



Niedersachsen Global 02 2010
Food & Agriculture / Health Care, 6 EUR

Niedersachsen Global

Food & Agriculture

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Published by local global in cooperation with www.nglobal.de



Niedersachsen

German for Business.

«A well-planned, carefully-thought out presence in the world's emerging markets is essential for future business growth.»

Jörg Bode Niedersachsen Minister
for Economics, Labour and Transport

Niedersachsen: Up and Running in Today's Growing Markets

Many businesses that are now once again reporting improved turnover and profitability are telling us loud and clear that a well-planned, carefully-thought out presence in the world's emerging markets is essential for future business growth. Booming markets in China, India, the Gulf Region and South America can often make up for more modest progress in traditional markets in Europe and the USA.

Our emphasis is very much on these growing markets. Using targeted delegation visits and participation in overseas trade fairs we are putting local businesses in touch with business partners, clients and politicians and helping them to enter these local markets. The state economic development body "Niedersachsen Global" (NGlobal), whose main areas of responsibility include business siting and export support, are always available as a point of contact to help you and to put you in contact with strategic partners in the region.

In Niedersachsen we are strategically well-placed with our international businesses in the fields of medical technology and software development, with our renowned high-end medical care and research and our attractive spa and treatment centres. Because of these attractive locational factors, we are well prepared to deal with the demographic change which is becoming more and more important. With life expectancy rising and birth rates declining, the proportion of older people is increasing.

That is why in this 6th issue of NGlobal-Magazine we take a look at the healthcare sector as one of the most important future markets for Niedersachsen, especially in terms of age-specific lifestyle, a challenge many countries in the world have to face. We give you insights and information about the successful application of "intelligent" IT-based assistance systems, whose use is based upon scientific findings in the fields of geriatrics, gerontology, hearing technology, information technology, engineering science, medicine, economics, nursing science, psychology and rehabilitation education.

In this issue, our country profile focuses on Turkey: a country with a young and dynamic society, providing interesting business and investment opportunities. Germany has long been Turkey's most important business partner. Last year the volume of trade between Niedersachsen and Turkey was around 1.5 billion euros. The



Photo: Niedersächsisches Ministerium für Wirtschaft, Arbeit und Verkehr

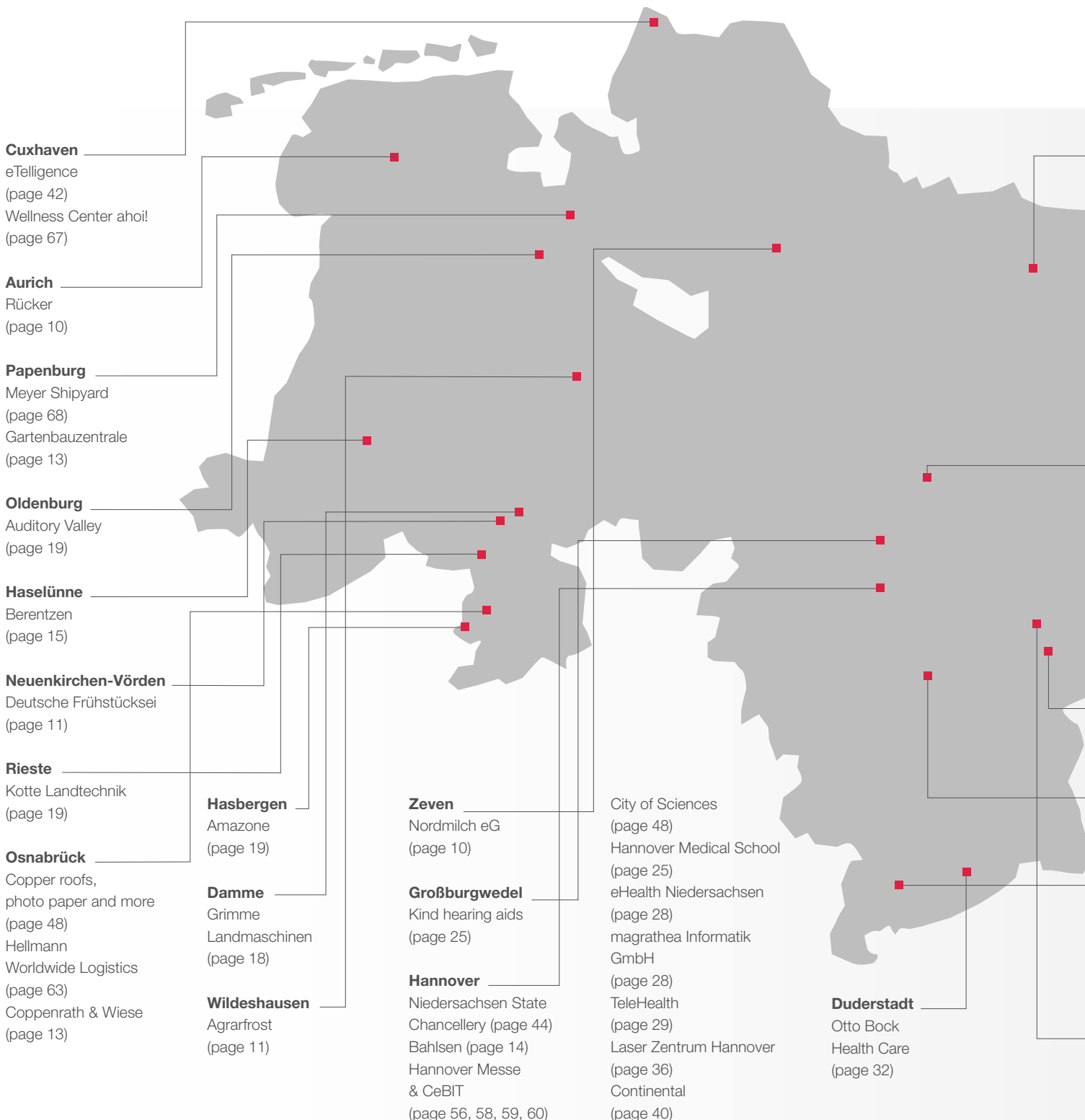
biggest export volume was in electricity generating equipment, cars and motorhomes, synthetic materials and machinery. Imports were dominated by clothing, buses, car parts and cotton. It is precisely for this type of special business relationship that we need people with an immigrant background like never before. We need their knowledge and their sense of shared responsibility. Feeling at home in two cultures can be a bridge to understanding.

All these topics will be at the heart of our discussions during our Turkish Foreign Trade Forum at the 2011 Hannover Messe as well as at the 2011 CeBIT with Turkey as its Partner Country, to which you are all cordially invited. (For further details go to: www.nglobal.de).

Meeting with international partners at the international exhibition centre here in Hannover is especially important to me. We look forward to seeing you there! 🇩🇪

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is a leading international
laboratory and process
technology provider based
in Göttingen.

Photo: Sartorius

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Food & Agriculture

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It is then no surprise that many well-known companies
and brands are based between the Harz and North Sea.

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Facts & Figures Niedersachsen

4th largest state in Germany by population. **2nd largest** state in Germany by area. **Largest** car manufacturer in Europe.

The newly built JadeWeserPort in Wilhelmshaven is Germany's only deep-sea port for the future generation of container ships.

Products

One in four cheeses and one in three eggs that are produced by German farmers comes from Niedersachsen. Besides, the state is famous for passenger cars, wind turbines, cookies, designer chairs, audio solutions, prostheses, vehicle parts, biomass plants, cruise liners, medicines, cables, frozen cakes, solar panels, drilling heads, motor trucks, seeds — just to name a few...

Knowledge (2008)

11	Universities
7	Technical colleges
5	Private technical colleges
2	Art colleges
140,000	Students
16,000	Foreign students
34,000	Employees at universities
1,500	Cooperations with foreign partner universities
1,755	Billion euros budget
7	Max-Planck Institutes
3	Fraunhofer Institutes
120	Other extra-university research facilities

The Brunswick region is the most research-intensive area in Europe.

Politics

Niedersachsen is governed by a coalition of the parties CDU and FDP with David McAllister (CDU) as Prime Minister and Jörg Bode (FDP), Minister for Economics, Labour and Transport, as his Deputy.

Map

Niedersachsen
Inhabitants: 8 million
Area: 47,624 km²
Capital: Hannover



Within 15 hours by train, 12 hours by truck or 1.5 hours by plane you can reach cities such as **London, Paris, Amsterdam, Bern, Vienna, Prague, Warsaw, Oslo, or Stockholm**

Within 30 hours by train, 24 hours by truck, or 3 hours by plane you can reach cities such as **Dublin, Madrid, Rome, Bukarest, Riga, St. Petersburg or Helsinki**

Trade Fairs

Five out of the ten biggest exhibitions in the world take place in Hannover. Deutsche Messe occupies the leading position in the global trade fair business.

Exports Imports

worth of

56,859,000,000 euros
(2009)

worth of

62,069,000,000 euros
(2009)

Netherlands (9.7 %)

Norway (19.6 %)

France (9.0 %)

UK (7.0 %)

Netherlands (11.1 %)

USA (6.4 %)

China (6.3 %)

Italy (6.1 %)

France (5.3 %)

Spain (4.8 %)

Poland (5.1 %)

Belgium (4.5 %)

Italy (4.0 %)

Austria (4.3 %)

UK (3.9 %)

Poland (4.2 %)

Belgium (3.7 %)

Czechia (3.2 %)

Spain (3.7 %)

Czechia (2,9 %)

And the most important trade partners (shares/2009)

Economy (2009)

206 billion euros GDP; 3,677,000 employees

202,397,700,000 euros: turnover of the 10 biggest companies

Volkswagen	113.8 bn euros
TUI	24.9 bn euros
Continental	24.2 bn euros
Salzgitter	12.5 bn euros
Agravis	5.8 bn euros
EWE	5.5 bn euros
MGL	5.0 bn euros
E.ON Avacon	3.8 bn euros
hagebau	3.7 bn euros
Georgsmarienhütte	3.3 bn euros

Sources: Nord/LB, Statistisches Landesamt

Pig Feeding Becomes a Finger Exercise

No matter if the farmer is on the fields or on holiday: he now can make sure at any time that his feeding processes run free from disturbance. By means of his mobile phone or tablet computers the pig producers can carry out adjustments and changes in their feeding programme. Access to the computer by mobile device is technically problem-free and easy to learn.

www.weda.de

Grippers for Food Applications

The German Institute of Food Technologies (DIL) has designed two new vacuum grippers specifically for the meat processing industry. Common vacuum grippers are hardly suitable for meat – because liquids or product residues may get into the vacuum system. The DIL gripping systems consist of a main casing and exchangeable suction cups. Each gripper generates its own vacuum using compressed air. The lifting capacity can be amply adjusted via the pressure level of the compressed air and via the surface area of the gripping cup. This allows to handle products with soft surfaces.

www.dil-ev.de

Culinary Niedersachsen

The marketing organisation of Niedersachsen's agricultural and food industry has awarded 32 typical foods as "Culinary Ambassadors of Niedersachsen". The products were selected in a state-wide contest. They represent nearly all the state's regions. Along with "Deutschländer Würstchen", which can be found on every supermarket shelf, there are also rare specialties, such as pralines refined with a pinch of salt from Lüneburg or fine biscuits from Jever called "True Passions" both of which are nearly unknown even in Niedersachsen.

www.mg-niedersachsen.de



From Field to Table

Wherever in the country one orders a schnitzel and French fries there is a high possibility that the meat and the potato sticks come from Niedersachsen. After all the state between the Harz mountains and the North Sea is Germany's most important food region.



Photo: Gartenbauzentrale Papenburg

Typical Greek soft cheese from Germany for gourmets in Greece? What sounds like carrying coals to Newcastle is in reality just one example of the salesmanship and export orientation of Niedersachsen's food industry. Rücker GmbH, a family business with 120 years of tradition, has already been producing feta-style cheese from cow's milk since 1978, and does not do it in Europe's sunny south but in Aurich, a town in the heart of Ostfriesland. And with Greece being one of the main sales markets of feta from Ostfriesland, it is no surprise that they also sell their mozzarella to Italy.

Whether feta cheese from Ostfriesland, apples from the Altes Land, asparagus from Burgdorf and Nienburg, potatoes from the Lüneburger Heide, fresh North Sea fish or aromatic ham from the Ammerland—Niedersachsen is Germany's number 1 agricultural and food state. One third of all pigs are fattened here, about half of German poultry and potatoes originate in Niedersachsen, and every third breakfast egg is being laid somewhere between the Ems and Elbe rivers every single day. These high-quality raw materials have been the basis for the development of a powerful food industry in Niedersachsen that specialises in processing original produce into food. It is then no surprise that many well-known companies and brands are based between the Harz and North Sea.

The Oldest Energy Drink in the World

Dairy farming is one of the cornerstones of the food industry in Niedersachsen. The grassland belt in the north of the country is one of the largest pasture zones in Germany and a centre for the husbandry and processing of dairy cattle. Niedersachsen's pastures accommodate 772,858 (Nov. 2009) milk cows in total. In 2009, the 12,490 milk-producing businesses supplied 4.93 million tons of milk to the dairies—almost every fifth litre milk produced in Germany (17 percent) comes from Niedersachsen.

Another large private dairy in Niedersachsen along with Rücker is Frischli Milchwerke GmbH, based in Rehburg-Loccum. The largest German dairy is the Nord-



Photo: Nordmilch

Niedersachsen's cows are very industrious. A total of 500,000 tons of cheese were produced in 2009 — one in four German cheeses comes from Niedersachsen.



772,858

milk cows

12,490 milk-producing businesses

One in five litres of milk and one in four blocks of butter produced in Germany comes from Niedersachsen

47 dairy businesses

5,900 employees (including ice cream)

milch group. The milk comes for the most part from the 7,000 members of the parent company Nordmilch eG. Other major industry players are Molkerei Ammerland, Uelzena eG and Heideblume Molkerei, among others. Niedersachsen is the home to a total of 47 dairy businesses. The number of employees is 5,900, if the people working for ice cream manufacturers in Niedersachsen are included. The revenue of the milk-processing companies—again including ice cream—was 3.11 billion euros in 2009, of which 23.4 percent were realised abroad.

Highly Specialised in Meat Industry

Another core business segment of the food industry in Niedersachsen is the meat industry. In Niedersachsen highly specialised operations for breeding, fattening, transporting, slaughtering, processing and the sale of pigs, cattle and poultry form an industry of national and international significance. In addition there are numerous Niedersachsen-based companies in the animal feed industry.

177 businesses in Niedersachsen employing 20,111 people in slaughtering and meat processing operations achieve an annual revenue of 8.1 billion euros, around 1.5 billion euros thanks to their export sales.

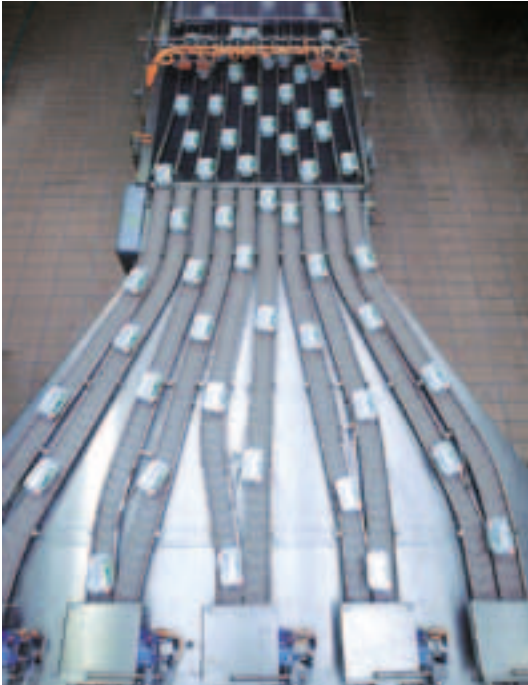


Photo: Nordmilch

For 50 years now, **Milram** is the European umbrella brand of Germany's largest dairy.



Photo: Abraham Schinken

Abraham is one of the largest European producers of smoked and dry-cured ham. The delicacies from Seevetal are shipped as far as America.

The regional centre of meat processing is traditionally the southern Weser-Ems region. Nearly half of all pigs in Niedersachsen come from the Cloppenburg, Emsland, Osnabrück and Vechta administrative districts. The Oldenburger Münsterland in particular has developed regional meat industry competence centres.

Another example of the efficiency of large operating units in Niedersachsen on the market is Deutsche Frühstücksei, the largest European egg producer, based in Neuenkirchen-Vörden. Deutsche Frühstücksei produces around 1.5 billion eggs for all leading German retail store chains. Additionally, the company operates the Ovobest Eiprodukte GmbH, one of the most productive and modern egg product plant.

The Smartest Farmer Harvests the Most Potatoes

Niedersachsen is not only known for its dairy and meat industries, the state is also Germany's largest potato-growing region. Almost half of all German potatoes are harvested here. Almost 30 percent of the German new potato acreage is located in Niedersachsen, the majority of it in the region between Hannover and Gifhorn. At the same time Niedersachsen is the largest propagation area for seed potatoes. The



1 in 2

chicken produced in Germany comes from Niedersachsen

Approximately one in two turkeys, and one in three pigs come from Niedersachsen.

20,111 employees

Annual revenue:
8.1 billion euros

Lüneburg-based Europlant Pflanzenzucht GmbH has a 50 percent share in the German propagation acreage.

While the share of fresh potatoes on the German market continuously decreases, the numbers for processed products are on the up. Dry products such as dumpling flour, puree powder and potato soups have acquired a share of more than 50 percent of the entire potato-processing food industry. The share of frozen foods is above 26 percent. The highest revenue generators, by far, are French fries; Niedersachsen is benefitting from this trend.

1.5 Million Servings of French Fries... Daily

Germany's largest potato refiner is Agrarfrost, a company which produces 1.5 million servings of French fries every single day. A total of 500,000 tons of potatoes are turned into French Fries, hash browns, croquettes, crisps, etc. by Agrarfrost annually. Also other companies such as Schne-frost, the Wernsing group or Snackmaster, profit from their uniquely favourable location within Europe. The production plants in Niedersachsen are placed right in the middle of the producing areas of the contracted farmers: short distances and quick processing save costs for transport and logistics.



1 in 2

potatoes produced in Germany were grown and harvested in fields in Niedersachsen

Over 50 % of the highly popular iceberg lettuce is sourced from Niedersachsen, and the parsley in the accompanying salad dressing could well be from the region too (34.7 %)

With a harvest of 25,000 tons, Niedersachsen is Germany's largest producer for asparagus

One third of all kale harvested in Germany comes from Niedersachsen



Photo: Agrarfrost

Germany's largest potato refiner is headquartered in the Oldenburg region. **Agrarfrost** produces 200,000 tons of potato products annually.

› Niedersachsen's strength is also inside the potato. With a share of 75 percent of the entire German production of starch Niedersachsen is by far the largest producer of potato starch. In close proximity to the Dutch border, in Emlichheim, is the parent plant of Emsland-Stärke GmbH, Germany's largest potato starch producer. Emsland-Stärke is one of the leading global manufacturers of refined products based

on potato starch, such as potato protein, flakes and granulates, exported into more than 100 countries worldwide.

The White Gold from Niedersachsen

But not only are potatoes from Niedersachsen in demand — asparagus is likewise. Whether it is served

Insha`Allah — Food Production According to Islamic Rules

Just a few letters make all the difference for Muslims: halal. This term stands for food that has been prepared according to Islamic rules. The demand for such oriental products is huge. About three million Muslims live in Germany alone. On a global scale there are 1.8 billion Muslims. "But while elsewhere in Europe some retail chains

market halal products successfully, German trade chains are still very hesitant to serve this growing market," says Osman Mahmoud. He was born in Egypt and has been responsible for the halal business of the Niedersachsen-based sausage producer **Bernhard Meemken** since 2007. This is rather unusual for a traditional producer from

the Oldenburger Münsterland, but the product line "**Halal — Made in Germany**" goes down well. The halal sausages every week are already being sold in discount stores.

Rücker GmbH is another player focusing on Muslim consumers. Together with a specialist of Turkish origin the company has developed

the recipe for its "oba" curd cheese in a way that it suits the tastes of the Turkish target group in particular. Moreover, for a few years the dairy has been advertising its "oba" regularly on all TV channels in Turkey. Special commercials have even been produced at the Bosphorus for this campaign. "Television advertising is worth it because Turkish women

watch the telly a lot in the daytime," explains Senol Isikay, sales employee for ethnic trade and a native-born Turk. **The East Frisian dairy produces 1,300 tons of "oba" each year.** The four percent share of halal cheese in the total cheese production is still very low, but for Rücker it is obvious that halal foods are an interesting growth market.

with Hollandaise sauce or melted butter is entirely a matter of taste, but the high quality of the asparagus from Niedersachsen, whose reputation has spread far beyond the state's borders, is undisputed. The season ranges between the end of April and St. John's Day at the end of June in the growing areas, with the main regions being around Burgdorf near Hanover and the Nienburger Land. Altogether around one fourth of all German asparagus comes from Niedersachsen.

Similarly popular and also valued as a seasonal vegetable is kale, served as "Grünkohl mit Pinkel" (curly kale with a smoked sausage) in the Weser-Ems region, while preferably combined with bratwurst in southern Niedersachsen. The prevalent view about this vegetable, also known as green cabbage or borecole, is that it must have seen the first ground frost before being eaten. Nearly a third of all kale harvested in Germany comes from Niedersachsen. In contrast, Niedersachsen leads in the production of iceberg lettuce by a long way, providing 75 percent of Germany's growing area. The centre of greenhouse growing activities in Niedersachsen is Papenburg in the Emsland region. The Gartenbauzentrale Papenburg cooperative produces more than 30 million cucumbers and 55 million herb pots, and is the German market leader in this segment.



Photo: Gartenbauzentrale Papenburg

Each year Gartenbauzentrale Papenburg produces more than 30 million cucumbers and 55 million herb pots.

Fruity and Delicious

The Altes Land is the fruit growing centre of North Germany; with more than ten million fruit trees it is the second largest growing region in northern Europe. More than one fourth of the German apple harvest stems from the Niederelbe region. One of the most important strawberry producing areas in Germany is the countryside surrounding the town of Vechta. The state is also by far the largest producer of blueberries in Germany, benefitting from the very favourable soil and climatic conditions. Approx. 70 percent of the German growing area is in Niedersachsen.

A large part of the fruit harvest is used to produce fruit juices and fruit wines directly in Niedersachsen. Leading producers are the South Niedersachsen-based family business Becker's Bester and the Riha-Hartinger group in Rinteln. Riha-Hartinger (Weser-Gold) is among the largest producers of soft drinks in Europe. The family business Dr. Demuth from Katlenburg-Lindau, founded in 1925, takes up a leading position in Germany in the fruit wine and sparkling fruit wine segment. In the Wendland, located in the east of Niedersachsen, the family business Voelkel has been producing fruit and vegetable juices since 1936. Voelkel specialised in the production of high-quality organic and Demeter juices.



1 in 3

of raspberry crops and nearly two thirds of Germany's bilberry production are based in Niedersachsen.

With more than 10 million fruit trees the Altes Land region is well known far beyond the state boundaries. The region has produced more than 25 % of the total national apple crop.

Grain by Grain

Niedersachsen is also the top bread producer. Based on the annual quantity of grains ground the state is the largest milling location in Germany. Niedersachsen has 21 mills which ground more than 500 tons a year. Over 90 percent of the grinding takes place in the area around Braunschweig and Hannover. Young millers are trained at the Müllerei-Fachschule in Wittingen and the Deutsche Müllerschule (milling school) in Braunschweig. The Müllerschule is the only school of its kind in all of Germany. The market leader in the bread industry is the Lieken group. In Niedersachsen the company produces the brands Lieken Urkorn in Achim and Golden Toast in Garrel, among others.

Single households, small families and changing eating habits favour the sales of frozen foods and products with a high degree of convenience. Companies such as Martin Braun KG offer products which benefit from this development. Martin Braun specialises in the production of baking agents, ready-to-eat products and deep-frozen food. The Osnabrück-based family business Coppenrath & Wiese is also very much in trend. The large-scale confectionery, which celebrated their 30th anniversary in 2005, has developed over the years into one of the largest providers of deep-frozen



Photo: Coppenrath & Wiese

Coppenrath & Wiese may well be the most modern bakery in Europe. Hardly a birthday party is held without the cakes from the frozen pastry producers based in Osnabrück.

pastries in Germany. The German market leader for long-life bakery products is also based in Niedersachsen. The company Bahlsen, founded in 1889 and with a long tradition, sells biscuits, candy bars and cakes and achieved a revenue of 545 million euros in 2008. This puts Bahlsen at the top of the market in Germany with a revenue share of 22 percent in the pastry segment. Bahlsen uses around 150,000 tons of flour per year, which they almost exclusively purchase from Hedwigburger Okermühle located in Wolfenbüttel.

Germany's Sugar Region

The south of Niedersachsen, comprising the Braunschweiger Land and Hildesheimer Börde plus the Uelzen area, is an important centre for the growing of sugar beets and the production of sugar in Niedersachsen. With a beet growing area of ca. 100,000 hectares Niedersachsen is by far the largest sugar beet producer in Germany and about 6,500 farmers in Niedersachsen cultivate sugar beets. In terms of volume processed Niedersachsen is also top. In 2009 more than 6.2 million tons of sugar beets were delivered to the sugar factories.

Nordzucker AG, headquartered in Braunschweig, has a market share of 15.4 percent, which makes it the second largest sugar producer in Europe; in addition it

generates bioethanol and feedstuff from sugar beet. These plants operate at the highest technical level and most of them are located geographically close to the growing areas, which provides for short transport distances and processing times thus ensuring a professional exchange between beet growers and industrial processors. An increasingly important success factor for Nordzucker AG are its subsidiaries. In several different locations Nordzucker companies produce amino acids, pharmaceutical products as well as a number of products for the health market. Another quite important pillar for the sugar industry is the animal feed market. The sugar production process generates high-quality feedstuff with high energy and raw fibre content for feeding animals. A by-product of sugar production is carbonated lime, a valuable and very popular agricultural fertiliser.

Sweet Temptations

The sweet side of the Niedersachsen-based food industry is predominantly made up by family businesses with a long tradition, such as the confectioneries Leysieffer und Heidel, both from Osnabrück, and of course biscuit market leader Bahlsen. Leysieffer began expanding in 1978 and has since opened stores in many large German cities. The brand is best-known for its pralines, but also its range of chocolate bars makes the hearts of connoisseurs beat faster, featuring selected delicacies such as white chocolate with chilli and whole milk chocolate with salt and pepper. Almost a dozen companies in Niedersachsen make up the confectionery industry in the strict sense and specialise in the manufacture of chocolate and pralines.

Hameln has a tradition of producing dessert and pudding powders as it is the home of the firms Nossek and Vogeley. Since 1892 Vogeley, in its fourth generation, has been producing sweet cream powders mainly for large-scale consumers. H. Pickerd GmbH from Großburgwedel, located north of Hanover, has been producing quality icings in Bundt cake-like moulds since 50 years. And the fact that Ulmer chocolate does not necessarily have to originate in Baden-Württemberg, but is actually a quality product from Niedersachsen, is a surprise to many consumers. In 1950 Herbert Ulmer built the Ulmer Schokoladen plant in Wilhelmshaven. Its shaved chocolate made Ulmer the market leader in Germany and also became a considerable export success.

Among potential buyers of sugar products from Niedersachsen are also, along with the companies named above, ice cream manufacturers and a large segment of the beverage industry which are mainly interested



21

mills grind
500 tons a year

In Braunschweig, there
is the only milling
school in Germany.



Photo: Berentzen

Berentzen Apfeln Korn is one of the most successful newly introduced spirits ever in Germany. Founded over 250 years ago, the schnapps distillery from Haselünne is sold in more than 60 countries.



Photo: TMN

East Frisians drink 290 litres of tea per capita — a world record. And their favourite kind of tea is **East Frisian tea**, of course.



6.2

million tons of sugar
beet crop

100,000 hectares

6,500 farmers cultivate
sugar beets

in liquid sugar. When talking about sweets, preserve manufacturer Göbber, located near Nienburg/Weser, and the Braunschweig-based honey maker Fürsten-Reform with its German-wide brand Biophar should not be forgotten.

One for the Road

Since the 18th century the people from Haselünne have been proud of their creativity in the production of alcoholic beverages. At times there were about two dozen distilleries operating in the oldest Emsland town, and a distillery museum keeps the spirited history of the small Hanseatic city alive. Even if the number of businesses has waned, there are still three renowned distilleries keeping up the reputation of Haselünne as the Korn schnapps capital of Germany. Probably the most well-known and by far largest distillery in the stronghold of high-proof liquor is Berentzen. Founded in 1758, the old-established company supplies 60 countries worldwide and holds under its roof a range of quite diverse brands such as Bommerlunder, Doornkaat, Pusckin and Berentzen Apfeln Korn. Like all large spirits producers, Berentzen is also increasingly following the trend towards mixed drinks, mostly based on vodka, while still maintaining its classic spirits. According to the company, the Polar-Limes product line has become a top-selling product.

The internationally most prominent German liquor comes — no surprise — also from Niedersachsen. Jägermeister is consumed in over 80 countries worldwide, and in the last year alone Mast-Jägermeister AG sold more than 82.4 million 0.7 litre bottles of the popular herb liqueur globally. Since its foundation in 1878 the family-owned public limited company is firmly rooted in the Wolfenbüttel region, where it has two production locations. In international comparison the spirit featuring the characteristic stag's head ranked in 9th place at one time. Mainly in the US and among young consumers Jägermeister has become a cult drink, clearly the result of a successful brand rejuvenation process started by Jägermeister in 1999. The number two of German spirit manufacturers, Hardenberg-Wilthen Korn distilleries, has its home in the south of Niedersachsen.

German Brewing Tradition

The brewing of beer has been verified to have already been known in Niedersachsen more than 600 years ago. The oldest beer invoice still in existence is dated 28 April 1378 and documents the sale of Einbecker beer to Celle. Following a noticeable concentration process on the German brewery, market beer brands from Niedersachsen today also find themselves being part of large corporation structures. The Jever brand



Photo: istockphoto

Niedersachsen has almost 300 km of North Sea coast — not surprisingly, fishing has always been an important economic factor.



43,772

tons of fish, crabs
and clams were
caught last year

Revenue:
600 million euros
1,916 employees

has belonged to the Radeberger Gruppe KG since 2006; Gildebrauerei is owned by the Belgian InBev, the largest brewery group in the world.

Where the Pepper is Processed

It does not actually grow in Niedersachsen but it is processed here on a large scale – pepper. The Fuchs group, based in Dissen in the Osnabrück administrative district, is the largest spice provider in Europe and the second largest spice specialist in the world. Other well-known brands of the group are Ubena and Ostmann. With over 7,000 products, the company is the market leader in Germany. At home and abroad Fuchs employs more than 3,000 people. What is remarkable: in Brazil Fuchs maintains the largest pepper plantation on earth. Another spice firm of international standing in Niedersachsen along with Fuchs is Gewürzmühle Nesse headquartered in Loxstedt. Nesse produces spices for the processing industry and is also one of the few large providers of organically grown spices.

A Big Fish

Fishing and fish processing are still of great importance for Niedersachsen's coast region from Ditzum all the way up to Cuxhaven. The focus of the state's fisheries is clearly on trawler and coast fishing. In 2009, the total catch of the deep-sea and coast fishing busi-

nesses in Niedersachsen was 43,772 tons of fresh fish, crabs and clams. The fish-processing industry between Emden and Lüneburg generated a revenue of more than 600 million euros in 2009 and employed 1,916 people. The fish-processing centre lies in the northernmost part of Niedersachsen, which is the Cuxhaven area. The city's fishing harbour comprises 35 fish-processing companies with ca. 1,000 employees, which supply the market with the complete range of fish products: Fresh fish, smoked fish, deep-frozen fish, delicatessen, salads and canned foods. But not everything is being canned in Cuxhaven. In many of the small sluice harbours at Niedersachsen's North Sea coast the local specialty called "Granat" is available: freshly caught shrimp of best quality right off the trawler.

Nationwide fish and delicatessen companies, for example Appel Feinkost, have had their production operations in Cuxhaven for many years. On the other hand Pickenpack — Hussmann & Hahn proves that the modern fish processing industry is not necessarily tied to coastal locations. For 30 years Pickenpack has been based in Lüneburg. The company belongs to the largest producers of deep-frozen fish in Europe.

Short Distances

But regardless of whether fish from Cuxhaven, spirits from Haselünne, or feta cheese from East Frisia, food from Niedersachsen is well-known all over the world. A tight-meshed transport network, comprising streets, railways, airways and waterways, helps to get the goods to the consumer as quickly as possible.

Last but not least the success of the Niedersachsen-based food industry and agriculture is due to its central location within Europe and to the short distances to important producer and consumer areas. Niedersachsen enjoys the advantage of having well-funded potential consumers at their own doorstep, along with new markets in Eastern Europe and the intensive exchange with the Benelux countries, which is based on long-standing good relations. Geographically speaking, Hamburg and Bremen are just round the corner, and North Rhine-Westphalia, Europe's largest metropolitan area with the strength of its corresponding demand, can be reached quickly. Plus: the proximity to high-tech food locations such as Denmark, the Netherlands or Belgium leads to an intensive transfer within the industry. 🐟

**Source: Marketinggesellschaft
der niedersächsischen Land- und
Ernährungswirtschaft e. V.**

Food Links

www.mg-niedersachsen.de
www.dil-ev.de
www.ernaehrungswirtschaft.de
www.milchwirtschaft.de
www.nglobal.de

More than H₂O

From waste water to lemonade: Chriwa water treatment technology filters and cleans the elixir of life for almost all industries.



Photo: Chriwa

by Annika Kielmann

The technicians at the Niedersachsen-based company do not sell standard plants as each system planned and built in Hambühren is custom-made. The concept is paying off: Chriwa water treatment technology is in use in 85 countries worldwide. Renowned manufacturers such as Coca-Cola count on the know-how from Niedersachsen. At the Hannover Messe the company was recently awarded the Niedersachsen Foreign Trade Prize 2010.

Maintenance Over the Web

"Whenever there is a new customer from the beverage industry, our representatives visit them, analyse the local conditions and always design the plant with the exact requirements in mind. No plant looks exactly like another. This is what distinguishes us from our competitors who offer standardised plants, for example, for desalination," explains Freya Kern Kuttner, working in the marketing department of the global plant manufacturing market leader. Then the systems are planned and built in Hambühren, assembled and finally flown out to their final destination

No matter if the plants are for international soft-drink labels, mineral wells, breweries or waterworks: each of them is custom-made.

at customer sites everywhere in the world. Maintenance is nearly always done over the web: if a plant at the other end of the world is malfunctioning, technicians can repair it fully automatically by remote diagnostics.

Filtering Salts, Removing Toxins

Systems range from water treatment to obtain drinking water quality to detoxication in industrial complexes. In the food industry, for example, water must be descaled and desalinated. Depending on the type of water at any given location, different filters have to be used to remove the unwanted substances. Some plants though have to deal with extremely nasty muck: Chriwa also manufactures systems for wastewater treatment plants. Here organic material may have to be flocculated. Some of the manufacturing industry produces highly toxic liquids. Some production cycles contaminate the water with toxic substances such as arsenic, fluoride, radon, radium or even uranium. Even for such cases, the Niedersachsen-based company is able to deliver treatment technologies which will clean up the mess and produce clear water.

Awarded at the World's Largest Industry Fair

The company received the Niedersachsen Foreign Trade Prize for its innovation power and international commitment. The award ceremony took place at this year's Hannover Messe in the context of the 7th Niedersachsen Foreign Trade Forum. 🇩🇪

With High-tech on the Fields the Farmers Can Optimize the Crops

The new agricultural machines feature more technical refinements than a lot of sports cars.

by Annika Kielmann

Klemens Kalverkamp, Managing Director of Grimme Landmaschinen agricultural machine company, is quite certain. "Feeding ten billion is not a problem for our planet," he says. "For example, today 50 percent of all potatoes are still being harvested by hand. We have to make agriculture more professional, then we can defeat hunger." And this is where Grimme's potato and beet diggers from the Niedersachsen town of Damme excel globally. "A country's prosperity may be measured by the way its potatoes and sugar beets are dug out of the soil", the engineer explains. High-tech for big agricultural machinery is his solution, from precision seed drills to harvesters.

Steering with Your Little Finger

The new agricultural machines feature more technical refinements than a lot of sports cars—with comparable prices. To dig beet, for instance, farmers use a true giant: the Rexor 620 is Grimme's most recent development. The self-propelled six-row sugar beet harvester, with a full load, weighs over 50 tons. And yet, the gigantic machine can be moved effortlessly over the fields using only one's little finger, thanks to power steering, automatic transmission and a hand throttle. The driver just uses a joystick to accelerate, lift or lower the harvested crop. Everything else is set up via two displays. With an inner turning radius of 7.5 metres, the Rexor is the most agile digger in its class. The rather plain exterior of these huge machines conceals not just powerful engines but also intelligent onboard computers and smart assistance systems.

"Agricultural machines are like people. The body of a human being, the skeleton, is like the steel of the machine. Heart and blood correspond to the engine, and the brain is represented by eight computers," suggests Kalverkamp. And the machines are as unique as human beings—each one is custom-made. The soil may vary, may be sandy, stony or clay; fields can be level or hilly, and whatever the circumstances may be machines are expected to work efficiently. 200 questions need to be answered by a customer before his colossus can be made in line with his requirements. Only the colour is a constant: all Grimme machines are bright red.

In order to allow farmers to cruise their land as effectively as possible, agritech companies have for some time relied on satellite navigation. GPS systems monitor the route and ensure that the harvesters are on the right track, with a precision of plus or minus two centimetres. This is substantially more exact than the navigation system in your car, which may well be out by a metre or so. To stay on track the use of autopilots is now standard practice. Computers calculate the optimum performance for machines on the fields or on the road for maximum fuel economy. These farmyard giants are also as comfortable as a luxury limo.

Cabins offering panoramic views, air conditioning and radio make 12-hour harvesting days bearable. The multiple-spring-loaded seats could easily be more comfortable than your favourite TV armchair. The Rexor 620 beet digger has a top speed of 40 km/h—quite nippy for a harvesting machine. On the

Contact

www.amazone.de

www.grimme.de

www.kotte-landtechnik.de



fields, of course, the Rexor moves at a slower pace. Its extra wide tyres ensure that its weight gets distributed as evenly as possible, compressing the soil much less than older, smaller models. In addition, farmers have the option to shift to crab-steering mode: this switches the wheels of the front and the rear axles to different tracks, to protect the soil and further minimize compression.

Little Tricks for Big Sprayers

The pesticide sprayers of the Amazone Group, which are not pulled but have engines and steering wheels of their own, also move in crab-steering mode. The self-propelled SX4000, made in Hasbergen, offers a maximum working width of 40 metres. The machines keep getting bigger, a trend which poses a challenge for engineers. It seems you need to be born to this sort of earthy vocation: nearly all technicians in the sector are originally farmers and passionate about their machines. This passion may well explain the big innovative potential of the medium-sized agritech companies; ten percent of the staff, including those at Amazone, work in development. It takes a lot of small technical details to make a 40-metre-sprayer possible.

“A country’s prosperity may be measured by the way its potatoes and sugar beets are dug out of the soil.”

Klemens Kalverkamp, Managing Director of Grimme Landmaschinen

Photo: Grimme

“The arrangement of spraying rods consists of individual elements which fold. The rods’ weight is reduced to a strict minimum. The latest versions are made of light aluminium,” says spokesman Christoph Siever, explaining one of the numerous key features. The rods are consequently so light that they can be lifted by one man. A special bolt allows easy maintenance, making it a pleasure to work with these big machines. There is no need to take off all elements to tighten the connections—the farmer just has to tighten the bolt at each connecting point. This is made possible by the offset arrangement which looks as though two trapezes had been welded together.

Many different control elements turn the spraying machines into true allrounders. The operator can control the alignment of the spraying rods, the angle these are set up at and the spraying intensity via the onboard computer. This of course en-



GPS systems ensure	system also calculates
that the machines are	the optimum perform-
on the right track, with	ance for machines on
a precision of plus or	the fields — e.g. it makes
minus two centime-	sure that the spreader
tres. In comparison:	or sprayer is switched
the navigation systems	off at the point for opti-
in our cars may well	mum yield and minimum
be out by a metre. The	overlapping.



The machines keep getting bigger, a trend which poses a challenge for engineers. It seems you need to be born to this sort of earthy vocation: nearly all technicians in the sector are originally farmers and passionate about their machines.

› sures that spraying is even and precise and always suited to the particular location. No matter whether used on flat land, on dykes or on extreme slopes, a special suspension on the so-called parallelogram dampens the swinging of the rods. These are kept at a constant distance from the ground ensuring an even spray cover whether the field is on a slope or flat. When the sprayer is folded in, its width is reduced to a mere 2.65 metres, so it can negotiate country roads with its 6,640 litre tank. The tank is painted in a dazzling orange and looks a bit like a UFO—its bottom is broad and massive, its top elegant and slender, a shape which allows the farmer to accelerate or brake without the liquid wildly sloshing around, which could otherwise make the whole machine lose balance. Furthermore, there are intelligent steering systems supporting drivers when the sprayers are at work. The axle of the sprayer follows in line with the tyres of the tractor so that the tyres do not destroy the plants that are being sprayed. It is thanks to such tricks that sprayers and other agricultural machines are becoming ever more gigantic.

Elegant in Crab Mode

This applies both to self-propelled machines and to tractor-drawn ones. In order to make such fat giants move more gracefully, specialists at the Niedersachsen company Kotte Landtechnik have co-operated with the University of Applied Sciences of Osnabrück and developed a novel steering system for towed slurry tankers. The innovative MultiSteeringSystem can make a farmer's heart beat faster: they love that special feeling that comes with a choice of steering options.

This allows the unwieldy vehicles to move at speed along roads, while they can be manoeuvred more easily and across fields with minimal soil impact. The solution for the otherwise unwieldy steering is the ability to adjust the configuration of each axle. When in in-line mode, the slurry tanker no longer cuts curves, while in crab mode it protects the soil, and manual or automatic axle adjustment allows a very small turning radius. Since the electronics for steering are located on the tanker, any make of tractor can pull the vehicle.

Such technical refinements definitely make farmers' lives easier. But progress will always march on, and—who knows—in the future times, farmers might disappear from the cockpits altogether. Field robots could then swarm over the fields, gather data on plant health, take samples from the soil and submit reports to the farmer. 🤖

Photo: Amazone

Matters of the Heart

In cooperation with US-American scientists, REBIRTH (Regenerative Biology and Reconstructive Therapies) researchers have found a way to decode the activation mechanism of abnormal heart growth. The REBIRTH research cluster is formed by seven institutions to promote regenerative biology and medicine, and focuses on disorders of blood, heart, lung and liver. www.rebirth.com



Photo: Bodo Kremmin/Rebirth

24 – 27 January 2011, Dubai

Arab Health

The health care expenditures of the Gulf States are expected to quintuple to 60 billion US dollars by 2025. Being the largest trade fair for medical technology, health, pharmaceuticals and dental technology in the Middle East, Arab Health provides access to this profitable market. Niedersachsen has been present at the Arab Health for six years now. Again in 2011, NGlobal will effectively present Niedersachsen as a centre of medicine. With the aim of supporting the market entry of the state's medical industry to Arab countries, the trade fair presentation will be strengthened by a delegation trip headed by Minister for Economics, Labour and Transport, Jörg Bode. Additionally, NGlobal will use Arab Health as a platform for a symposium on innovative medical technology from Niedersachsen. From medical intervention to aftercare, all medical care phases will be presented, in particular in terms of training and further education. www.nglobal.de



Caring for Your Health

High-quality care, medical and technical excellence and short paths for transferring the results of research directly to patients

- Centers of competence / Companies
- Universities
- Resources / Cluster

Detailed map: www.nglobal.de/fileadmin/media/docs/Life_Sciences_Folder_eng.pdf

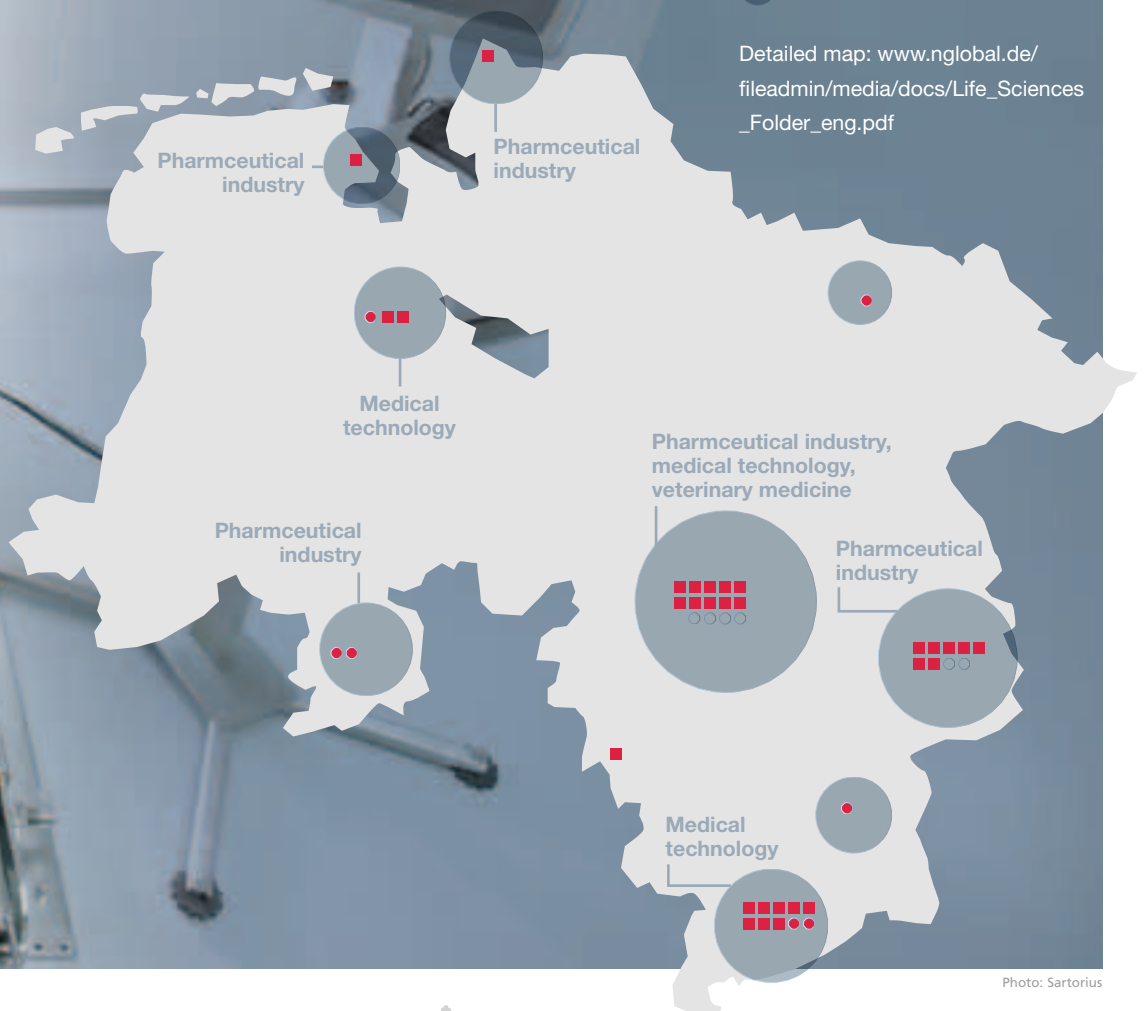


Photo: Sartorius

Listening to the Future

by Inka Ziegenhagen

Hearing is arguably the most complex of all human senses as it can locate and process alarm signals extremely quickly as well as single out individual sound sources—even in extremely noisy environments. Transforming deaf people into hearing people with the help of modern technologies is therefore considered a downright medical miracle. The research and development cluster “Auditory Valley” constitutes a globally unique network of scientists, physicians and industry representatives who cooperate in the medical and audiological optimisation of hearing systems.

Modern Societies Require Optimal Hearing Capabilities

The Hannover-Oldenburg axis is the innovative centre of an important sunrise industry. “We live in a society in which the ability to hear well is becoming more and more important,” says Prof. Kollmeier, Scientific Director of HörTech gGmbH, the Medical Physics section at the University of Oldenburg and the new Fraunhofer project group Hearing, Language and Audio Technology. “The global networking by means of video and telephone conferences, the increasing use of consumer electronics, the increasing noise pollution in everyday life and the increase in working lifetime are huge challenges for the modern societies in the area of hearing. We use the Auditory Valley to work on future solutions to enable everyone to hear optimally in all situations.”

Due to the connection between the competence in hearing systems in a medical context with the audio technology used in the consumer area, the Auditory Valley has a globally unique innovation potential in the future market of hearing technology.

This network comprises the entire value chain of high technology hearing systems from research to development to product launches. The HörTech competence

The globally unique cluster called “Auditory Valley” hosts companies and scientists working on improving the performance of hearing systems and enabling deaf people to regain their hearing abilities thanks to modern technology.



Photo: Cochlear

centre for hearing aid systems engineering, the expertise of the Hannover Medical School (MHH), Medical Physics section at the University of Oldenburg, as well as the hearing centres in Hannover and Oldenburg make the Oldenburg/Hannover region the Mecca of hearing research in Europe. The cluster also brings together the leading manufacturers of hearing aids, such as Sennheiser, Siemens, Cochlear and Kind Hörgeräte. Since 2003 the head developers of these worldwide hearing aid manufacturers, with a joint market coverage of over 90 percent, have met twice a year to plan joint projects.

Hearing Aids

Germany's largest supplier of hearing aids is Kind Hörgeräte. The company is based in Grossburgwedel near Hannover and operates more than 550 shops in Germany and 14 other countries. Kind and its subsidiary, audifon, master the entire value chain in the hearing aid acoustic sector—from research and development to production and distribution to sales. A Kind speciality are intelligent hearing aids. These devices analyse the individual acoustic characteristics of the environment and adapt to them manually or automatically. Thanks to a unidirectional microphone and a speech recognition system, they ensure good hearing quality even in difficult surroundings, such as at parties, lectures or with loud background noises.

Along with hearing aids, the company has also recently started to offer customised in-ear-headphones. This so-called c-ear is produced with the most modern CAD and laser technologies, and specially developed plastics. Trained acousticians prepare an individual ear cast within a few minutes which is then used to manufacture a personal headphone within a few days. The advantage: c-ear does not chafe or fall out and optimally blocks out background noise.

Hearing Implant Replaces Parts of the Human Sense Organ

A particularly innovative hearing system, which comes close to represent a medical miracle, is the Cochlear Implant (CI). This inner ear prosthesis, which is inserted surgically, enables hard-of-hearing and deaf people to hear. "The CI is the first and only implant that can, to a large extent, replace a human sense organ," explains Prof. Dr. med. Thomas Lenarz, Director of the Clinic for Laryngology, Rhinology and Otiology at the Hannover Medical School.

In contrast to conventional hearing aids, which only amplify sounds, a Cochlear Implant replaces the damaged hair cells and directly stimulates the auditory nerve with which noise and speech can be understood more clearly.

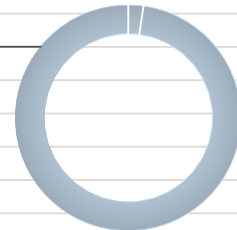
And here is how the miracle becomes a reality: The Cochlear Implant is placed under the skin behind the ear, and another external processor is worn behind > **Prof. Kollmeier**, Scientific Director of HörTech

Auditory Valley

Market position of the industrial key partners of the Auditory Valley

Hearing Aid Manufacturers

92 %
of the global
market is
involved
in cluster
projects



- Size: 4.5 billion USD
- Growth rate: 5-8 %
- Market penetration in Europe: 21 %

Cochlear Implant Manufacturers

- 100 % of the global market takes is involved in cluster projects
- Size: 1.2 billion USD
- Growth rate: 20 %
- Market penetration in Europe: 10 %

Audio Technology Manufacturers

50 %

of the global communication headset, audio systems, microphones and headphones market spans Sennheiser Electronic GmbH & Co. KG

Distribution and Logistics

- Kind Hearing Aids
Largest seller of hearing aids in Germany (10.7 % market share)
- Energy and Communications Company EWE
5.3 billion euros recorded sales, supplying over one million households in the region

Source: HörTech

“We live in a society in which the ability to hear well is becoming more and more important.”



Photo: Sennheiser

Sennheiser one of the industrial partners of the Auditory Valley. The company located just outside Hannover is one of the world's leading manufacturers of microphones, headphones and wireless transmission systems.

otorhinolaryngologists (ENTs), acousticians, manufacturers and scientists all the way up to the development of medical products. By supplying partially implantable hearing systems—middle ear implants—as an alternative to conventional hearing systems, the clinic's range has been enhanced in recent years.

Future Market Hearing Technology

The market for high-performing and intelligent hearing systems will grow strongly in the future—after all, only three out of ca. 15 million hearing-impaired persons actually carry a hearing device which is a market penetration of 20 percent. This enormous growth potential is going to further increase against the background of demographic changes. The future of hearing systems is going to be dominated by an increasing linkage of hearing system competence in the medical sector (hearing aids, CI) and modern audio technology from the consumer area (mp3, Bluetooth, etc.). This potential has long been recognised in the Auditory Valley. Here they are already working on the integration of hearing device technology into mobile phones or TV sets which would make the advantages of hearing aids accessible to a significant number of people. 📶



Photo: Kind

No matter if at parties, lectures or with disturbing background voices — the Kind hearing aids analyze and adapt themselves to the situation.

› the ear. Thus, the sound will be received directly by the ear, digitalised, coded as a signal, finally converted into electric pulses under the skin and passed on. An electrode stimulates the auditory nerve fibres inside the ear—and sends the signals to the brain where they are perceived as auditory impression.

The Clinic for Laryngology, Rhinology and Otiology at the Hannover Medical School runs the largest international Cochlear Implant programme. In 2008, more than 4,000 adults and children had an implant inserted. Around 500 patients receive a new CI each year. The Hearing Centre Hannover is a substantial section of the clinic. Here the entire range of diagnostics and therapies as well as hearing systems and CI care have been consolidated. The treatment of patients is based on a concept which provides for close cooperation of

For further information

www.hoertech.de
www.auditory-valley.com
www.audiologie-niedersachsen.de
www.kind.com
www.sennheiser.com
www.hno-mhh.de

“The CI is the first and only implant that can, to a large extent, replace a human sense organ.”

Prof. Dr. med. Thomas Lenarz, Director of the Clinic for Laryngology, Rhinology and Otiology at the Hannover Medical School



Photo: Cochlear

Housing for Seniors

Mastering the Demographic Change



Photo: Wolfsburg AG

MAX, a suit developed to simulate old age

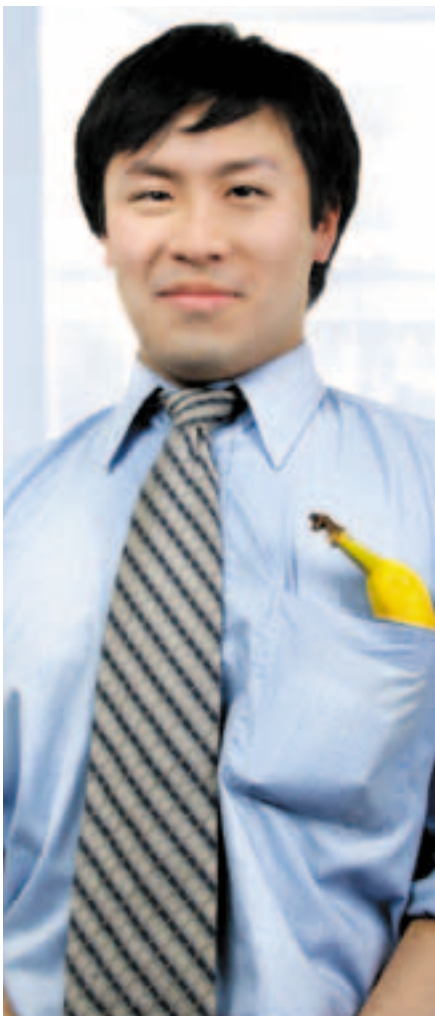
Already today the change in demographics poses a big challenge to industrial nations. One in five Germans is currently 60 years of age and over. Particularly in rural areas, one third of the residents is a member of this age group, and this trend is growing. What expectations do senior citizens have of products and services? Promising pilot projects in Niedersachsen show how the economy and society can be sensitised to such issues and how solution-focused approaches can be developed.

There is, for example, MAX, a suit developed by Volkswagen AG, AutoUni, Audi and Wolfsburg AG in cooperation with TU Chemnitz that helps to simulate old age. The modular design of this suit restricts vision, movement, hearing, strength and sensitivity

and enables younger people to experience the elderly's sensual perceptions of everyday life. "This suit helps us to better understand the demands of senior citizens and develop ideas how products and services can be made more suitable for them," says Ralf Sjuts, Head of HealthBusiness of Wolfsburg AG.

The topic "housing for seniors" is in the focus of another Wolfsburg AG project. Beginning in 2011, an on-site pilot house, which is to serve as an object for study as well as for tests and trainings, will provide realistic conditions to find out how one's own home can offer individual solutions for better living through intelligent technical systems. This will lead to enhanced comfort and security in one's living environment. 🏠

www.wolfsburg-ag.com



Boosting Corporate Brain

edubiz 2011

Platform for International HR Development and Corporate Education
HANNOVER MESSE | Global Business & Markets | 4 - 8 April 2011

edubiz is the conference on apprenticeship, qualification and human resource development in international companies. edubiz addresses responsible parties in HR and further education from companies, educational establishments and educational politics. The conference discusses the outcome of globalisation and demographical development for international businesses.

Organizer is the publisher local global of Stuttgart, whose publications discuss the entrepreneurial Praxis of internationalization.



edubiz WWW.EDUBIZ.EU

SAVE THE DATE
HANNOVER MESSE
Global Business
& Markets
4 - 8 April 2011



Photo: magrathea

magrathea Informatik GmbH is specialized in the field of time scheduling and resource planning. Their products — such as the **dashboard I.KLINIKTM** — are in use all over Europe in more than 300 hospitals

Medicine by Touch Screen

eHealth initiative Niedersachsen

eHealth has long become an irreplaceable part of the health care industry. Niedersachsen in particular is distinguished by cutting-edge research and innovative eHealth technologies. To foster this potential the Niedersachsen Ministry for Economics, Labour and Transport started the initiative eHealth.Niedersachsen in 2006.

What Does eHealth Mean?

The artificial term “eHealth” generally describes the use of modern information and communication technology for health care purposes. eHealth services offer in periods of demographic change an enormous potential for the social and economic development of a country. Based on telecommunication, eHealth applications can facilitate and accelerate the interaction between patients and suppliers of health care services. Multi-media administration systems such as the

electronic health record (EHR) enable a fast and particularly secure transmission and processing of data. Discreet assisting technologies for Ambient Assisted Living (AAL) give people the chance to live independently and safely at home up to an old age. Furthermore eHealth is a global trend: more and more patients consult the internet for information on their medical problems, thus making an increasing contribution to their own health protection.

Another subject that is also very much discussed in the German media is the introduction of the electronic health card. In the future, the electronic health card shall replace the health insurance ID in Germany. The aim is to reduce the costs for data transmission between medical service providers, health insurance companies, pharmacies and patients, and to facilitate and accelerate this process.

eHealth in Hospitals

A promising field of application for eHealth technologies is the hospital. The magrathea Informatik GmbH, located in Niedersachsen, has developed the clinic control system "I.KLINIKTM Medical Dashboard" which is unparalleled in the German market.

The dashboard visualizes sober administration and process data of the clinic in such a way that it can be used to control clinical operations. The visualization concerns room and bed utilization, patient information related to rooms, requirement and warning messages for employees as well as control data for the nursing staff. The information is visualized for the concerned location in the digitized floor plan.

Today the clinic staff relies on an application-oriented search for patient information. This means that the search is performed in several different applications—and this costs precious time. The magrathea Dashboard enables the clinic staff to accumulate the critical data of a patient from different IT systems and to properly display it, for example, on large screens in the corridors. The doctor can now be quickly informed of the current location and treatment of a patient. The intuitive user interface makes it possible that even personnel without data processing know-how are quickly able to use the system.

eHealth at Home

eHealth is not only used in hospitals but is equally important for rehabilitation at home. Rehabilitation plays an important role for the reintegration of patients into their social and working environments. Classic rehabilitation procedures are mainly marked by lack of sustainability: their most important weakness is often the short period of funding. However, behaviour changes and training effects can only be achieved over a longer period of time.

The MediTec GmbH, a company located in Niedersachsen, goes one step further with its TeleReha system and extends the scope of ambulant assistance to the patient's home. In his usual environment—but under constant guidance—the patient is able to integrate the required rehabilitation activities into everyday life and to develop habits that are beneficial to health. The key element of the MediTec TeleReha system is the TeleReha device. It is a constant companion of the patient that monitors the medically relevant parameters such as pulse, ECG and oxygen level of the blood. For controlling the device, a standard smart phone is used. The TeleReha device combines sensor technology and training equipment.

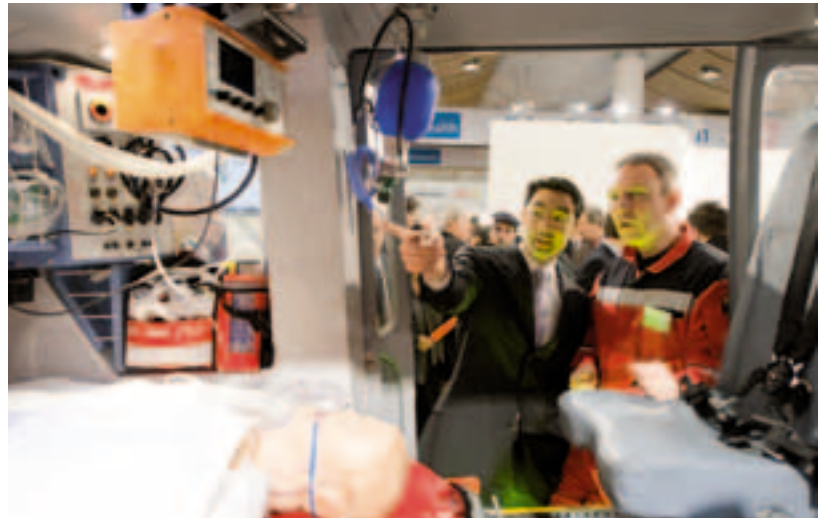


Photo: CeBIT

TeleHealth — A Leading Hub for eHealth

1 - 5 March 2011, Hannover, CeBIT

TeleHealth is a key component of the platform CeBIT gov. Its unique combination of exhibition, conference, networking hub and FutureCare pavilion make it the leading platform for dialog between government and business representatives on the one hand, and users of IT solutions in the health care sector on the other.

Topics showcased at TeleHealth 2011

- Networked medical structures
- IT-supported integrated care
- AAL (Ambient Assisted Living)
- High tech for prevention
- Personal data safes
- Health care apps
- Medical product law

A special highlight is the FutureCare pavilion. It offers a close-up look at how IT is being integrated in the health care industry. The visitor will be treated to practical application scenarios for the doctor's office, pharmacy, hospital and home. TeleHealth is a partner of eHealth.Niedersachsen.

The Initiative eHealth.Niedersachsen

eHealth.Niedersachsen is an initiative of the Niedersachsen Ministry for Economics, Labour and Transport in cooperation with nordmedia — Die Mediengesellschaft Niedersachsen/Bremen mbH. The objective of the initiative is to exploit the economic potential of eHealth within the framework of the growing health care industry in Niedersachsen, and to develop a network along the entire value chain.

Apart from regular events eHealth.Niedersachsen publishes each year, in cooperation with the University of Applied Sciences Osnabrück, an IT health care report which is a survey of all German hospitals. The publication "eHealth.Niedersachsen 2010" which will be released in autumn 2010 provides a detailed insight into current projects and activities of the initiative and its network partners. 📄

Contact

nordmedia Project Office
eHealth.Niedersachsen
Phone +49 511 123456-54
www.ehealth.niedersachsen.de

Technologies from Lüneburg for the Health Industry

eHealth is a guiding theme of the IT initiative ikn2020.



The teams of **Panasonic** and **lambda4** deal with the location of victims of accidents through high frequency waves.

All signals point to growth but the lack of skilled personnel and the cost pressure in the health sector are slowing everything down. What exist in abundance are solutions for easing the burden of routine tasks on personnel and for increasing efficiency, mainly in diagnostics and aftercare.

The Institute for Distributed Autonomous Systems and Technologies at the Leuphana Universität Lüneburg is developing, for example, Assistance Systems which ensure the safety and independence of people in need of support even outside of stationary units. Everything is focused on the people. Their way of living is not impacted by the assistance system. The so-called Ultra Wide Band (UWB) sensor is a technology which collects vital data without direct contact with the patient.

Competence Centre Lüneburg

There is no interaction required between the user and the collecting system. UWB sensors can, for example, be integrated in loungers. The system collects selected vital data such as heart rate, respiration, posture and location in the room. By using artificial intelligence the assistance system recognises current life situations and can determine emergencies with high certainty. This technical assistance system is being developed by altogether 10 partners in the science, health and technology industries.

The project receives support from the Federal Ministry of Education and Research (BMBF) under the name AAL@Home. Leuphana Universität Lüneburg will expand the "Integrated Medical Care" area to become a key research area. Within the framework of the

Photo: Lambda4 Entwicklungen GmbH, www.illuteam43.de

ikn2020, Initiative for the Information and Communications Industry in Niedersachsen, the business development department of the city and administrative district of Lüneburg (WLG) supports corresponding pilot projects. As a regional centre for this state initiative it brings together developers and users, particularly those in the e-health field. New promising development issues, such as the transfer of patient-related data in acute care, require special knowledge which can often only be made accessible by means of cooperations.

Integrated Medical Care

For example, a development team from Panasonic Electronic Devices Europe GmbH, Lüneburg, works together with a group of innovative, medium-sized enterprises. They deal, among other things, with the location of victims of accidents through high frequency waves or with the transfer of patient data to the emergency ward of hospitals while the patient is still on the way (see illustration).



Photo: istockphoto

The use of modern IT technologies in the health industry can make an important contribution to improving patient care with limited human resources. In this particular sector Lüneburg is becoming a competence centre because the university and businesses are working together on real-world solutions. They can only succeed if users already participate in very early development phases. The Lüneburg region offers especially favourable conditions in this situation. 

The new Niedersachsen initiative for the IT and communications industry, "ikn 2020", is a network of eight regions across Niedersachsen formed to better cross-link the region's IT companies. Within this initiative, Lüneburg has adopted the leadership in the e-Health area.

schwerdtfeger@ikn2020.de
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Controlling an Arm Prosthesis with the Mind

Despite having two arm prostheses, Christian Kandlbauer hardly needed any more driving lessons than other people before taking his driving test.



Photo: Otto Bock

The mind-controlled prosthesis for use in daily life emanates from the prototype arm and allows the performance of three movements triggered by thought commands: hand open and close, wrist turning both inwards and outwards and the elbow bending and stretching.

In September 2005, the world of Christian Kandlbauer has caved in. The 22-year-old man from Steiermark in Austria lost both of his arms in a high voltage accident. Today Kandlbauer is able to work again and even to drive a car by himself—due to a new prosthesis developed by medical technology company Otto Bock Healthcare. At the beginning of the cooperation with Otto Bock Kandlbauer was a little doubtful: “I couldn’t imagine how a mind-controlled prosthesis would work.” But then the medical team of Otto Bock explained it to him in detail and he gradually felt more assured. Now Kandlbauer is happy he said yes. He can move the mind-controlled prosthesis with his thoughts. “I can still remember my real arm. I just imagine moving the phantom arm, and the prosthesis instantly moves exactly how I want it to.”



Photo: Otto Bock

Christian works as a warehouse clerk at the garage that once employed him as a mechanic.

The first prototype of a mind-controlled arm prosthesis was presented by the Duderstadt based company Otto Bock at the end of 2007. Meanwhile the thought-controlled prosthesis is already suitable for everyday use. One of the main challenges was to reduce the weight from six to 2.5 kilogrammes. The existing version with three joints already offers an unusually high level of day-to-day autonomy and independence for the user. For Kandlbauer, who works in a garage, his new prosthesis led to a dream come true: he obtained his driving license and has been travelling back and forth to work in his own vehicle without assistance ever since.



Photo: Otto Bock



Photo: Otto Bock

“I move the mind-controlled prosthesis with my thoughts. I can still remember my real arm. I just imagine moving the phantom arm, and the prosthesis instantly moves exactly how I want it to.”

An Interview with Christian Kandlbauer

Mr. Kandlbauer, how did you lose your arms?

Christian Kandlbauer: All I know is that I had an electrical accident involving a 20,000 volt pylon. The hours before and after the accident are a complete blank, I can't remember anything. All I remember is when the psychologist came to my bedside in the hospital and told me that my arms were gone. That's when my world caved in.

Mr. Kandlbauer, how do you make your prosthesis do what you want it to?

I move the mind-controlled prosthesis with my thoughts. I can still remember my real arm. I just imagine moving the phantom arm, and the prosthesis instantly moves exactly how I want it to.

How has this prosthesis changed your life?

Thanks to the mind-controlled prosthesis, I'm almost as independent and self-reliant as I was before my accident. I can pretty much live the life I lived before the accident.

What can you do now that you never would have thought possible?

I never imagined that I'd be able to drive a car with two prostheses.

Why is driving so important to you?

Before, someone always had to drive me to work. Thanks to the mind-controlled prosthesis, I can drive to work by myself and don't need help from anyone.

What have been the most important changes for you since the amputation?

At first I couldn't imagine I'd ever be able to drive or work again after losing both arms.

How do people react when they notice you?

Most people don't even notice that I have prosthetic arms. You can't really see it if you don't look closely. But you're right, I occasionally do notice people looking at me and sometimes people ask me about it. But I don't mind. I've learned to accept myself as I am. That's very important. And I understand that people are curious about it.

You wear a muscle-controlled prosthesis on the right side and a mind-controlled prosthesis on the left. How do they differ for you?

The prosthesis on the right feels like a device I wear on my body. I control the prosthetic joints by contracting two muscle groups. One joint moves after the other. By contrast, the prosthesis on the left feels like a part of my body. I want to move my left arm, the prosthesis moves—just like before my accident.



Photo: Otto Bock



Photo: Otto Bock

How does a mind-controlled arm prosthesis work?

The principle of the mind-controlled arm prosthesis is based on **TMR (targeted muscle reinnervation)**, a process that uses remaining motoric nerves in the residual limb to control the prosthesis functions. The four main arm nerves, the median nerve, radial nerve, ulnar nerve and musculocutaneous nerve are redirected in a targeted fashion to the surgically segmented chest muscles. Following successful reinnervation (a process which may last several months depending on the length of the regenerated section), the surface of the chest (TMR region) forms **an interface to the human brain**. Electric nerve impulses coming from this region can be sampled and processed by surface electrodes as an EMG (electromyography). Powerful microprocessors in the prosthesis detect the motor commands underlying the impulses in real time and generate equivalent control commands for the joint motors in the prosthesis. The mind-controlled prosthetic arm makes it possible to perform movements in the joints as they were performed by the natural arm prior to amputation: intuitively and simultaneously.

Currently Christian Kandlbauer is leading a completely independent life almost at the level he enjoyed before his accident.

The latest Otto Bock prototype, equipped with seven joints, offers additional, sensational possibilities: for the first time, a prosthesis transmits such sensory information through the nerves and back to the brain. So, under laboratory conditions, Christian Kandlbauer is able to feel with this prosthesis as he did before his accident. The principle: nerve cords consist of a multitude of nerve fibres which are divided into two groups: the motoric (efferent) and the sensory (afferent) fibres. The efferent fibres of a nerve cord are responsible for motor control, the afferent fibres transmit the sensory perceptions in the opposite direction. The sensing thought-controlled prosthesis uses both abilities. "Microscopic sensors which capture the temperature, the grasping force, and the surface properties of an object being touched are integrated into the fingertip of the prosthetic hand", explains Dr. Hubert Egger, Manager of the "Thought-controlled arm" project.

Otto Bock HealthCare

The medical technology company Otto Bock HealthCare, flagship of the Otto Bock Group, is the leading supplier of innovative products for people with restricted mobility and the global leader in orthopedic technology. The company was founded in Berlin in 1919, and is now led by Professor

Hans Georg Näder, the third-generation managing shareholder. 100 percent of the shares are owned by the Näder family.

In 2009, sales increased to 500 million euros. By the end of 2009, the number of employees rose to 4,218 around the world. The global

activities of the group are coordinated by the head office in Duderstadt. The main production sites are Duderstadt, Königsee, Vienna, Beijing, and Salt Lake City. As a global brand, Otto Bock exports to all the countries in the world.

www.ottobock.com

The measured data are "translated" into suitable signals using a microchip and transmitted to actuators on the skin. These actuators generate lifelike stimuli for the sensory nerve endings, leading to restored perception in the brain: the prosthesis wearer feels as though with the index finger of the natural hand prior to the amputation. "Christian Kandlbauer not only moves his arm through thought processes about a natural arm, he has also regained feeling in the hand," says Dr. Hans Dietl, CEO of Otto Bock HealthCare Products GmbH in Vienna. The sensory prosthesis is a prototype. Dr. Dietl expects that the sensory arm prosthesis will be available for everyday use in approximately four years. Only then will Christian be able to use it every day. 🦾

Laser are Precise All-rounders — Especially in the Field of Medical Technologies

The Laser Zentrum Hannover and its spin-offs revolutionize the future of laser technology.

By Michael Botts

Since its founding in 1986, the Laser Zentrum Hannover (LZH) has become one of the largest independent laser research institutes in Europe. For many applications in the medical field, the technologies developed in Hannover by the LZH and its spin-offs – like Rowiak and Particular have become extremely important.

Laser Scalpels and Cell Manipulators

The Rowiak GmbH was founded in 2003. The company develops and manufactures innovative opto-electronical products for use in the field of life sciences. These products are based on material processing using femtosecond laser technology. Rowiak started out by specializing in laser scalpels, or more exactly laser microtomes, which can be used for three-dimensional cutting with a precision of under one micrometer.

The product spectrum has grown to include not only instruments for non-tactile cutting of biological tissue or other materials, but also systems for opthamological laser surgery. These laser units are used above all in laboratories in medical and pharmaceutical institutes, in biotechnology, genetics, or in cell and molecular biology.

Rowiak is dedicated to opening new applications for ultrashort lasers in the field of life sciences and material processing. By combining different optical processes, such as optical coherence tomography (OCT) or microscopy using laser-based instruments, new solutions for current research projects can be found. There are many possible applications, not only for medical technology, but also for material research, and for industrial processing of many different materials.

Laser Zentrum Hannover

The Laser Zentrum e.V. (LZH) has been partially sponsored by the Niedersachsen Ministry for Economics, Labour and Transport and has advanced to become an important member of the research landscape in the field of laser technology and optics in Niedersachsen and Germany. The LZH has

played an important role in establishing high-tech in Hannover and Niedersachsen, and has helped many companies in the region and beyond to start using laser technology in production, respectively to economically use the advantages of laser technology. A key element of this suc-

cess has been — since the founding of the LZH — the interdisciplinary cooperation between scientists and engineers, which has helped to establish laser technology in a wide spectrum of applications, from nanoparticles to ship-building. www.lzh.de

“Recently, Rowiak has started a cooperative project with the LZH to develop a prototype to correct presbyopia,” says Rowiak founder Prof. Dr. Holger Lubatschowski. “I think it will be possible to use the laser to correct vision in the near future, by restoring elasticity to the eye lens, which becomes hardened with age. Just think of the size of the market, considering that everyone over the age of 45 is affected by presbyopia!”

Manufacturing High Purity Nanoparticles

The Particular GmbH is a new LZH spin-off, founded on 1 July, 2010, by two LZH scientists. Particular uses



Particular produces highly pure **nanoparticles** for medical use. Here you can see nanoparticles of silver, titanium, platinum and gold (from l. to r.) in water

Photo: Particular

a new processing method to manufacture high purity nanoparticles from almost any material. Since nanoparticles are necessary for many research areas, such as medical technology, Particular's processing methods aim at both reducing costs for high-tech nanomaterials, and at helping introduce new nano-products to the market. This is true not only for products in the field of medical technology, but also for other high-grade products which can benefit from laser-generated nanoparticles.

Mini but Mighty

Nanoparticles are microscopically small particles, which can improve the characteristics of products, for example the biological compatibility of implants, infection protection for medical catheters, or for scratch-resistant sunglasses. Normally, chemical methods are used to manufacture nanoparticles, but Par-

ticular uses a laser to produce nanoparticles in a liquid, for example gold nanoparticles removed from the surface of a piece of gold.

"Laser technology can be used to open up new fields to nanoparticles", says Niko Bärsch, head of Particular. "Nanoparticles can make implants more compatible, or they can be used for diagnostic purposes." Particular is the first company in the world to produce nanoparticles in liquids using the laser. These particles can be made of almost any material, and especially their high purity characteristics make them suitable for commercial use. Apart from the good cooperation with the LZH, Bärsch emphasizes the support given Particular by the program "EXIST-Research Transfer": Funding from the German Federal Ministry of Economics and Technology will help Particular during their starting phase until the end of 2011. 🚀

Contact

www.rowiak.de
www.particular.eu



"I think it will be possible to use the laser to correct vision in the near future by restoring elasticity to the eye lens, which becomes hardened with age."

Prof. Dr. Holger Lubatschowski, Founder of Rowiak GmbH

Photo: Rowiak



Photo: GWG

Park with Potential

A biotechnology “Silicon Valley” is emerging in Göttingen.

Contact

**Gesellschaft für
Wirtschaftsförderung
und Stadtentwicklung
Göttingen mbH**
(Göttingen Society for
business and urban
development mbH)
Phone: +49 551 547 43-0
info@gwg-online.de
www.gwg-online.de

Things have not always gone well for the German biotechnology industry in the past decade. Since the decoding of the human genome at the end of the 90's triggered a veritable flurry of business foundations with several hundred biotechnology companies being established, the industry has experienced everything from exaggerated euphoria to disillusionment. Now, in 2010, industry experts agree that the original structural deficits were followed by a serious learning process, so that many sound businesses now display excellent strengths and market success. There is an impressive density of such strong, innovative enterprises in the city of Göttingen in southern Niedersachsen. This region has become established as a region that profitably combines science and business due to the especially advantageous conditions it offers for biotechnological development and production.

Science Park

How well Göttingen recognised the opportunities for an optimised platform for exploiting synergy effects, can be seen particularly in the Science Park in the city's north-western industrial estate. The Gesellschaft für Wirtschaftsförderung und Stadtentwicklung Göttingen (GWG) offers innovative technology enter-

prises and spin-off companies from the university, the university of applied science and renowned research institutes (e.g. the Max Planck Institute for Biophysical Chemistry) an extensive building complex with around 7,500 sq m of offices and fully-equipped laboratories. The opportunities offered have particularly been taken up by young biotech enterprises. They enjoy a reduction of economic risks, favourable rents and the integration into a network of consultants and people starting up their own businesses, exchanges with other technology centres in Niedersachsen, and the direct proximity to other biotech enterprises. They profit from the lively exchange with the numerous research establishments on site and the direct line to GWG, which acts as professional development partner. The Science Park is home to such biotech actors as IBA GmbH, DeveloGen AG, Fassisi GmbH, miprolab GmbH, Bioventure Consulting GmbH, and many more, as well as being next-door neighbour to Sartorius Stedim Biotech GmbH.

Driving Force against Worldwide Recession

This is where success can best blossom. In 2009, Sartorius Stedim Biotech GmbH (SSB), the biotechnology division of Göttingen-based Sartorius AG, achieved

substantial growth in sales, and a leap in profits. Biotechnology has proven to be a driving force against the worldwide recession. For 2010, the head of the group of companies, Dr. Joachim Kreuzburg, forecasts further strong growth of the biotech division and "very interesting new products" in the disposable product segment, which has achieved double-digit growth. Managers of other enterprises also foresee a positive future, and are pragmatically pursuing ambitious objectives. Dr. Lothar Germeroth, CEO of IBA GmbH speaks of a very good scientific environment. Dr. Frank Gessler, managing director of microbiological and toxicological diagnosis specialists miprolab GmbH, sees "a great deal of potential" thanks to the functioning networks. This is also supported by the very good situation regarding what are chiefly most medium-sized suppliers, who often contribute to the success with their own developments. Carsten Dehning, chair and CFO of Develogen AG, and Stephan Sander, Co-managing Director of Fassisi GmbH, a specialist for veterinary diagnostics also predict good prospects for biotechnology in Göttingen. The international reputation is being further reinforced, says Dr. Jens Peter Horst of MBM ScienceBridge. The CEO



Photo: Sartorius

The Göttingen-based **Sartorius GmbH** is an internationally leading laboratory and process technology provider covering the segments of biotechnology and mechatronics.

of this Göttingen University technology transfer establishment, which acts as mediator between inventors, patent lawyers and industrial partners, is also considering the wider area of neurosciences. This mutually stimulating environment also offers a range of interesting opportunities for prudent investors and potential cooperation partners. 

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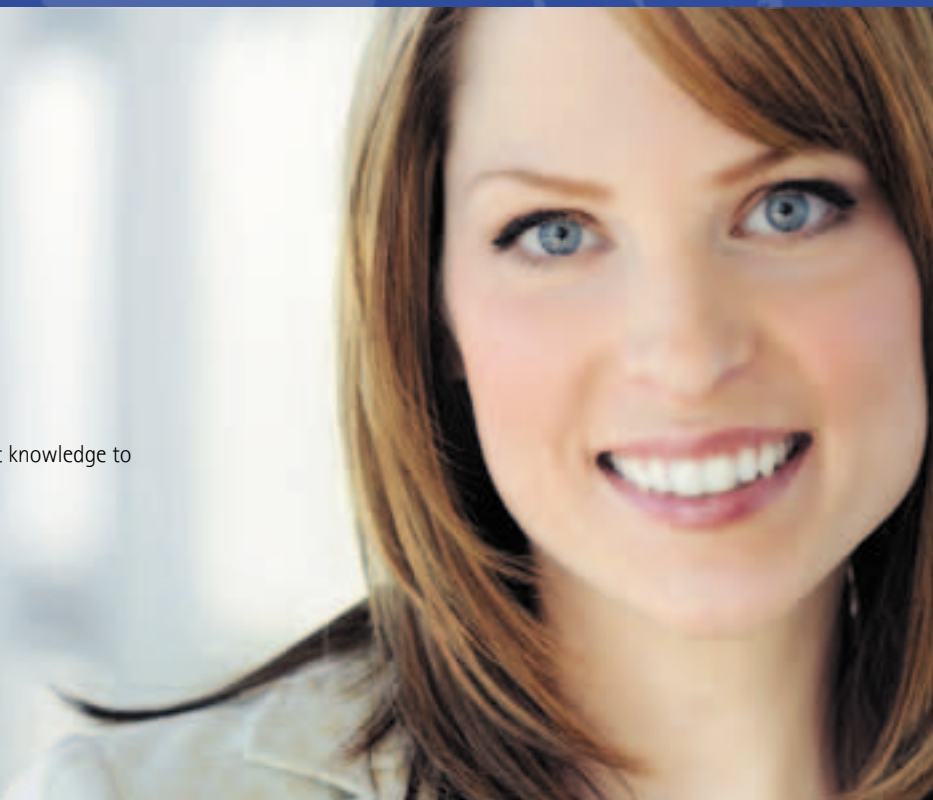
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New Plant in China

The Volkswagen Group expands its production capacities in China: The production at the new Foshan plant is supposed to start mid-2013. The complete production facility with press shop, body shop, paint shop and assembly unit is to be constructed on a site with an area of 170 ha. The annual production capacity will be 300,000 units. The new plant at Foshan is part of the Group's long-term growth strategy. "In the first five months of 2010, Volkswagen Group China sold about 778,000 vehicles, exceeding deliveries in the record year of 2009 by a further 48 percent," explains Dr. W. Vahland, President and CEO of Volkswagen Group China. www.volkswagen.de

New App for Tire Pressure

Continental is making driving safer and more economical with a new application that reports exact inflation pressure of each tire directly to a smart phone. The vehicle electronic is connected wirelessly with the driver's smart phone, therefore making speedy data exchange possible. From 2013, Continental expects to start mass producing the first tires that will have sensors collecting tire data directly in the tire underneath the tread, instead of sensors that are connected to the valve. This will mark the beginning of the intelligent tire era.

www.conti-online



Photo: Continental

Meeting at Mahr

At the site of Mahr in Göttingen, representatives of the German mechanical engineering industry have discussed the future prospects of the sector with Niedersachsen's Minister for Economics, Labour and Transport, Jörg Bode. After the crisis the new Mahr management will focus on new international prospects — above all in China.

by Hans Gäng



Photo: Mahr

Mahr is a global leader in the field of measuring technology.

The mechanical and plant engineering industry is looking up. The industry is represented by the German Association of Mechanical Engineering and Plant Construction (VDMA). In order to exchange views member companies met in August for the 2nd industry dialogue at the site of application specialist Mahr in Göttingen. The participation of the Minister for Economics, Labour and Transport of Niedersachsen, Jörg Bode, underlined the significance of this nation-wide communication platform. After his words of welcome, the minister discussed with the participants how to further strengthen the sector, which he characterised as a key industry for the state.

Successfully through the Economic Crisis

The new Chairman of the Board of Directors, Stephan Gais, presented the measuring technology company to the participants in his welcome speech and took them on a tour through the premises. In August of this year Stephan Gais succeeded Thomas Keidel, who retired after 26 years in the management of the Mahr group, but will remain as partner and member of the advisory board. The Managing Director for the Sales and Development area is now Ulrich Kaspar, who has been in the company for 19 years and successfully developed the hand measuring instrument business area in Esslingen.



Photo: Mahr

Site of Mahr in Göttingen.



Photo: Mahr

Jörg Bode, Minister for Economics, Labour and Transport, visits Mahr.

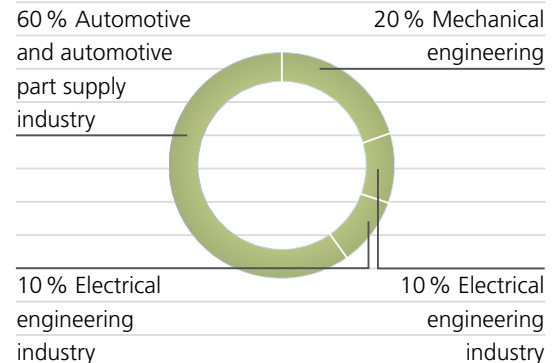
Gais described the prospects for Mahr after the crisis as positive. He reported a good order situation although this year's order level had still not quite reached the previous year's level. Only in 2008 Mahr had achieved a historic record result. In the past two years the entrepreneur led the company successfully through the economic crises—without losing any of those qualified employees who are so indispensable today. Gais: "Whoever fails to quickly and reliably deliver on the international markets will no longer be getting urgently needed orders." The Mahr boss was confident that in 2011 they would be able to get close to the revenue and profitability levels from before the crisis: "Today Mahr is number 3 in the global dimensional metrology market and has established itself as an application specialist."

The Importance of China

In particular, the growth market China is of high importance for the company in its current phase. Gais had described the dramatic effects of the world economic crisis on medium-sized companies in a previous interview with Niedersachsen Global (Issue 2/2009). His theory that they need to create room for manoeuvre for themselves has been proven to be true by Mahr during the last two years. Based in Suzhou, where the production and sales site has been expanded over a number of years, the company serves China's booming industries. "After the USA and France, China has become the third largest export market in the meantime," reports Ulrich Kaspar. Mahr is adjusting to continued growth in the Far East and intends to create the capacities required for this. Ulrich Kaspar: "We are working on expanding the production and also the sales functions. This involves cooperations as well as additional investments in our existing location. 🚗"

Mahr Facts

- Middle-sized globally operating corporation with headquarters in Göttingen
- No. 3 in world market for dimensional metrology
- Consolidated sales in the Group 192 million euros (2008)



■ Employees: 1,600

Production sites:

Göttingen / Germany, Jena / Germany, Wadgassen / Germany, Probstov / Czech Republic, Providence / USA, Suzhou / China

www.mahr.com

Source: Mahr

"Today Mahr is number three in the global dimensional metrology market and has established itself as an application specialist."

Stephan Gais, Chairman of the Board of Directors, Mahr



Photo: Mahr

Energetic Market Bustle in the Cuxhaven Trial Region

eTelligence — the intelligent energy network



Photo: EWE

The Cuxhaven region already covers 50 percent of its energy needs from wind power.

The Oldenburg-based EWE ranks among Germany's largest utilities. The group's activities comprise electricity, natural gas and water supply, energy and environmental technology as well as gas transmission and trade, telecommunication and IT. In 2009, EWE recorded sales of 5.8 billion euros. www.ewe.com

When the wind blows in Cuxhaven, it produces current. The region already covers 50 percent of its energy needs through wind power—the energy potential of this coastal region is literally in the air. However, wind power is not always available—the wind turbines often rotate at just the right speed, but sometimes the wind drops and they come to a standstill, and at other times, it is too gusty and the turbines have to be switched off for safety reasons. To smooth out these fluctuations in the energy supply it is necessary to steer the volume of electricity intelligently. The Oldenburg-based energy services company EWE has now created the rudder for doing so: eTelligence.

eTelligence is one of six projects to be sponsored by the German federal government as part of the E-Energy initiative. The research project runs until 2012. Taken together, the findings of those involved in the project are intended to produce standards that will subsequently set trends for the whole of Germany. In Cuxhaven EWE intends to build a regional marketplace for energy trading. “Goods will be traded there according to supply and demand, just like at a vegeta-

ble market. There also has to be someone to run the market, to set rules for the traders,” explains Dr. Jörg Hermsmeier, Director of the EWE Research and Development department. It has to be established who can sell on the market, who has which rights and how the settlement process should work. Laying down these market rules is one of the main tasks of the eTelligence project.

The energy market will be open to consumers, network operators and energy providers. Everyone can be both a consumer and a producer of energy. For instance a cold store operator can make his/her business available as a power storage plant; operators of photovoltaic systems, wind or biogas facilities can act as decentralized energy generators. Furthermore, every home and every company can steer their actual energy needs by efficient energy management. They will all be networked using the latest communications technology and together, they ensure that power loads can be shifted efficiently. This produces an energetic market bustle for a common goal—a sustainable energy supply and climate protection. 



“With the eTelligence project EWE will create a large community of energy producers and consumers”

Dr. Jörg Hermsmeier, Director of the EWE Research and Development

Photo: EWE



Photo: PZH

City of Sciences

International enterprises of various sectors benefit from the scientific expertise of the outstanding research institutes and universities in Niedersachsen's capital.

by Hans Gäng

As a Metropolitan Region, the Hannover-Braunschweig-Göttingen agglomeration can boast a unique combination of economic, academic and cultural potential, and, by concentrating these strengths it is able to make its mark in the competition between national and international locations. As a hub of international flows of traffic, trade and information, it unites a remarkable variety of competences and strengths in the fields of manufacturing, logistics, science, research and culture.

Technology meets Research

Niedersachsen's capital is proud of its international position in Life Sciences, since the university and research landscape is one of the most valued in Germany. And it's always just a small step to business – by the implementation of research results in Hannover.

Hannover shows an eye for proportion when considering the networking of research and production in the field of optical technology. The region possesses leading research centres in the fields of production and laser technology already over a period of many years already. The internationally leading Laser Zentrum Hannover (LZH), for example, has been around for over 20 years. The centre provides a powerful incentive for firms to set up research and development facilities close by, and also promotes training closely linked to industrial practice. The privately run GISMA German International Graduate School of Management (GISMA) is a cooperation partner of the prestigious Purdue University in the USA.

Also Production Engineering has been at home in Hannover for a long time. Good ideas and products are delivered continuously here, for example in the Hannover Production Technology Centre (PZH). It has a unique space of 20,000 square metres for work and research. The long list of major German research institutes hosted by the state capital – see box below – underlines the attractiveness of the region for both future minded enterprises and individuals.

Future Brains

More than 36,000 students live in Hannover region. Many of them also embark on their careers here. Hannover Region has evolved into a university landscape offering a diversity and a level of education which fully deserves its international acclaim, providing excellent career opportunities for graduates. The list of establishments is long: Leibniz University, Hannover University of Applied Sciences and Arts, University of

The Hannover Medical School, founded in 1965, is one of the world's leading university medical centres and the only free standing medical university in Germany.



Photo: MHH

At the Hannover Centre for Production Technology (PZH) teams of scientists, students, technicians and their business partners cooperate on research projects for improved production processes.



Photo: PZH

CeBIT is the worldwide largest exhibition and meeting point in the ICT field.



Photo: Deutsche Messe

The tire and automobile parts manufacturer Continental was founded in Hanover in 1871 and is currently one of the five largest automotive suppliers in the world and is the second largest in Europe.



Photo: Continental



Photo: Leibniz Universität Hannover

The Leibniz University strengthens its research position by regional cooperation agreements with other universities and research institutions. By working closely with industry the university plays an important part in the development of region and federal state.

› Veterinary Medicine, Hannover Foundation, Hannover Medical School, the Hannover University of Music and Drama, the Business University of Applied Sciences and the German International Graduate School of Management and Administration (GISMA) to name just a few. The Leibniz University Hannover is the largest funded institution in Hannover for providing higher education to the students from around the world. The University is the focal point of a vibrant scene that provides new impetuses to cultural and business life: numerous creative enterprises hammering out new ideas ensure that the transfer of high technology to industry thrives.

The capital of Niedersachsen is world-famous in both human and veterinary medicine. The Hannover Medical School (MHH) was a pioneer in transplantation. MHH has become the centre of transplant medicine in Germany, with more than 400 organ transplants per annum. The Cochlear Implant technique for treating the deaf makes the MHH Europe's leading institution in this field.

In the field of biotechnology MHH cooperates closely with companies established in the nearby Medical Park. The School of Veterinary Medicine Hannover is

a top international address and maintains partnerships with institutions in approx. 20 other countries. Not far from the MHH there is the International Neuroscience Institute INI, a special clinic and research establishment for neurosurgery, neurology, neuroradiology, ear, nose and throat medicine, orthopaedic surgery and internal medicine. Its architecture reproduces in an abstracted form the shape of the human brain.

Science Applied in Top Industrial Fields

The region is a huge laboratory for applied science. World-famous companies such as TUI, Bahlsen, Komatsu-Hanomag, Solvay, Sennheiser electronic, Kind hearing aids and Rossmann are based here. In the automotive industry Hannover is home to a number of technological leaders, such as Volkswagen Commercial Vehicles, Continental, Varta and Wabco.

Automotive is still the most important industrial branch in Hannover. More than 30,000 people are employed in this sector. With this service, Hannover belongs to the top five locations in Germany.

The Volkswagen Commercial Vehicles Transporter (VWN) factory at Hannover-Stöcken is the biggest employer in the region and operates a huge plant at the northern edge of town, alongside the Mittellandkanal and Motorway A2. Together with a plant of German tire and automobile parts manufacturer Continental AG they own a coal-burning power plant. Continental AG, founded 1871 in Hannover, is one of the major companies in town even if there's a takeover in process: The Schaeffler Group from Herzogenaurach (Bavaria) holds the majority of the stocks but, due to the crisis had to deposit the options as securities at banks.

Hannover is a location which is, in terms of energy and CO₂ efficiency, concerning in research, development, production and application without equal throughout Europe. For 175 years, Hannover has been in a leading position in the field of energy supply. Over 1,200 companies with 23,000 employees guarantee Hannover's role as an IT location of the premium class—and during the globally renowned Ce-Bit trade fair, the city becomes literally the focal point of the IT world community. Niedersachsen's capital is also proud of its international position in Life Sciences, since the university and research landscape is one of the most valued in Germany. And it's always just a small step to business—by the implementation of research results in Hannover.

Vitality of the Service Sector

Besides research and technology, a modern and highly competitive service industry is contributing to the region's role as one of the top business locations in Germany. Tourism giant TUI AG is headquartered in Hannover. Hannover is home for many insurance companies, many of them just with national relevance. One major global re-insurance company is Hannover Re with its headquarter situated east of city centre.

Major insurers and financial service providers such as the Talanx Group, VGH, Hannover Re, VHV or AWD have their headquarters here, providing for security in the future. In the financial sector, Nord/LB and Sparkasse Hannover are amongst northern Germany's leading banks. In the media area, the players of more than regional importance include the Madsack and Schlütersche publishing houses and the television programme-maker TVN. Norddeutscher Rundfunk, with its State Broadcasting House, and the private radio stations Hit-Radio Antenne, ffn and Radio 21 all broadcast from Hannover, and media specialists train at the ARD.ZDF medienakademie.

Competitive Infrastructure

Due to the World Exposition EXPO, Hannover has one of the best communications infrastructures in the world. More and more start-up businesses are exploiting this advantage and are coming up with business ideas that sharpen the profile of Hannover as a business location. Some ten million people live in the catchment area of Hannover's Langenhagen Airport, from where they can travel to destinations throughout the world. And Hannover is also becoming more and more important as a freight traffic hub: The German Railway Company has heavily invested in Seelze marshalling yard, which occupies a leading position in Germany. 🚂

Promotion of young talent has top priority at Volkswagen. In Hannover, the car manufacturer offers eleven job trainings.



Photo: Volkswagen

Based near Hannover, Sennheiser is one of the world's leading manufacturers of audio equipment.



Photo: Sennheiser

The Laser Zentrum Hannover specializes in high-quality coatings for optical components used in lasers.



Photo: EWE

The Centre for Production Technology GmbH works in close contact with the institutes of the Leibniz University and supports the scientists in transferring their innovations into practical applications



Photo: PZH

Osnabrück?

Its Products Are All Around You

Copper roofs, spicery and pralines, photo paper, and lifts are just some of the products manufactured in Osnabrück.



Photo: City of Osnabrück

Facts

- third-largest city of Niedersachsen
- 163,000 inhabitants
- well-known as the "City of Peace" because of the Treaty of Westphalia signed here in 1648
- Sectors: food industry, health care, automotive, logistics
- 18,000 students

Being the centre of an economic region in the West of Niedersachsen and the home to ca. 780,000 people, the "City of Peace" Osnabrück has always been an important place. The third-largest city of Niedersachsen owes its existence to a perspicacious decision of Charlemagne more than 1,200 years ago. Osnabrück's place in European history has been secured as one of the negotiation locations for the Treaty of Westphalia (1648). Osnabrück with its 163,000 inhabitants is the economic and cultural centre of the region with a catchment area stretching as far as North Rhine-Westphalia and even into the Dutch border region.

Economical Strenghts

Successful industrial enterprises and a wide range of medium-sized businesses from all sectors characterise the economic power of Osnabrück. One of the most important industries in the region is the automotive supply industry, as it employs approx. 15,000 people. Numerous jobs for highly-qualified personnel exist, for example, in the field of engineering. Along with the large companies, first and foremost Volkswagen Osnabrück GmbH and ZF Lemförder Fahrwerktechnik GmbH & Co. KG, there are many small and medium-sized enterprises based in and around Osnabrück. Other important activities in connection with the automotive sector are interior fittings, body construction, prototype construction, and tool manufacture. The food industry is another very strong sector in the region. The administrative district Osnabrück is ranked

third among the nation's top 30 locations, employing 8,500 people. Together with the neighbouring Grafschaft Bentheim district and the Münsterland, the region is even among the top 20 at the European level. The German Institute of Food Technologies (DIL) in Quakenbrück represents a renowned institution, the competence of which is recognised across the entire country. Also the RIS Centre of Competence for the Food Industry, operating state-wide, is rooted in this region. Both institutions support the companies' innovation and qualification efforts. In addition, companies such as R&R and Coppenrath & Wiese are also relevant industry players which are based in Osnabrück.

The health industry also plays an important role in the city at the River Hase. In order to list all market leaders and specialists in the health region Osnabrücker Land one has to take a really deep breath: One of the five largest cardiac centres and one of the largest private hospital groups in Germany, the largest German mail-order pharmacy, and the global market leader in the areas dental and rehabilitation technology. And last but not least: Renowned research institutes and the "GewiNet" competence centre—a joint facility of companies, hospitals, doctors, universities, and communities in the Weser-Ems region.

Qualified health personnel are easy to find in the health region Osnabrücker Land: this is due to 30 technical schools, and in particular two universities

with their focus set on health and healthcare sciences as well as health economics and dental technology. Moreover, more than two dozen education institutions, hospitals, and nursing homes are cooperating in the qualification alliance "Institute for Health and Education".

Education

However, not only health-related offerings have contributed to the educational reputation of Osnabrück. Even the Nobel prize is not beyond the realm of possibilities: In their capacity as members of the work group "Applied Genetics", scientists of the Osnabrück University have provided vital knowledge to the Nobel Prizes of 1997 and 2003. And there is the topic of "Artificial Intelligence": The "Maizerati" team of the Osnabrück University of Applied Sciences won the world championship in the "Autonomous Field Robot" discipline. At the Field Robot Event 2006 at the University Stuttgart-Hohenheim the students prevailed against competing teams from Malaysia, Chile, the Netherlands, Finland, and Germany. Already in the previous year the team from Osnabrück University recorded two sensational wins at the 2005 robot soccer world championship in Osaka, Japan. In the 3D simulation league the team from Osnabrück were runners-up; in the 2D simulation league they ended up as world champions.

The reason for the innovative capability of the altogether 18,000 students at the university and University of Applied Sciences in Osnabrück is due not only to internationally renowned lecturers, well-equipped faculties, and the high number of partner universities all over the world, but also to the business-science co-operation.

Business Meets Sciences

The Institute of Environmental Systems Research investigates new approaches to the management of water resources in its project "Newater". The European Legal Studies Institute, the Institute for European Law, and above all the Institute for International Private Law enjoy the highest domestic and international reputations. Here is the head office of the "Study Group on a European Civil Code", which plays a prominent role in the alignment process of private and commercial law within the European Union. The "Continuity of Care Network for the Osnabrück Region" consists of hospitals, geriatric homes, and outpatient nursing. It works on software solutions which are currently being tested in practice. The Osnabrück economic area benefits not only from its internationally successful global players, numerous small and me- ➤

Osnabrück benefits from its attractive location between the Teutoburg Forest and the Wiehen Hills, surrounded by many spas in close proximity.



Photo: City of Osnabrück

Christian Wulff is probably the city's most famous son. In June this year he was elected President of Germany. Previously, he held the office of Minister President of Niedersachsen.



Photo: Niedersachsen State Chancellery

Definite must sees: the charming historic Old Town with a magnificent cathedral and beautiful churches as well as interesting museums.



Photo: City of Osnabrück



Photo: rational

Over four decades **rational einbauküchen** has grown from a craft business into one of Germany's most renowned and international leading manufacturer of high-value kitchens.



Photo: Sanicare

Having started as a local pharmacy in Osnabrück, **Sanicare** is now the biggest mail-order pharmacy in Germany with more than 7,000 orders a day.



Photo: Georgsmarienhütte

Steel from **Georgsmarienhütte** is used wherever loads are at their greatest, where force is generated or transmitted, and where safety plays a role.



Photo: City of Osnabrück

The architectonic concept of the **Felix Nussbaum Haus** creates a spatial context in which the tragic combination of the life and works of the artist, who was born in Osnabrück, emerges as the all-dominant impression.

› dium-sized enterprises and its universities and science institutions, but also from its geographical accessibility and its central position in Europe.

Logistical Links

Already then Charlemagne recognised the city's advantageous location. In 780 he founded a bishop's see at the junction of old trade routes at the Hase river. Still today the routes from Scandinavia to Western Europe and from the Netherlands to Eastern Europe intersect here. Osnabrück is situated on the axes Amsterdam—Berlin and Rhein/Ruhr—Hamburg.

According to a study by the Fraunhofer work group for Technologies in the Logistical Services Industry (ATL) in March 2009, the Osnabrück/Münster region belongs to the top 18 logistics regions in Germany. The region's trimodal orientation with many handling capacities for intermodal freight transport (KLV) is a particular strength. Osnabrück is a crossroads of several waterways connecting it to the Bremen and Emden harbours as well as to Hannover and the Ruhr area. From a West German perspective the labour and ground costs are very competitive. Both Osnabrück and its region offer areas with great potential for establishing logistics operations. Well-known forwarding companies such as Hellmann Worldwide Logistics or Meyer & Meyer are headquartered here. In Osnabrück, Hellmann and NOSTA Transport GmbH handle KLV traffic.

Time to Relax

One who works a lot, also needs a rest. In the cultural sector Osnabrück can boast a whole set of attractive offers. The annual European Media Art Festival and the Kunsthalle Dominikanerkirche, presenting exhibitions on contemporary art, attract domestic and international attention. The latest and at the same time most spectacular addition to the varied and diverse museum landscape is the Felix-Nussbaum-Haus. The house, designed by the American architect Daniel Libeskind in a deconstructionist manner for the collection of paintings by the Jewish painter Felix Nussbaum, has attracted international attention and recognition. 🐾

A Thriving City

Peine is an endearing medium-sized town with approx. 50,000 residents in the heart of Niedersachsen between Hannover and Brunswick.

Peine has a thriving economic life: along with the lively shopping area in the town centre with its historical sights and places of gastronomic and cultural interest, Peine offers fully developed industrial and modern business parks, providing excellent conditions for commercial businesses.

Peine is directly connected with the A2 motorway between Hannover and Berlin, and therefore with further transport networks such as Langenhagen Airport. Its fully developed infrastructure makes Peine an attractive business location. Companies from a variety of sectors have already established themselves here. And its attractive surroundings offer an important residential and leisure value with a good range

of care and education opportunities for children. Its townscape has lovingly designed green spaces, and its surrounding areas with a practically untouched landscape can be explored by bicycle. Peine is a beautiful place to live. Our lively shopping area with its many sights and gastronomic venues is particularly charming. Cultural attractions such as the two big theatres in the Peine Forum and the Peine Ceremonial Halls, as well as the cabaret theatres offer something for everyone's taste.

Commerce and business are well set up; with the recently opened City-Galerie in the centre of Peine, a modern shopping world has sprung up, attracting shoppers with its 6,700 sq metres of retail space. 

Stadtverwaltung Peine
Wirtschaftsförderung
(Peine Town Administration / Department of Trade and Industry)
Annette Szagun
Kantstraße 5
31224 Peine
Phone +49 5171 49 315
annette.szagun@stadt-peine.de
www.peine.de

Peine – keeping you on the move!

Peine is an ideal business location in a beautiful environment.

A large variety of manufacturing and service businesses that already have a strong local and regional infrastructure of the town and the Peine previously designed business and infrastructure environment, which is well suited to the individual needs of different companies.

In particular, there are excellent staff at hand for numerous national and foreign companies. The excellent infrastructure and excellent housing, the Peine Forum and the Peine Ceremonial Halls, the Peine Forum, as well as a development in the Peine Forum, which is well suited to the individual needs of different companies, which is well suited to the individual needs of different companies.

It is a pleasure to work with the Peine Forum and the Peine Ceremonial Halls, which is well suited to the individual needs of different companies, which is well suited to the individual needs of different companies.

Your contact is
Annette Szagun

Stadt Peine / Wirtschaftsförderung
Kantstraße 5 | 31224 Peine | Phone +49 51 49 315-242, Fax +49 51 49 315-243
E-Mail: annette.szagun@stadt-peine.de



www.peine.de

15 – 26 November 2010, Santiago de Chile,
Calama, Barranquilla, Bogotá

Chile and Colombia

The delegation trip of the German mining supply industry is organised by the IHK Hannover in co-operation with the VDMA (German Association of Mechanical Engineering and Plant Construction) and the local Chambers of Industry and Commerce. It offers an interesting programme focusing on the mining activities in Chile and Colombia.



Photo: flickr_kevinbotto

23 – 25 January 2011, Dubai

United Arab Emirates

Niedersachsen's Minister for Economics, Transport and Labour, Jörg Bode is accompanying a delegation from Niedersachsen to the Arab Health trade fair. Arab Health is one of the world's largest healthcare exhibition in the Middle East.

19 – 22 February 2010, Damaskus

Syria

In order to intensify the economic and political relations with Syria, the Ministry for Economics, Transport and Labour of Niedersachsen plans a four day delegation trip in cooperation with NGlobal and the IHK Hannover. Interested SMEs based in Niedersachsen are very welcome to take part in this delegation.

Detailed information on delegation trips, registration as well as additional events can be found under www.nglobal.de

„Driving Force“

Niedersachsen's new Prime Minister, David McAllister, on the state's international focus and the importance of small and medium-sized businesses

David McAllister

12 January 1971:
born in Berlin, married,
two daughters
1991 - 1996: Studies
of law at Hannover
University
since 1998: Lawyer
since 1998: Member
of the federal
state parliament of Niedersachsen
2001 - 2002: Mayor of the
town of Bad Bederkesa
2002 - 2003: Secretary-
General of the CDU
in Niedersachsen
2003 - 2010: Leader
of the CDU in the
federal state parliament of
Niedersachsen
since 1 July 2010:
Prime Minister
of Niedersachsen

Prime Minister, how important is the further internationalization of Niedersachsen's business for you?

Niedersachsen places a very high value on internationalization. It is one of the main focuses of our economic policy. Niedersachsen will only remain competitive if we incorporate the broader perspective and influences of the wider world in our decision-making processes.

How do you see Niedersachsen positioned in terms of international competition?

At a time of globalization, Niedersachsen is in competition with every region of the world. In future, our success in the face of this competition will depend much more on our presence in international markets and our ability to innovate.

For this reason, the internationalization of our state and our businesses is very important. The excellent trade fairs that we have in Niedersachsen, especially in Hannover, are a great advantage for us.

The state helps local businesses to showcase themselves abroad and to position themselves in international markets. Our broadband initiative, for instance, is very helpful in this respect: it helps businesses to keep in touch with their international business partners around the world. Our investment in port facilities on the North Sea coast has created the ideal conditions for import and export business. Research centres with a great international reputation, such as the CFRP Research Centre in Stade, also play their part.

“At a time of globalization, our small and medium-sized businesses are also in competition with every region of the world. That is why improving their international competitiveness has long been one of the goals of our foreign trade policy.”

David McAllister, Prime Minister of Niedersachsen



Photo: Niedersachsen State Chancellery

We both advocate and support the internationalization of the economic and investment region of Niedersachsen in the heart of Europe.

Do you think it will also be possible to market the state's expertise in the areas of mobility and sustainability in Asia's growing markets?

Mobility and transport are two of the most exciting prospects for the future. Hardly any region in Europe has as much expertise in the area of mobility as Niedersachsen. The auto industry, with Volkswagen and their suppliers, obviously plays an important role here. Added to this we have specific expertise in areas such as rail technology, ship-building, port industry, aircraft construction, traffic control and logistics. Renowned research establishments in Niedersachsen are developing trend-setting concepts for today's transport problems. They are providing innovative and sustainable solutions that are changing both economic and ecological structures. We are therefore taking an intelligent and inter-disciplinary approach to the development of transport, services and infrastructure.

We are also marketing this expertise and know-how in Asia. Indeed, it is these growing markets that face huge challenges in terms of mobility. This includes the mega-cities that are threatened with gridlock and the lack of infrastructure in rural areas. This is where businesses and research establishments in Niedersachsen are in demand as consultants and business partners. This is becoming very obvious in the political discussions that I have during delegation trips, for instance. Naturally, I'm happy to use these opportunities to promote Niedersachsen's strengths in the area of mobility

What role do you see for small and medium-sized businesses during your upcoming trips?

Small and medium-sized businesses are the driving force behind our economy. Economic policy in Niedersachsen is first and foremost about small and medium-sized businesses. More than 99 percent of all businesses in Niedersachsen fall into this category. They employ around 70 percent of all employees and just under 85 percent of all trainees. At a time of globalization, our small and medium-sized

businesses are also in competition with every region of the world. That is why improving their international competitiveness has long been one of the goals of our foreign trade policy. Delegation trips are one of the most successful ways of achieving this. They help us to make initial business contacts and gain an impression of the local economic situation.

Niedersachsen has a lot of links with the UK: a shared history, the North Sea and now, of course, you personally. Are you looking at ways to develop these links in terms of business?

In addition to the eventful history of the Personal Union of 1714 to 1837, we are first and foremost linked by the North Sea. The United Kingdom is also a very important European trading partner for Niedersachsen. After France and the Netherlands, Great Britain was the third biggest importer of goods and services from Niedersachsen in 2009, with a figure of 3.953 billion euros.

Great Britain also contributes significantly to our tourism: on average we get 135,000 overnight visits from there. Only the Dutch and the Danes are more frequent visitors. These are also reasons why I try to develop the best possible relationship with the United Kingdom. Indeed, next year during a trip to England and Scotland I will be holding talks with politicians and businesses with a view to promoting much stronger economic cooperation between us. The British Armed Forces in Niedersachsen are welcome friends and guests. 🇬🇧

Niedersachsen at Expo Real 2010

Niedersachsen's business development organisation Niedersachsen Global (NGlobal) presented the state's flagship projects in a Niedersachsen Lounge at the Expo Real 2010 in Munich.



Photo: Messe München

The growth regions and model projects to be presented by NGlobal at this year's Expo Real in Munich included the growth industries deepwater ports, offshore industry, electromobility, and food logistics. These industry-oriented projects and locations will release tremendous growth potential in the corresponding regions and present an appealing and attractive environment for industry-related companies to establish themselves.

JadeWeserPort in Wilhelmshaven

The JadeWeserPort, one of the largest Northern German infrastructure projects in the last 50 years which was implemented by the states Niedersachsen and Bremen, is the only deepwater port in Northern Europe other than Rotterdam that is non-tidal and accessible without waiting periods. Additionally, a freight traffic centre of European significance, covering approx. 160 hectares of ground, will be developed here.

The Seaports in Niedersachsen

Triggered by the dynamic growth of industries related to electricity production with onshore and offshore wind energy plants, the seaports in Niedersachsen are currently experiencing an outright boom situation. Generously sized areas suitable for heavy-duty cargo, modern cargo transfer sites with efficient facilities, excellent connections to the hinterland, and the existing logistical infrastructure make the seaports situated in Niedersachsen the top locations for the production, transport, storing, and transfer of large components for wind energy plants.

Jade Bay Region

The Jade Bay Region offers a broad portfolio of sites for industrial and commercial use. The freight village (GVZ), the JadeWeserPort, the JadeWeserPark, the Chemical Industry Park Wilhelmshaven, or the Com-



Photo: JadeWeserPort

Expo Real, the largest B2B trade fair for commercial real estate in Europe focuses on networking, market orientation and valuable business contacts.

The JadeWeserPort is the only deep water port in Germany that is not subject to tidal changes.



Photo: EWE

Osnabrück's competence in electromobility: E3 is a joint project of Karmann/VW and EWE.

mercial and Logistics Portal Varel are but a few examples for a rising economic region. For businesses dealing with wind energy plants the industrial estate Aero Mare Lemwerder, with its nearby harbour and waterway (Weser) navigable by seagoing vessels, provides optimal conditions for the production and shipping of large components such as wind turbines and other components. The BioPort Brake has been able to establish itself as the main handling centre for agricultural and forestry products due to its optimal transport location.

The Industrial Estate "Evolumotion" in Osnabrück

The focus in the Osnabrück industrial estate "Evolumotion" is clearly on the automotive field, particularly the sunrise industry electromobility. As the hometown of the company once known as Karmann GmbH, which has now been taken over by Volkswagen AG, the city of Osnabrück can point to a long-standing tradition in vehicle development and vehicle construction. Following the considerable commitment of Volkswagen to the Hanseatic city this location will play an important role in vehicle development and vehicle construction in the future. Particularly in the electromobility sector the vehicle designers from Osnabrück have been pioneers. For example, the electric car E3, a joint project of Karmann/VW and the Oldenburg-based energy company EWE, is already in market testing.

Food Industry Cluster Dissen

The town of Dissen in the Osnabrücker Land region presents itself as a cluster for the food industry. Companies already known nationally from the segments delicatessen, meat and sausages, and herbs as well as highly specialised service providers from this industry have established themselves here. 🍷

Hannover Messe, 5 April 2011

2nd Niedersachsen Foreign Trade Prize 2011

Also in 2011 the Niedersachsen Foreign Trade Prize will be awarded to honour outstanding achievements of Niedersachsen-based SMEs in the foreign trade area. During the Foreign Trade Forum 2010, the Niedersachsen Foreign Trade Prize was to be awarded for the first time: it was bestowed upon Chriwa,

an SME based in Ham-bühren to honour and publicise outstanding achievements in foreign trade. Along with extensive international references and innovations, the company also convinced the jury with its continuing education and training activities for their employees as well as consistent promotion of young

talent. The other nominees 2010 were Novatex GmbH from Pattensen, Röwer & Rüb GmbH from Thedinghausen, Stöbich Brandschutz GmbH from Goslar, and TESCON security systems GmbH & Co KG from Salzgitter.

Application deadline:
4 February 2011
www.nglobal.de



Photo: NGlobal

Innovation Campaign Niedersachsen

"You know our horses. Now experience our power."

This is the motto with which the campaign "Innovative Niedersachsen" makes the state's strengths known to the public. The campaign, initiated to position the state together with its companies as an in-

novative business and research location within Germany, was started in March 2007. By the end of 2013 the state will have allocated three million Euro annually for staging the campaign; additional resources

are being provided by sponsors. The German-language magazine "Plietsch", introducing Niedersachsen as an innovation location, is part of the campaign.

China Calling

Opinions about the country may differ — but the enormous development that this country has achieved is undeniable.

Representative Office China

Mrs. Michaela Holdt
15F China Insurance
Building
166 East Lujiazui Road
Pudong New District
Shanghai 200120
PR China
Phone +86-21 68419 885
Fax +86 21 68419 082
holdt@niedersachsen-in-china.com
www.niedersachsen-in-china.com

by Michaela Holdt

China—a country that lets people's opinions drift far apart, when it comes to certain issues concerning this huge country brings views back together again when it comes to China's extremely fast development.

Events such as the Olympic Games and the World Expo undoubtedly contributed to the progress of some cities. Around 45 billion USD were spent to prepare Beijing for the 2008 Olympic Games. An equal amount was used to change Shanghai into impressive metropolis deemed appropriate to host China's yet biggest event: The World Expo 2010.

"Better Cities, Better Life"

The theme "Better Cities, Better Life" promotes sustainable urban development practices. The event enjoys a huge success, and neither rain nor heat waves keep a daily average of 350,000 visitors from coming. Long queues are the consequence. At peak times, a six hour waiting period is not unusual and the line for the German Pavilion is no exception. Still, crowds are willing to deal with it to visit the three-dimensional walk-through sculpture, and learn about the "Balance," which is meant to signify a city in balance.

The theme of the Expo is not only depicted in the individual pavilions but will also let the city and its people benefit from projects long after the Expo's expected 70 million visitors have left. A greener landscape, new roads, tunnels and bridges, and a vast expansion of the city's public transit systems, which now serves about six million people each day, are only some of the positive side effects of this event.

In addition, huge real estate projects continue to be underway and are also spreading to other cities. How-



Photo: shanediaz120/flickr

All eyes on China: after the global crisis the chinese economy has become the driving force for the global economy.

ever, housing prices, fueled by aggressive bank lending and state-owned companies' high bids, doubled in recent years, leaving concerns about the rising of a growing property bubble. So far, China has managed to stay away from bubbles and subsequent crises. Government involvement and its 586 billion USD stimulus package helped China to boost investments and to reach a growth rate of 8.7 percent even in 2009.

Cheap Workers Become Demanded Customers

China development is not only limited to tangibles, but can also be seen by a transition in its people. A more educated work force and a larger middle class with purchasing power and a purchasing will, keep the economy going and raise expectations about a highly lucrative domestic market. Foreign companies that once entered the Chinese market for cheap labour may now want to stay for its 1.3 billion customers. Opportunities will remain, but companies need to be competitive to get a foot into China's market. 🐼

China

GNP: 4,326,187 m USD
Growth: 8.7 %*

Strengths

- + External accounts buoyed by industrial competitiveness
- + Gradual move upmarket
- + Infrastructure development
- + Very high corporate savings rate

Weaknesses

- Social tensions
- Industrial and commercial overcapacity
- Weakness of Chinese banks
- Environmental problems

* estimated / Source: Coface

Atlanta, USA

Mrs Silke Miehke
 German-American
 Chamber of Commerce
 530 Means Street,
 Suite 120
 Atlanta, GA 30318, USA
 Phone +1 404 586 6800
 Fax +1 404 586 6820
 Info@gaccsouth.com

**Representative Office
Washington, USA**

Mr. Steven K. Lanier
 American World Services
 Corporation
 1247 Wisconsin Avenue
 NW Suite 201
 Washington, DC 20007,
 USA
 Phone +1 202 296 7385
 Fax +1 202 333 0017
 slanier@awscorp.com
 www.awscorp.com

**Partner Office
Havana, Cuba**

Mr. Dieter Kipp
 Calle 3ra. No.24 e /
 C y Final, La Puntilla,
 Miramar, Playa,
 Ciudad de la Habana
 Phone +53 7 204 0640
 Fax + 53 7 204 5803
 dieterkipp@mixmail.com

**Partner Office
Scandinavia**

Mr. Benny Egholm
 Sørensen
 Buen 6-8
 6000 Kolding, Dänemark
 Phone +45 76 34 45 00
 Fax +45 76 34 45 01
 bs@connecting-markets.com

**Representative Office
Russia**

Mr. Andreas Jopt
 Mrs. Anna Urumjan
 1. Kasatschi Pereulok Nr. 5
 119017 Moscow
 Russia
 Phone +7 495 730 40 43
 Phone +7 495 234 49 83
 Fax +7 495 730 40 44
 niedersachsen@col.ru
 dman@col.ru

**Partner Office
Poland**

Mrs. Patrycja Kosta
 Nordic Park
 ul. Kruczkowskiego 8
 00-380 Warszawa
 Phone +48 22 353 86 66
 Fax +48 22 501 46 39
 kosta@niedersachsen.com.pl

**Representative Office
UAE**

Mrs. Angela Schaschen
 Suite 105
 Sultan Business Centre
 P.O.Box 72736
 Dubai,
 United Arab Emirates
 Phone +971 4 337 6072
 Fax +971 4 337 6074
 angela@messe-me.com

Saudi Arabia

Mr. Peter Michael Perkuhn
 German Saudi Arabian
 Liaison Office
 for Economic Affairs
 (GESALO)
 P.O. Box 61695, Riyadh
 11575 Kingdom of
 Saudi Arabia
 Phone +966 1 462 3800
 Fax +966 1 462 8730
 perkuhn@ahk-arabia.com

**Representative Office
India**

Mr. Sudhir Patil
 Hannover Milano Fairs
 India Pvt. Ltd. B 303 -
 Dynasty Business Park
 Andheri Kurla Road,
 Chakala,
 Andheri-East Mumbai
 400093, India
 Phone +91 22 40050681
 Fax +91 22 40050683
 sudhir.patil@hmf-india.com

5 April 2011, Hannover Messe

Foreign Trade Forum: Turkey

The 8th Foreign Trade Forum will focus on Turkey and will take place during Hannover Messe on Tuesday, 5 April 2011 at the Nord/LB Forum. As an international forum, the event serves as a platform on which Turkey can present itself and its business strengths to an interested audience drawn from the areas of business, science and politics.

www.nglobal.de

9 - 12 December 2010, Istanbul

Renex – Renewable Energies

As the international trade fair in the Renewable Energies sector, Renex 2010 points out attractive investment opportunities and potentials in the areas of energy, efficiency and environment in the South-east European economic area. Key topics will be: wind energy, solar systems, geothermal resources, water supply and disposal, recycling and environmental technologies, hot water production, and biofuel. In South East Europe, there is a particularly high need for investment in the energy sector.

For further information on Niedersachsen's joint presentation:

www.tabc-niedersachsen.de

1 - 5 March 2011, Hannover

CeBIT

Turkey is the official partner country of CeBIT 2011

Turkey is an attractive, emerging market for high-tech enterprises. As a result, the German IT and telecom industry have teamed up with CeBIT to make Turkey the official Partner Country for 2011. "Germany has been Turkey's leading trade partner for many years," declared Bitkom President August-Wilhelm Scheer. "Given their experience in Europe and Asia, Turkish enterprises are highly interesting cooperation partners. German firms will benefit from a more extensive exchange," he continued. The cooperation is also intended to help German SMEs become more active internationally.



Photo: CeBIT

Good Relations

Niedersachsen has an excellent economic relationship with Turkey.



Photo: CeBIT

Signatures in Istanbul:
Dr. Oliver Liersch, State Secretary for Economics, Labor and Transport for the German State of Niedersachsen, **Ernst Raue**, Member of the Board of Deutschen Messe AG, Hannover, Germany and **Murat Yalcintas**, Chairman of ITO Istanbul Chamber of Commerce, Chairman, at closing the contract for CeBIT 2011.

by Hans Gäng

There are a number of factors which have brought the Northern German state and the dynamic Turkish economy closer together and led to a trade volume of 1.5 billion euros. The Turkish market absorbs many high-quality products from Niedersachsen: equipment for the generation of electric power, cars and motor homes, plastics, and machines constitute a significant part of the exports from Niedersachsen. The imports are dominated by clothing, buses, automotive supply parts, and cotton. Tourism contributes its fair share to the good relationship: Niedersachsen's tourism giant TUI has for many years operated successfully in Turkey's attractive holiday destinations.

Now there is a new reason: Turkey has been quick in overcoming the global economic crisis. The country is trying to become less dependent on the EU markets and presents itself as a bridge into the neighbouring markets in Central Asia, the Gulf, and Northern Africa. And it is following ambitious plans to modernise its infrastructure. Particularly in the area of renewable energies there are opportunities for interesting partnerships with Niedersachsen, Germany's energy hub.

Exploring New Business Opportunities

And Niedersachsen cultivates relationships: delegations – such as the one headed by the Minister for Economics, Labour and Transport, Jörg Bode, last May – explore new business options. The travel groups setting out from Hannover to Istanbul, Ankara or Izmir are mainly made up of business leaders who know

Turkey exceptionally well and have the best contacts in the country. German companies with long-standing experience and market success as well as successful entrepreneurs of Turkish origin: both, for their part, motivate Turkish businessmen to consider Niedersachsen as their location for accessing the European market. A German-Turkish Business Center sponsored by NGlobal and HannoverImpuls has the aim of providing Turkish businesses interested in and willing to establish themselves in Niedersachsen with comprehensive information on the prospects in the state.

Turkey Making its Mark in 2011

The role of trade fairs can hardly be overestimated in the fact that Niedersachsen has become known in Turkey. More and more Turkish exhibitors intend to gain global market access by way of the platforms offered by the Deutsche Messe, and not only in Hannover. Its subsidiary in Turkey has been expanding quickly and has become the dominating player in the Turkish trade fair market. Trade fairs such as WIN, CeBIT Bilisim, and the newcomer Renex are where German companies meet new customers from the entire region. In 2011 the trade fair city Hannover will return as a focus of interest to Turkey. The ambition with which Turkey pursued its role in 2007 as an active partner country of the Hannover Messe suggests that Turkey will also want to make its mark in 2011. Turkey is the partner country at the CeBIT and is also the market to which the Niedersachsen Foreign Trade Forum at the Hannover Messe is dedicated. 📍

Further information at www.nglobal.de

Türk-Alman Business Center

The strong new platform for Turkish-German business relations.

Business relations between Turkey and Germany are of increasing importance for both countries. In order to meet these requirements the

“taBC – Türk-Alman Business Center” has been founded in Niedersachsen. Here you meet experts who assist you in developing new business fields in

Niedersachsen. Regardless whether you are looking for office and/or storage space or for strategic partners, our teams know the region and will be happy

to help you find your way into the market. The newly-founded Business Center in Niedersachsen is a joint project of Niedersachsen Global

(NGlobal) and hannoverimpuls.
www.tabc-niedersachsen.de

Right Man, Right Place

People who are devoted to their work are abundant in the trade fair business.

As Managing Director of Hannover Messe Turkey, Alexander Kühnel has a dream job.

"I'm about to accept an absolute dream job," this giant of a man told me just before he left for Turkey. Until then, Alexander Kühnel had been responsible for the supplier segment of the Hannover Messe, among others,—one of the cornerstones of the industrial world fair. Almost nowhere is the share of foreign exhibitors higher. Together with his colleagues in Hannover and Istanbul Alexander Kühnel had also made sure there that the share of Turkish exhibitors grew year after year.

The dynamics of the Turkish market had been obvious to Alexander Kühnel by looking at the foreign Hannover Messe clones which he pushed from Hanover. China, India, Russia, the Gulf and finally Turkey—they are all exciting markets for Deutsche Messe and its internationally acknowledged trade fair brands. The Deutsche Messe is well-positioned everywhere, installing their own sales teams and events, and is expanding its foreign business by entering into smart cooperations. As a result it also gains partners for its home events in Hannover, which in turn can mobilise additional exhibitors and visitors for the home location in Niedersachsen. In an exemplary fashion and with great success this is exactly what Deutsche Messe did in Turkey.

There Deutsche Messe does not have its own exhibition grounds. However, since Alexander Kühnel took over in Istanbul, he headed a considerable portfolio of events. The Turkish edition of the Hannover Messe is WIN, which has been divided in two and thus fills all halls of the Tüyap exhibition grounds twice each spring. It is an attraction for the entire Eurasian region. Kühnel: "The ori-

entation of the Turkish exporting industry towards new markets in the Arab world, Northern Africa, and the Turkic states of Central Asia is a good basis for trade fairs in Istanbul." After all, Hannover Fairs Turkey also brings the Turkish industry together at the foundry trade fairs Ankiros, Annofer, and Turkcast. "The Turkish industry has achieved good results and gotten out of the crisis. This means that we also step up our efforts," says Kühnel. It is no coincidence that Kühnel and his enterprising colleague Belkis Feron manage to get the Turkish foundry industry to exhibit in Hanover year after year. In cooperation with Messe Frankfurt, Deutsche Messe organises the Auto-mechanika in Istanbul.

CeBIT Bilisim

One highlight in the autumn is CeBIT Bilisim—illustrating the growing ICT market in Turkey and, with 126,184 visitors (2009), the most important event in the entire region. Leadership and perspective are the very qualities of Deutsche Messe, even in areas which it does not actively attend to in Germany: Travel Turkey takes place in Izmir and is the most significant Tourism fair for the country. Sodeks, Deutsche Messe's heating, ventilation, refrigeration show in Istanbul is Turkey largest trade fair.

There is one innovation Alexander Kühnel is really proud of: "On the topic of energy, Turkey has a key role to play in the region. Our new event Renex, dealing with renewables, will make clear what a huge potential this market has here in the region."

What is the basis for success in the trade fair business in Turkey, along with the right themes? For Alexander Kühnel there is no doubt: "Networks, communication, flexibility." Being German, he has to work out solutions together with his Turkish partners that are acceptable for both sides: "A simple black or white does not exist here." Is he still feeling comfortable after almost two years at the Bosphorus? "No question about it, this is one of the most exciting trade fair locations in the world." 🇹🇷



Photo: Deutsche Messe AG



NEW RELEASE
EXHIBITION MARKET
LATIN AMERICA
2011 | 2012

Exhibition Market Latin America 2011 2012

Trade Shows in Latin America:
New Opportunities for International Exhibitors

Trade fairs and exhibitions abroad are a proven way to enter new country markets. For German and European as well as Latin American companies, the "Exhibition Guide Latin America" gives an insight into the range of the Latin American exhibitions and presents the most important trade fair venues. Furthermore, the publication gives practical advice for an efficient trade fair and overviews the political and economic development of selected Latin American countries.

Book appeared August 2010
ISBN-13: 978-3-9811781-6-6
www.localglobal.de/shop



In cooperation with



Accessing the German Market

The delegation trip to Turkey organised by NGlobal and IHK Hannover raised questions about the aspects companies that wanting to access the German market should consider.



Photo: Thomsen GmbH & Co. KG

by Jens Thomson

"One who lives sees much. One who travels sees more," as old proverb goes. And the Indian philosopher Kabir teaches us, "Wherever you are is the entry point." In May, I took advantage of the offer by the Hanover Chamber of Commerce (IHK) to visit Turkey. Organized by IHK and NGlobal, the journey with the Minister for Economics, Labour and Transport, Jörg

Bode, took our delegation to Ankara, Izmir, and Istanbul. It was our goal to build relations with manufacturers and to investigate sales perspectives in the German market. Numerous contacts led me to form optimistic expectations of future market opportunities for Turkish export goods. However, the wish to export to Germany requires Turkish entrepreneurs to make a number of decisions which need to be well considered. After all, being well-established on the home market and confident about the selling points of one's products does not automatically mean success in a new market. A foreign language, different customs, bureaucratic obstacles, and national norms can delay market entry or even cause it to fail altogether.

Utilising Local Knowledge

Our experience as a distributor has shown us that local knowledge can help new market participants quite quickly and on several levels. It starts out with an analysis of the demand: is the product interesting for German producers at its price? Does it meet quality requirements? Which certificates are expected?



"Every market works by its own rules. Outsiders are therefore well advised to find a trusted scout."

Jens Thomson, General Manager,
Thomsen GmbH & Co. KG

Photo: Thomsen GmbH & Co. KG

The Author

Jens Thomsen is the general manager of Thomsen GmbH & Co. KG from Stuhr near the northern German city of Bremen. Focusing on applications and not on selected products, the company has been providing distribution services for a wide range of manufacturers, in particular for engineering and automotive suppliers,

since 1980. Along with its partner companies in the connect4automation network, Thomsen provides the full spectrum of sales promotion especially for the engineering and automation industries.

jens.thomsen@thomsen-stuhr.de
www.thomsen-stuhr.de

We know the potential customers, and we can offer a treasure of information simply on the basis of decades of business relations with manufacturers of industrial goods. Additionally, our partners analyze the chances for success of new products. Together, we draw up business plans, which support market entry step by step. This ensures a venture's sustainability and investment security from the start. Networks pool the resources of specialised services providers. In our sector, connect4automation, a cooperative of independent offices, provides the full spectrum of market research, business enhancement, documentation, marketing, and press relations. Each one of these service providers has a multitude of business contacts. Their combined intelligence amounts to practically 100 percent market penetration.

From Market Analysis to Marketing

These existing sales channels and contacts can already be utilised for a first market analysis. In this way, foreign manufacturers examine their market potential before establishing a sales office and initiating major investments. Thus they can determine early on whether and under which conditions the step into the German market is profitable. Following this up, we provide counselling during the foundation of a branch, find and qualify distributors, and organize trade show presentations. Additional available services include technical documentation and translation thereof, presentation in the trade press, and the preparation of all communication and advertising materials. The all-round package principally presents the option for a long-term partnership, which is interesting for us because we hope to gain from the experience, and of course the diversification of the product portfolio will benefit our existing partners. 📄

Pushing the Expansion in Turkey

Hellmann Worldwide Logistics opens new warehouse in Turkey.



Photo: Hellmann

Hellmann Worldwide Logistics expands the warehouse capacity in Beylikdüzü, Istanbul from 3,000 sqm to a total of 10,000 sqm.

Since 1999, Hellmann has consequently strengthened its market shares in Turkey and, by now, is among the country's leading logistics companies. The new warehouse is a milestone which confirms this trend. A rack system for 9,500 europallets is provided at the 7,000 sqm space. 2,600 sqm and block storages with a capacity for 4,000 europallets are available in addition. A loading platform and six electronically height adjustable platforms load and unload up to four trucks at the same time. "With the new warehouse we established enough capacity to further push the successful expansion in Turkey.", says Cem Akgül, Managing Director Hellmann Worldwide Logistics Turkey.

Hellmann built the new real estate right next to the old warehouse. The location is strategically highly beneficial as the distance to the biggest Turkish harbour is only two km, to the airport—the European part—only 13 km, and about one km to the interchange E5/E6. In addition to the new warehouse, Hellmann established an in-house customs department as a further module of the business in Turkey. The Turkish customs agents take care of a quick handling of all required formalities for the import and export. Next to customs clearance, the complete service range of custom warehousing is offered.

Hellmann Worldwide Logistics Turkey handles inner-Turkish and European Road Freight, less-than-container-load and full-container-load, as well as transports to the Middle East and countries of the Commonwealth of Independent States. The portfolio is completed by an IATA Air Freight Agency, Sea Freight and project logistics." 📄

Until 09 January 2011, Hannover

Heckel, Kirchner and Pechstein

The exhibition "All eyes on Fränzi und Marzella – Two models of the Brücke artists" is the first comprehensive exhibition devoted to the two known young models of the Brücke artists.

www.sprenkel-museum.com/



Photo: Peter Rytz

4 – 7 November 2010, Göttingen

Göttingen Jazz Festival

The jazz festival in Göttingen, with its jam-packed programme, devotes itself year after year to all styles of traditional and contemporary jazz music. In the time-honoured ambience of the Deutsches Theater as well as on three stages, parallel performances of international greats and members of the local jazz scene will make the audience swing.

www.jazzfestival-goettingen.de

5 November 2010, Emden

Nordsee Blues Festival

The 22nd International Nordsee Blues Festival will enchant the nightlife of downtown Emden with real blues. More than 10 bands will be playing in various downtown pubs.

www.blues-nacht.de



Photo: istockphoto

Norderney

Europe's oldest seawater wave pool has always been famous for its prominent guests.

Cuxhaven

The basic elements of the successful treatments are seawater, mud and algae.

Bad Zwischenahn

Relaxing with oriental ceremonial treatments, peelings on saponites or herbal steam baths.

When Autumn comes and the Weather gets Misty

A visit to one of the 40 spas and health resorts of Niedersachsen is exactly the right thing to do for a relaxing health and fitness break.

Bad Harzburg

The healthy brine springs of Bad Harzburg consist of entirely natural sole.

Bad Grund

The secret of the medical treatment is hidden in an ironstone gallery.

Bad Pyrmont

The city in the Weser hills is world-famous for its spa for more than 300 years.

Bad Bentheim

The spa town close to the Dutch border has one of the strongest brines in Europe.

by Daniela Sandmann

From the North Sea Coast to the Teutoburger Wald and the Weserbergland all the way up to the Harz mountain range—Niedersachsen offers a wide range of different climate zones. Between the rivers Ems and Elbe rivers many healing natural resources are to be found. Mineral and moor health spas, seaside resorts, climatic resorts and Kneipp spas provide a comprehensive prevention and rehabilitation programme—under the supervision of a professional staff, of course. In more than 40 spas and health resorts all over Niedersachsen people seeking treatment or peace and quiet can determine their individual health programme.

In a study conducted in 2008 by the European Tourism Institute (ETI), Bad Pyrmont, Bad Harzburg, Langgöog and Bad Zwischenahn were among the top five locations in Germany. Some places in Niedersachsen tempt visitors with unique attractions, such as Bad Münster with its seven different mineral springs, Göttingen with the only still existing saline pan in Europe, or the Badehaus Norderney as the largest thalasso centre in Germany.

Thalasso—the Healing Power of the Sea

The Wadden Sea is not only a very unique habitat but also a treasure chest for your personal well-being. This is because water is the best medicine—the ocean depths conceal a whole array of cosmetic treasures: Algae, mud and salt water are precious resources which make a thalasso therapy at the North Sea a real delight! In combination with the healthily bracing seaside climate these are the basic “ingredients” for the local thalasso administration. The literal translation of thalasso therapy means “medical treatment by the sea”. The term has been derived from the Greek words *thalassa*, which means ‘sea’, and *therapieia*, which means ‘care’. In order to be able to use fresh sea water, thalasso centres must be located directly at the coast.

The warm sea water pools in the thalasso baths are the perfect place to dive in and relax. The sea’s active substances are even more efficient when applied at pleasant temperatures. In some spas where the water contains 30 percent of salt you will feel a sense of weightlessness. Trace elements and minerals such as sodium, magnesium, calcium and potassium can penetrate the skin and create a delicate sense of well-being. Algae compresses and sea mud packs intensify this feeling further and have a cleaning and anti-inflammatory effect. A thalassotherapy recharges the body with energy. 🌊



Photo: Badehaus Norderney

Places of Well-being in Niedersachsen



Photo: TourismusMarketing Niedersachsen

The most well-known state spa of Niedersachsen is Bad Pyrmont. Already in 1681 the members of the European high nobility visited the then trendy spa. The town centre includes the spa gardens with its palm garden, the largest outdoor palm enclosure north of the Alps. The main treatment facilities are the Königin-Luise-Bad health centre, where all ambulant spa therapies (moor, brine, CO₂ and physical therapy) are provided, as well as the Hufeland thermal bath with its abundance of wellness offers. www.staatsbad-pyrmont.de



Photo: Badehaus Norderney

The bathing pleasure on the East Frisian Island Norderney has prominent supporters: the poets and authors Theodor Fontane and Heinrich Heine went to the North Sea to revive and gather inspiration for their literary work, the statesman Otto von Bismarck recovered from his political duties. Europe’s oldest seawater wave pool, built in Bauhaus design, was extended to be Germany’s largest thalasso centre with a sauna area and salt grotto. www.badehaus-norderney.de

Cuxhaven



Photo: tourismus.cuxhaven.de

Another renowned thalasso centre can be found in Cuxhaven. The “ahoi!” centre in the North Sea spa Cuxhaven presents a range of wellness offers revolving around sea water, algae and sea mud. In addition there are massages, baths and inhalations or a relaxing day in the seawater wave pool. Special thalasso applications get the immune system going and make the body fit for the chilly season. From the centre there is a **wonderful view of the Wadden Sea**. www.tourismus.cuxhaven.de



Photo: Bad Grund

Bad Grund

Here in the southern part of the Harz mountains chronically ill people suffering from respiratory diseases or musculoskeletal disorders find **special therapies for alleviation and healing**. This is due to natural remedies in the form of salts and water. The ironstone gallery in Bad Grund, which was developed 20 years ago, is the scene for regular therapy sessions. The healing gallery has practically allergy-free, clean air and 100 percent air humidity. The favourite: the rest cure, which you spend warmly tucked in a lying position at 7 degrees Celsius in the gallery. www.bad-grund.de

Bad Harzburg



Photos: Bad Harzburg

At a time when the term wellness did not have today's modern connotation, Bad Harzburg was already completely focused on the well-being and health of its guests. The terms have changed, but the high quality in Bad Harzburg has remained the same. Particularly **the combination of wellness and hiking** in the spa town nestled to the Harz National Park has yet to find its equal. Bad Harzburg is not only renowned as one of the most beautiful spa locations in Niedersachsen, the healthy brine springs consist of entirely natural sole, i.e., no additional salts are added to the healing water. www.bad-harzburg.de

Bad Zwischenahn

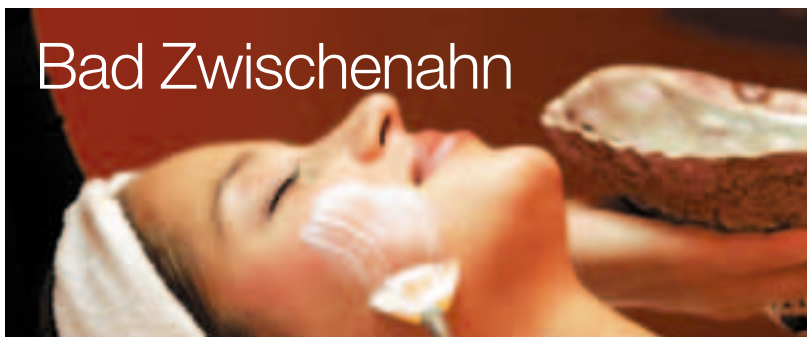


Photo: Bad Zwischenahn

Located in the middle of the Ammerland is the state-approved moor spa Bad Zwischenahn. Rugged marsh, untouched nature, gentle geest, clear air and the moor with its healing powers are the natural environment for the spa guests. The spa offers a multitude of therapeutic options, as there are physiotherapy, massages and moor applications. Additionally, the wellness village offers a diverse range of cosmetic treatments such as **oriental ceremonial treatment**.

Bad Bentheim



Photo: Fachklinik Bad Bentheim

Below the huge Castle Bentheim in the Bentheim forest, a special kind of water is released from the earth: brine with a salt content of 27 percent that is 39 degrees Celsius warm. This makes it **one of the strongest brines in Europe**. According to legend, injured deer rolled themselves in the sulphurous mud at this place and got well again. Today a thermal spa has been built there, which no longer attracts deer, but paying guests from all over the world. www.grafschaft-bentheim-tourismus.de

Floating Ocean Giants

Meyer Werft shipyard in Papenburg has become a major tourist attraction.



Photo: Meyer Werft

Every year, about 300,000 tourists come to Meyer Werft to see on site how state-of-the-art shipbuilding works.

Meyer Werft in Papenburg has been building a large spectrum of different ships for more than 200 years and is in its sixth generation. In the mid-eighties the family business entered the cruise ship market. Since then Meyer Werft has established itself as one of the trend-setting high-tech enterprises in the shipbuilding industry and today enjoys the reputation of being one of the leading and most innovative shipyards in the world.

Every year, about 300,000 tourists come to Meyer Werft to see on site how state-of-the-art shipbuilding works. Tourists are particularly captivated by the huge luxury cruise ships and the complex production line at the shipyard. In cooperation with Papenburg Tourismus GmbH, a visitors centre is operated to provide detailed insight into the production process at the

yard by means of exhibits, videos, a mock-up cabin, etc. The lucky ones may even have a chance to experience a proper ship passage for themselves. On 30 October, the first of two cruise ships built for the Disney Cruise Line (USA) will leave the building dock and start its long journey along the river Ems towards the North Sea. With its gross tonnage of 124,000 tons the "Disney Dream" will be the largest cruise ship ever built in Germany and, with its colours being black and white, will resemble the ocean liners of the thirties in the last century.

The cruise line passages of the Papenburg-based Meyer Werft are a huge media event each time around. The undocking of the ships, the final outfitting as well as the Ems passage of the luxury liners offer a magical attraction to aesthetes. 🚢

Dates and Bookings

30 October 2010:

Undocking of Disney Dream

Mid-November 2010:

Ems passage

Regular tours only after registration with Papenburg Tourismus
Phone +49 4961 / 83960
info@papenburg-tourismus.de
www.papenburg-tourismus.de

The Papenburg shipyard is the cradle for many a "dream ship".



Photo: Meyer Werft

The “Oldenburg Palm”

Kale and Pinkel is the typical dish of the North Germans.



Photo: Ritz-Carlton

For this issue, chef de cuisine **Robert Scheibe** of **The Ritz Carlton** (photo on the right side) of Ritz-Carlton hotel in Wolfsburg has reinvented the tradition dish and created a contemporary recipe.

The most beautiful time of the year for the people in Niedersachsen is winter — at least from a culinary point of view. This is because winter time is kale time. Niedersachsen is the only place where kale is grown in significant quantities. It is therefore also referred to as “Oldenburg palm”.

Kale Rides as Social Events

Kale has always been accompanied by the so-called Pinkel — a sausage consisting of cubed bacon, bar-

ley groats, beef tallow, lard, onions, salt and pepper, and other herbs. The most important thing about eating kale, though, is the kale ride. This sociable group excursion through town and countryside is a relaxed affair in which games are played and a good selection of beverages keeps the spirits high even at low temperatures. When everyone is frozen stiff, the group will stop off at an inn or tavern and indulge in an opulent kale feast with bacon, ham steak and Pinkel. 🍷

Glazed Loin of “Salow Herbed Suckling Pig”

Kale with Braunschweig Bregenwurst, layered potato casserole, pumpkin marmalade. Recipe serves four people.

Ingredients

1100 g Loin of suckling pig
80 ml Vegetable oil
40 g Butter
sprig Thyme
sprig Rosemary
Salt
Pepper
Garlic

Loin of Suckling Pig

Use a sharp knife to score the rind of the loin vertically. Cut the loin into 220 g portions. For a crispy rind, sear the loin for about five minutes on the skin-side, then sear the other sides. Cook the loin for 20 minutes in an oven set at 160 °C. The loin is done when the internal temperature reaches 75 °C. To round off the flavour, in a pan briefly roast the loin with rosemary, thyme, garlic, salt and pepper, as well as a small piece of butter.



Photo: Ritz-Carlton

Pumpkin Marmalade

Cut the pumpkin into small cubes. Caramelize the sugar in a pot and then deglaze the caramel with Noilly Prat. Add the pumpkin and shallots to the caramel. Lightly sauté and then deglaze with the orange juice. Add the chilli (cubed) and a sprig of lemongrass. The marmalade gains a particularly spicy aroma when cooked mustard seeds are added. Simmer the marmalade over low heat until the orange juice has been boiled away and pumpkin is tender. Remove the lemongrass. Season the marmalade with the acacia honey and salt. Finally, add a piece of cold butter and the parsley.

Ingredients

300 g Hokkaido (pumpkin)
50 g Shallots
200 ml Orange juice, pulp-free
50 g Acacia honey
sprig Lemongrass
50 g Butter
50 ml Noilly Prat
10 g Mustard seed
2 g Red chilli
Parsley

Ingredients

2 kg Kale
100 g White onions
150 g Bregenwurst
50 g Rolled oats
50 ml Vegetable oil
35 ml Noilly Prat
50 ml White port wine
200 ml Veal stock
20 g Mustard
15 g Honey
50 g Butter
Salt
Pepper,
Nutmeg
Sugar

Kale

First sear the Bregenwurst. Remove from the pot and set aside. Cut the onions into cubes. Brown them in the drippings. Thoroughly wash the kale leaves and cut them into wide strips. Add these to the onions. Briefly sauté the rolled oats with the onions and kale. As soon as the kale leaves begin to wilt, deglaze with the white port and Noilly Prat. After the alcohol has completely vaporised, add the veal stock. When the stock begins to boil, add the butter, mustard, salt, pepper, honey, and nutmeg as well as the Bregenwurst. Simmer at a low temperature. As soon as the liquid has been almost completely reduced and has thickened nicely due to the oats, season as needed and then let the kale stand for 10-12 hours. The kale needs this time to develop its full flavour. Test the flavour several times when reheating.

Layered Potato Casserole

Cook the peeled potatoes in water with caraway seeds, bay leaf and salt for 20 minutes. As soon as the potatoes are soft, carefully pour off the water and leave them in the pot to allow the cool off, which increases their binding strength. Press the potatoes through a ricer into a bowl and add the egg yolk. Warm the cream with the salt and nutmeg. Add this to the potato mixture. Use a whisk to mix until the consistency is smooth. The layered casserole is baked in the oven in a springform pan. The oven broiler (top heat) should be preheated to 250 °C. Place one ladle of the potato mixture into the springform pan and bake it in the oven until golden brown. Repeat this process at least 15 times, in order to create a multi-layer casserole. Allow to cool for three hours after baking. The casserole is then ready to be cut.

Ingredients

1000 g Floury potatoes
50 g Egg yolk
350 ml Cream
Bay leaf
Caraway seeds
Salt
Nutmeg

Winter Wonderland

A magical Christmas forest in the city centre, underground advent, a floating Christmas market and perhaps the most appealing Advent calendar of Germany... The remarkable winter and Christmas markets in Niedersachsen will prepare the visitors for the most beautiful season of the year.



Braunschweig
Stroll around the cathedral and the Dankwarderode Fort to the Braunschweig Christmas market, which has a tradition of 300 years from the days of Henry the Lion.
24 November -
29 December 2010
www.braunschweig.de/weihnachtsmarkt



Celle
The wonderful bright half-timbered facades shine in festive splendour during the Advent period. The highlight of the market is a 14-metres high Christmas pyramid located in the historical Old Town.
25 November -
27 December 2010
www.weihnachtsmarkt-celle.de

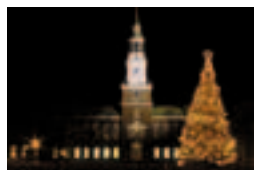
Emden
Framed by the festively lit museum ships right in the city centre, the only floating Christmas market takes place on pontoons in the inland port. At the beautifully decorated wooden stands you will also find all sorts of maritime gifts, as well as many aromatic delicacies.
22 November -
23 December 2010
www.emden-touristik.de

Göttingen
Even the "Gänseliesl", the emblem of the town, gets into the festive spirit when she sees the romantic Christmas markets around the medieval Town Hall in the city centre.
24 November -
29 December 2010
www.goettinger-weihnachtsmarkt.de

Goslar
Nestled in the picturesque setting of the medieval buildings, huge Christmas trees and atmospheric torches transform the Old Town into a fantastic fairytale forest.
24 November -
29 December 2010
www.weihnachtswald-goslar.de

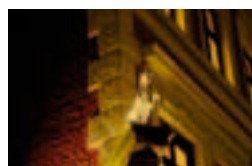
Hameln
The unique buildings of the Weser Renaissance illuminate in a warm glow during the festive period. The great attraction is the 11-metre tall Christmas pyramid.
24 November -
23 December 2010
www.hameln.de

Hann. Münden
The small, cosy Christmas market on the church square in the half-timbered town of Hann. Münden is completely devoted to the legendary travelling surgeon Doctor Eisenbart.
26 November -
24 December 2010
www.hann.muenden-tourismus.de



Hannover
In Hannover there are three Christmas markets: around the Market Church, on the Lister Meile and the special Christmas gift is the Finnish Christmas Market in the Old Town.
24 November -
23 December 2010
www.hannover.de/de/tourismus

Hildesheim
The splendour of the Hildesheim Christmas market on the historic market square shines in front of the impressive façade of the wonderfully preserved half timbered Butchers' Guild Hall.
24 November -
27 December 2010
www.hildesheim.de



Lüneburg
The splendid Baroque façade of the town hall radiates a Christmas glow and serves as the festive setting for the Lüneburg Christmas market. A jewel of the Advent period is the historic Christ market in the Old Town, where farmers and craftsmen stroll around in 16th century costumes.
24 November -
23 December 2010
www.weihnachtsstadt-lueneburg.de



Oldenburg
Framed by the St. Lamberti Church, the historic town hall and the Oldenburg Castle make the festive mood of the Oldenburg Christmas market particularly contemplative.
23 November -
22 December 2010
www.oldenburg.de

Osnabrück
A six metre high nutcracker and the biggest Christmas music box in the world attract yearly more than 600,000 visitors to the Christmas market in Osnabrück. The Christmas markets around the Johannis Church and in front of the Cathedral are connected by the popular little railway.
24 November -
22 December 2010
www.osnabrueck.de/weihnachtsmarkt

Wolfenbüttel
The magical fairytale trail and the daily Advent calendar attract mainly families with children to the cosy atmosphere of the historic town market.
23 November -
23 December 2010
www.weihnachtsmarkt-wolfenbuettel.de



Photos: Tourismus Region Celle GmbH, M. Prinke, flickr. Photo (right side): Hildesheim Marketing, Leif Obornik

Dear readers, Now it is up to you!

Your opinion is important to us! We are interested to find out how you like the magazine. To take your interests better into account, we would like to ask for your support, please answer us a few questions.

What did you like most in this issue and why?

Is there anything you think you would like improved? ☐ Yes ☐ No

On which topics and industries would you like to get more information on?

- ☐ Automotive ☐ Logistics ☐ Aerospace ☐ Energy ☐ Food Industry
☐ Life Science, Health Care ☐ IT ☐ Trade Fairs in Hanover ☐ After Work
☐ Other:

You are positive towards Niedersachsen, the business region north of Germany and thinking of establishing business here, looking for a partner in cooperation and or funding, ☐ Yes ☐ No

Like someone from the economic development agency, Niedersachsen Global, to get in touch with us: ☐ Yes ☐ No

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Best regards, your NGlobal team

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Niedersachsen
Global GmbH
Annette van Ost
Osterstraße 60
30159 Hannover /
Germany
annette.vanost@nglobal.de
www.nglobal.de
Or fax to
+49 511 897 03969

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Next Issue
Spring 2011



Photo: Alpha Ventus

Wind Energy

From planning wind energy plants to supplying the network infrastructure: Niedersachsen has become the top cluster for green energy.

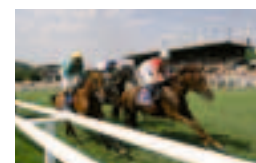


Photo: Stadtmärkte Bad Harzburg

Horsepower

In Niedersachsen everything revolves around the noble animals.

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Andreas Bergmaier
Phone: + 49 711 22 55 88 24
bergmaier@localglobal.de

Imprint



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

NGlobal
Niedersachsen Global GmbH

In cooperation with
Niedersachsen
Global GmbH (NGlobal)
Osterstr. 60, D-30159 Hannover
Phone: +49 511 89 70 39-0
info@nglobal.de

Concept
Hans Gäng
Chief Editor
Inka Ziegenhagen

Authors
Michael Botts
Hans Gäng
Michaela Holdt
Annika Kielmann
Daniela Sandmann
Jens Thomsen
Inka Ziegenhagen

Translation
Martina Mühlhauser
Erich Petricevic

Editorial Design
C. Schulz-Hamparian
www.schulz-hamparian.de

Print
Bechtle Druck & Service

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