

MARKETS

GERMANY

1/17

ENERGY REVOLUTION

Germany's energy transition comes of age as new legislation invigorates the renewables sector and lays the groundwork for a whole new industry. Welcome to the age of the smart grid.

The Alpha Ventus offshore wind farm, located in the North Sea near Borkum, is just one example of innovation in the renewable energy sector that now employs 355,000 people.

Positive Prognosis:

***Why German companies
are leading in the field of
in vitro diagnostics***

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Appy Days:

***Why the health apps
market in Germany is
exploding***

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City of Light:

***How Jena is becoming a
burgeoning hub for high-
tech industry***

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TECHNOLOGY

Jena: City of Light

A small university city in eastern Germany known for optics and photonics is becoming a global high-tech hub.

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HEALTHCARE



Positive Prognosis

Germany's in vitro diagnostics market is on the up again. What are the factors driving this complex industry?

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Smart Energy

Germany is ramping up renewable energy production, generating significant business opportunities.

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Germany's Chinese Tiger

Frankfurt: the CEO of China Telecom Germany looks back on five years of supercharged growth.

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HEALTHCARE



Appy Days: Mobile Health

The market for mobile health apps is booming and diverging in two directions: medicine and wellness.

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»In this issue, we focus on the significant investment opportunities presented by the Energiewende, Germany's energy transition.«

Dear Reader

You hold in your hands the first edition of a refreshed Markets Germany. The aim of the relaunch is to make the magazine clearer and more modern, while maintaining the integrity of the content. The magazine will be published three times a year in February, June and October, alongside its sister title Markets International, a German-language publication that looks at the global economy.

In this issue, we focus on the significant investment opportunities presented by the *Energiewende*, Germany's energy transition policy. Foremost among these is the expansion of "smart grids," which offers overseas companies the chance to both do good business and contribute to the development of a future technology of growing global importance.

We also examine the burgeoning market for healthcare apps, one of the fastest growing sectors of the digital economy. Experts believe that the market will grow to €3bn by the end of 2017 in Germany (€23bn worldwide).

The global trend towards the digitization and modernization of industrial production – a.k.a. Industry 4.0 – continues. The Hannover Messe in April 2017 is devoted to this topic; more precisely to the impact of the smart revolution on industry, on employees and society as a whole. GTAI experts Asha-Maria Sharma and Oliver Seiler explain what we can expect in this field in the future.

I hope you enjoy the new issue of Markets Germany!

Dr. Jürgen Friedrich / CEO

Email: invest@gtai.com



ONE TO WATCH

Photo: Jan Zaopner

Erez Galonska, CEO and co-founder of INFARM

INFARM is a Berlin-based company which is pioneering on-demand, hydroponic farming services with a bold vision to help cities become independent in their food production. Harvesting the talents of plant scientists, industrial designers, business and IT experts, the 50-strong team have devised an innovative "Farming as a Service" (FaaS™) model: for a monthly fee, subscribers receive capacity in a farm located either in their own premises or in the INFARM city-farm. Their patented vertical farming technology is modular and easily deployed in any location, be it a school, restaurant, supermarket or hospital. Erez Galonska hopes to democratize farming and bring consumers closer to their food.

"My partners and I come from backgrounds in gastronomy and traditional farming in Israel, and we've always been passionate about food," he says. "Urban indoor farming has the potential to empower local communities to grow food that is both healthier and more sustainable. Our systems reduce water use, require less fertilizer and eliminate the need for pesticides. In addition, much of our produce is grown at the point of consumption, which eliminates the supply chain. The freshest produce is the healthiest because it contains all the original nutrients that are lost when the produce is transported and refrigerated." The INFARM team chose to launch in Germany because it has a large market for organic

food and invests significantly in new technology. "Berlin is ideal because it's a hub of innovation and real estate prices are still relatively low, which has afforded us time to really focus on R&D to develop the best product possible." To see one of their farms, METRO Cash & Carry supermarket in Berlin has installed an INFARM system, which grows herbs, leafy vegetables and microgreens for customers.

Read the entire interview with Erez Galonska online here: www.gtai.com/markets-germany



www.infarm.com



A bicycle path near Eindhoven at night, built by the parent company of a German construction firm: pebbles marking the 600-meter track are coated with active pigments that gather energy in daylight, which then makes them sparkle at night.

Energy Revolution

Germany has targeted a complete phase-out of nuclear power by the end of 2022 and in recent years has ramped up renewable energy production. Three new laws concerning renewable energy were passed last summer, generating significant business opportunities.

Contact: renewables@gtai.com

Christina Würthner, chief executive of the Swiss software company Enersis, expects nothing short of a revolution as Germany transforms its energy policy, radically changing the way power is generated, distributed and consumed. To take advantage of these reforms, the firm set up a German subsidiary, based in Berlin, last year. “The approaching phase of the changeover offers huge potential for us as a company,” says Würthner.

She has spent the past year traveling around Germany and meeting energy provid-

FACTS & FIGURES

32.6

per cent

Share of renewable energy in total electricity production

Source: BMWi (Federal Ministry for Economic Affairs and Energy)

ers to promote her company, which designs software that allows businesses to measure and control their electricity consumption. “We are helping these companies to develop new digital business areas related to the changeover,” she says. Demand for the Swiss firm’s expertise is clear. After one year, Enersis already employs 13 people in Berlin – as many as in its head office in Bern.

Auspiciously, Enersis’s German expansion coincides with the passing of three important energy laws by the federal government last summer: the digitization of the Energy Tran-



sition Act, the Renewable Energy Act 2017, and the Electricity Market Act. Germany has already set the target of phasing out nuclear power by 2022. It has also significantly expanded its renewable energy sector in recent years, particularly wind farms and solar energy plants. But the new legislation finally provides a common framework for these reforms. These elements include a range of renewable energy sources, the electricity market, energy efficiency measures, the electricity grids and digitization.

A new industry is born

"In taking this step, we have achieved the greatest reform of the electricity market since the liberalization of the nineties," says Federal Minister for Economic Affairs and Energy Sigmar Gabriel. This means that not only will renewable energy generators be further integrated into the electricity market but also major consumers and producers will be digitally networked with one another. "The next phase of the changeover can now begin," says Gabriel.

This transformation also offers new business opportunities for entrepreneurs and foreign companies. In the next few years 1.5 million energy producers of all sizes and major consumers will need to be intelligently networked together, creating a multi-billion-euro market opportunity. The federal government has allocated €4bn in 2017 alone to support the changeover.

"Above all, the digitization of the changeover process and the transformation of our electricity supply grid into an intelligent control system are going to require considerable investment," says Ludwig Einhellig, energy expert at business consultancy firm Deloitte. "A completely new industry is emerging with a mix of IT firms, component manufacturers and energy providers." Moreover, the 884 small and medium-sized grid operators in Germany cannot achieve change of this scale on their own. Most of these companies would prefer to enter into partnerships or outsource the measurement and transmission of data on electricity gen-

eration and consumer data, as shown by a recent Deloitte study. Meanwhile, the remaining grid operators, among them the major energy providers, will also be investing heavily in information technology.

The digitization of the Energy Transition Act

The first of three new laws will enable the creation of a smart grid in Germany – an intelligent electricity grid that can be controlled in a decentralized way. As a first step, in 2017 all major energy consumers, including companies with an electricity consumption of more than 10,000 kilowatt hours per year, are to install smart meters. Private households, which use significantly less electricity, will follow suit in a few years' time.

Smart meters continuously measure current electricity consumption and transmit this data to the grid operators and electricity supply companies – a prerequisite of a decentralized electricity network. It will only be possible to operate a grid in a stable way and moderate fluctuating levels of electricity production if electricity suppliers, grid operators and consumers are networked and can exchange data. The idea is that electricity should be consumed at those times when the quantity generated is greatest. Incentives will be offered to companies and members of the public to consume the bulk of the electricity they need during these peak generation times. The federal government is also supporting the restructuring of the electricity grid with funding programs such as SINTEG and Kopernikus (see pages 10-11).

The introduction of smart meters will provide a surge in demand for industry. Experts estimate that several million devices will be required in Germany in the next few

»We have achieved the greatest reform since the liberalization of the nineties.«

Sigmar Gabriel Federal Minister for Economic Affairs and Energy

years. Furthermore, the data from the meters needs to be collated and processed and it is likely that the data itself will give rise to new business models. "The market is still in the early stages of development," says Heiko Staubitz, Energy Markets expert at Germany Trade & Invest (GTAI), which offers support to foreign companies that want to invest in Germany. "The opportunities for foreign companies to position themselves here are correspondingly large."

GTAI helped Enersis to get established in Germany. The company is optimistic that the country's energy reforms will provide scope to expand its operations. "Many energy suppliers in Germany are open for new concepts and engaging in new business areas," says Würthner. With their software tools for saving energy, combined with the potential to develop completely new value-added services, the company sees the benefits of increased competition in the energy sector.

"We are currently experiencing a kind of disruption in the market which can act like a springboard for companies that are strong in innovation."

Digitization and the advancing progress of the changeover in Germany also provide new incentives for companies to invest in energy efficiency measures. Thanks to innovations in technology, saving electricity and heat has become significantly easier over the past few years and market observers predict →

FACT & FIGURES

Renewable energy is surging ahead in Germany

355,000

employees

Number of people employed in the renewable energy sector in Germany

Source: BMWi*

€9.7bn

investment

Investment in wind energy in 2015

Source: BMWi*

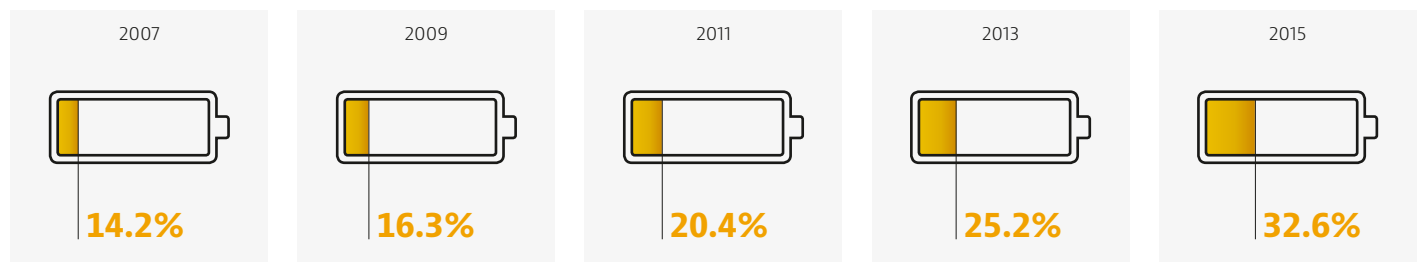
156m

tons

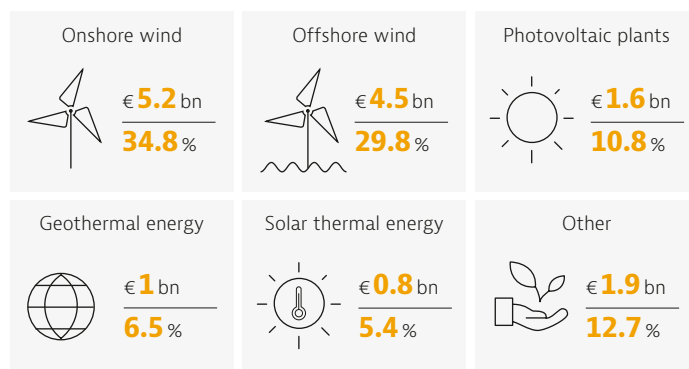
Reduction in greenhouse gas emissions through the use of renewables.

Source: BMWi*

Power consumption: rapid expansion of renewable energy

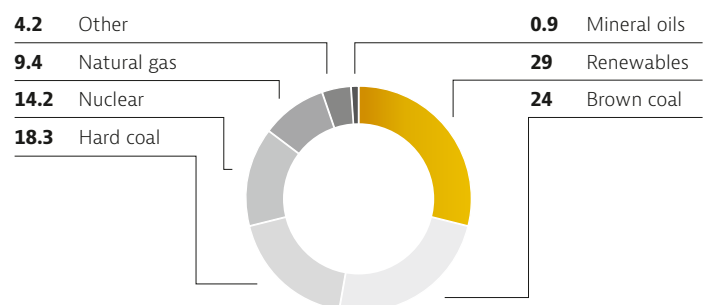


Investment in renewables: wind energy is leading the field



Source: Renewable Energy Statistics working group
*BMWi (Federal Ministry for Economic Affairs and Energy)

The energy mix: where Germany's power comes from today**



Source: BMWi (Federal Ministry for Economic Affairs and Energy), AG Energiebilanzen, August 2016
** in per cent

»Building an integrated energy system.«

Klaus Bonhoff, chief executive of the National Organization for Hydrogen and Fuel Cell Technology (NOW), explains why the increasing distribution of electric cars encourages the coupling of important sectors like electricity production, transport and the move towards renewables.

Mr. Bonhoff, until recently electric-powered vehicles were not that common in Germany. Is that something that will change in future?

Yes. First of all, the government premium for buying an electric car in Germany will start to take effect. Secondly, the charging infrastructure for electric cars will be significantly expanded over the next few years; the Federal Ministry of Transport and Digital Infrastructure's target is to add a further 15,000 charging stations by 2020. Thirdly, car manufacturers will offer a wider range of electric models and thus attract a wider cross-section of customers than before. And finally, the cars' driving range, often cited as a critical factor, will noticeably improve, on account of technological advances.

We often hear that electro-mobility is particularly important for the success of the changeover process in energy policy – why?

Germany can only reach the climate protection goals it is striving for if there is a large-scale change over to electrical drive systems and electricity-based fuels such as hydrogen. In addition, the electricity produced from renewable energy sources has to be efficient and economically cost-effective to use across all energy sectors. Hydrogen, produced from renewable electricity through electrolysis, could be the link that's needed to yoke together the energy sectors and build up an integrated energy system in Germany. In addition, we will also need electricity storage and transformation facilities to deal with fluctuations in electricity supply. Electric-powered vehicles could play an important role here.

What are the most interesting foreign investment opportunities in the electro-mobility sector?

The increasing electrification of transport will change the supply structure for fuels. For efficient vehicles in the goods transport sector, meaning trucks, trains, ships and aircraft, use of a purely battery-driven engine is possible to a limited extent. In this case, electricity-based fuels such as hydrogen will need to be developed and put into use on a national scale.



This symbol, which represents a charging cable, appears on a prototype of a self-driving, electric vehicle. From the laboratory of computer science at the Free University of Berlin.

»Energy efficiency used to be the 'poor cousin' of renewable energy; today it is a driving force for innovation.«

Andreas Kuhlmann, chief executive of the German Energy Agency (Dena)

→ this trend will increase further. There is also potential for foreign firms that provide energy efficient technology to profit from this growing market. "Energy efficiency used to be considered the poor cousin of renewable energy," says Andreas Kuhlmann, chief executive of the German Energy Agency (Dena). "Today we realize that energy efficiency is in fact a driving force for innovation."

The changeover in energy policy has been high on the agenda of the traditional energy supply companies for some time. Seeing the potential for growth in the German market, the Dutch electricity grid operator Tennet took over the high voltage grid of the German energy provider Eon in 2010, expanding its distribution grid. Over the next decade, Tennet plans to invest around €22bn in further expanding its grid, a large part of which will be in Germany. "Here in Germany, our focus is on the implementation of the changeover in energy policy through the required expansion of the grid and the integration of renewables," says Urban Keussen, chairman of the executive board of its German subsidiary Tennet Iso. It is in the process of laying up to around 3,000 km of new power lines on land and connecting the grid to large offshore wind farms in the German North Sea. For example, Tennet put five new DC (direct current) grid connection systems into operation in 2015. This has increased the capacity for wind energy from the North Sea up to 4,300 megawatts, enough to power millions of households.

The Renewable Energy Act 2017

The second important act concerning renewable energy brings about fundamental changes in the market for electricity produced from solar and wind. It will put an end

to the current system whereby the federal government sets a new fixed price each year at which renewable energy can be remunerated on the market. In future, electricity will be remunerated through a tender procedure. "This should attract more competition into the market," says Christoph Podewils from the think-tank Agora Energiewende. For companies producing electricity at competitive prices, it presents a significant advantage. Moreover, investors will now have greater incentives to build more new wind farms, photovoltaic plants and power plants in economically viable areas. "The changeover process in our energy policy is making huge strides forward," says Podewils. "It will be much more feasible in the future to control the further expansion of renewable energy sources."

The Electricity Market Act

The third law which was passed last summer is intended to maintain a stable balance between supply and demand on the electricity market. This will become increasingly important as the proportion of electricity obtained from weather-dependent sources becomes greater. The act makes it compulsory for electricity traders only to sell electricity that they are feeding into the grid at the same time. This new regulation will lead to investment in new infrastructure over the next few years – electricity generating plants that have a high level of customer demand will be the main winners. In this way, market forces will drive further expansion of renewable power plants in Germany.

The background to the current comprehensive changes in the law is the success encountered in the changeover in energy policy so far. In 2015, 29 per cent of the electricity

produced in Germany came from renewable energy sources, making the country a global pioneer in this field. Wind energy, including both onshore and offshore, supplies the greatest share of the market (12.3 per cent). Germany's first offshore wind farm Alpha Ventus started running six years ago and represents a significant milestone. Wind energy will continue to play a decisive role in the *Energiewende* (energy transition). By 2050, the aim is to have 80 per cent of electricity consumption coming from renewables. "Of course, this further expansion brings continued opportunities for manufacturers, suppliers and for the companies who service and maintain the growing number of plants," says Deloitte consultant Einheilig. State funding programs will also provide an important incentive for future development.

Until then, producers and network operators will still need to make some fine adjustments in order to be able to guarantee supply at any time with the growing proportion of renewable energies. Experts consider that, in the long term, it will be the seasonal rather than the daily fluctuations in renewable energy production that will bring the biggest challenge. "In autumn and winter, it is dark for a longer period and, if there is also no wind, electricity production will drop noticeably," says think-tank expert Podewils. At such times, conventional electricity suppliers would have to step in as they are in a position to generate flexibly and efficiently. "That is often not achievable with traditional large power plants," says Podewils, who suggests an alternative might be "modular-driven gas power plants which work with many small engines rather than one large turbine." This represents another emerging niche in the market and an attractive investment opportunity.

Energy Gets Smart

The German government recently passed three laws which will invigorate the renewable energy market. But some areas of R&D still need state support to make the energy transition a reality. Here we profile two keystone funding initiatives: SINTEG and Kopernikus.

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Enter the smart grid: SINTEG

In February 2015 The Federal Ministry for Economic Affairs and Energy (BMWi) launched the competitive funding program “Smart Energy Showcases – Digital Agenda for the Energy Transition” (SINTEG). As a central part of the Federal Government’s “Innovative Digitization of German Business” package, SINTEG will focus on smart grids and the intelligent networking of energies. The ultimate goal is to develop and demonstrate in regional pilot schemes transferable solutions for a climate-friendly, secure and efficient energy future, optimizing intermittent power generation from wind and solar energy. Over 200 companies, working within consortia, submitted proposals. The five successful showcases address the central challenges of future energy supply, including the integration of renewables, flexibility, supply security, system stability, energy efficiency and the establishment of new market structures.

SINTEG will invest around €600m in digitization of the sector, of which the BMWi have committed up to €230 million (over the first four years) and the companies themselves have pledged €370 million. The five showcases will serve as a blueprint for broad implementation:

C/sells – a large-scale showcase in Germany’s solar arch: this solar energy showcase will span the southern states of Baden-Württemberg, Bavaria and Hessen and aims to optimize generation and consumption at a regional level. Participants will be organised into groups (“cells”) which might consist of individual generators or distribution grids. Each cell generates energy for itself before supplying others within the region (supply and demand will be balanced).

Designnetz – a modular approach to the energy transition: spanning the states of North Rhine-Westphalia, Rhineland-Palatinate and Saarland, the Design Network represents a mix of rural areas, big cities and industrial areas. It will showcase flexible solutions that optimize energy supply (harnessing decentralized solar and wind), distribution and can be adjusted to market demand.

Enera – the next big step in the Energy Transition: The goal of “enera,” located in the northwest of Lower Saxony, is to solve one of the thorniest challenges of the energy transition: changing from a centralized to a decentralized system, from static to dynamic. A more flexible grid will be engineered by upgrading the technology used by generators, consumers and storage units and empowering providers.

NEW 4.0 – the energy transition in north Germany: this project, which brings together Hamburg and the state of Schleswig-Holstein, aims to supply 70 per cent of the region’s energy demand from renewables by 2025. The management of surplus power is at its core, e.g. exporting excess electricity produced during windy periods.

Key objectives of the SINTEG showcases

1. Demonstrate safe and efficient grid operations with a high proportion of renewables.
2. Find solutions for increased flexibility within the network and market.
3. Effective integration between all players within the smart network.
4. More efficient use of the existing grid structure and reduction of the need for grid expansion.



Photo: Paul Langrock/Zent/iaif

A model "power to gas" project by Windgas Hamburg: superfluous wind power is stored by electrolysis and later fed into the natural gas network. The electrolysis process is fuelled by the E.ON Uniper gas plant.

WindNODE – showcase for smart energy from north-east Germany: encompassing five eastern German states including Berlin, WindNODE aims to integrate renewables generation, the grid and consumers through digital networking. It will develop innovative products and services that complement the traditional business of volume selling and introduce new consumer standards.

Fostering an energy renaissance: Kopernikus

Initiated by the Federal Ministry of Education and Research (BMBF), the aim of Kopernikus is to research and develop renewable energy solutions and paradigm-shifting systems that can be applied on an industrial scale. The four projects to transform the supply of energy bring together expertise from more than 90 organizations across the

science, business and civil sectors that have previously collaborated in the Research Forum for Energy Transition. Federal funding is required because these research projects are complex and high-risk. The BMBF will provide €120m for Phase 1 funding, with a further €280m available by 2025. The program will run for 10 years, with an R&D phase followed by industrial trials.

ENSURE – new networks: in select urban and rural regions, projects are being set up to test the interplay of intelligent decentralized supply networks to ensure energy security and data protection.

P2X – Power-to-X: this project aims to boost the use of energy surpluses generated by renewables by more than 90 per cent. The technical solutions for redistribution

and storage focus on heat ("power-to-gas"), mobility ("power-to-liquid") and industrial chemical storage.

SynErgie – industrial processes: energy-intensive industrial processes present a challenge for the energy transition. This project will re-orientate select industries to the more volatile feed-in of renewable energies. Germany aims to become a lead provider of adaptive power technologies by 2030.

ENavi – system integration: the transformation of energy supply has an impact on many interconnected systems, including technological, political and social structures as well as corporate and consumer behaviour. This project will explore the interplay of electricity, heat and mobility to supply the industrial and household sector.

ello



Photos: Ello Rollator, NavVis

Grey Mobility

Grandma's Cruising

German start-ups are harnessing advances in e-mobility and gaming to help senior citizens stay sharp, keep moving and have fun.

After noticing a friend's grandmother having trouble getting her groceries uphill, Max Keßler and two other entrepreneurs in Stuttgart designed a smart wheeled walker with an integrated electric motor. Add-on features of the Ello Rollator (www.ello-info.de), now in small-scale production, are lighting for night journeys, an anti-theft device, a GPS locator, a removable battery

and an automatic braking function to keep it from rolling away. While designed to assist with hills and curbs, it can also cruise at up to 5km/h, keeping Grandma on her toes.

But if Grandma is looking for something with a bit more oomph, Hamburg-based Memore (www.memore.de) has launched a device that keeps seniors physically and mentally fit by enabling

them to virtually ride a motorcycle, play table tennis or go bowling using medical video games. The MemoreBox can be attached to conventional TVs and uses Microsoft's Kinect V2 sensors to create a gesture-based, hands-free interface. Its therapeutic claims include training software that could "postpone the progress of cognitive decline" and physical therapy that can help

avoid injuries "by improving balance and spatial awareness." Working with several prestigious hospitals and research organizations in Germany, the team has tailored the device to the specific needs and abilities of older citizens. After proving a hit in one retirement home, one major German health insurance fund is considering rolling them out to twenty more. ■

Easy EV

Rent-a-Station

The scarcity of charging stations has discouraged many from buying electric vehicles. But Munich-based start-up eeMobility hopes to fill this gap by providing full-service charging, particularly for company fleets. For a monthly flat-rate fee, eeMobility will obtain the permits, install and service the stations and purchase the power. Charge her up! ■

Cloud Logistics

Rio on the Go

Munich-based HGV manufacturer MAN is launching what it claims is the first cloud-based system for the logistics and transport industry. The Rio platform will allow subscribing companies across the supply chain – from shippers to dispatchers to carriers to drivers to recipients – to receive real-time information about their goods via Rio Box-equipped vehicles. Using its Loadfox function, users can also redirect excess cargo to other trucks and exploit unused capacity. ■

Digital Sense

Über-Modern Measurement

Two German start-ups have developed prize-winning tools that enable us to better measure our world. Munich-based start-up NavVis has designed a robotic trolley that measures indoor spaces that can't be mapped out by satellites, such as airports, museums and factories. Using high-resolution cameras and laser scanners, the M3 Mapping Trolley generates images, point clouds and plans that not only provide "centimeter accurate, photorealistic 3D models," but also precise measurements and sensor data, such as magnetic fields and WiFi signals. Meanwhile, the Berlin-based start-up Relayr has developed a tool that lets software developers jump straight in to creating prototypes, products and solutions for the Internet of Things – no engineering degree required! The Wunderbar's five detachable sensor

boards measure things like temperature, humidity, sound, light and speed; its bridge module allows for additional sensors; and its master module relays all this data to the cloud. It's the Swiss Army knife of sensors! ■



Laser mapping technology

Boiler room at TU Munich
3D Point cloud
www.navvis.com



Auto-Health

The Car That Cares

Digital healthcare hits the road as Audi invests in medical mobility solutions and launches an in-car product that can monitor the mental and physical fitness of the driver.

Audi is taking networked driving up a gear by monitoring drivers' health and even helping them to feel better. Sensors integrated into the Audi Fit Driver can tell whether the wearer is tired and take automatic "biofeedback" measures to pep them up – such as making the car colder, brighter or even louder. And if the driver's blood pressure goes up, the onboard computer can initiate some

FACT & FIGURES

25

per cent

Drivers falling asleep cause 25 per cent of all fatal car accidents on German motorways.

Source: ADAC (General German Automobile Club)

relaxing breathing exercises. The iconic, Ingolstadt-based car maker has also co-founded the Flying Health Incubator in Berlin to foster more digital health innovations. One of its start-ups is focused on allowing people to virtually visit the doctor from the comfort of their own car. Audi also wants to design a car that pulls over and calls for assistance if the driver has a medical emergency. ■

A Positive Prognosis

As the use of in vitro diagnostics continues to increase around the world, especially in the field of personalized medicine, German companies are leading innovations in Europe.

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In vitro diagnostics (IVD) uses medical devices and reagents to examine body specimens in order to detect disease, infections and chronic conditions and identify the most suitable treatments. IVD testing can be carried out in both external and hospital laboratories, but recent years have seen a major shift towards testing at the point of care (such as doctors' surgeries) or even at home using consumer IVD devices.

The application of IVD technologies in clinical diagnosis has become indispensable in the diagnosis and treatment of disease. Technological advances in the field of companion diagnostics and personalized medicine (procedures that tailor treatments to the individual, pinpointing which specific drugs or products should be used), rising incidences of chronic disease and lifestyle-related conditions, aging populations, a growing demand for point-of-care testing and increased affluence in emerging economies are all combining to drive the growth of the IVD sector worldwide.

Global IVD market revenue is expected to reach \$74.7bn (€68.4bn) by 2020, representing a compound annual growth rate (CAGR) of 5 per cent over the previous six years. Currently, North America dominates the global IVD market with Europe in second place. Major players such as Abbott Laboratories, Bec-

FACTS & FIGURES

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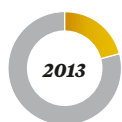
per cent

Share of German GDP which is spent on healthcare

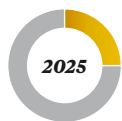
Source: World Bank

Aging population trends in Germany

Share of population which is over 65 years old.



21% of population
16.83 million



25% of population
19.81 million



30% of population
21.5 million

Source: Right at Home International

ton, Johnson and Johnson, Roche Diagnostics and Siemens Healthcare have built their dominant market position in recent years by focusing on innovation and expanding into emerging markets like India.

The European scene

The European market is highly fragmented, with intense competition among vendors. This, combined with a lack of proper reimbursement policies and stringent regulatory frameworks, has led to general stagnation in the European market as a whole.

Germany is the exception here: an innovative IVD sector supported by the country's strong R&D landscape and the needs of an aging population (see box) is still driving growth and will open up significant opportunities for investors over the next decade. Germany has the lion's share of the European market for IVD. This is forecast to reach \$5.7bn (€5.2bn) by the end of 2020, which represents a significantly higher CAGR of 5.5 per cent than the global average over the same six-year period.

Germany's IVD market on upward trend

Germany's diagnostics sector is represented by the Association of the German Diagnostics Industry (VDGH), with 100 members that either produce or distribute diagnostics and



Photo: Paul Hahn/iaif

Technological advances in the field of companion diagnostics and personalized medicine as well as the rising age of the population are driving growth in the sector.

The German market stands out positively for the first time in four years

life science research products. Almost two-thirds of them have their own R&D operations, and 68 per cent their own production facilities in Germany.

The VDHG estimates the total value of Germany's IVD market at €2.2bn in 2015 – an increase of over 1 per cent on the previous year. “This is a gratifying, albeit modest growth,” says VDHG Chairman Matthias Borst. “Market development in Europe is stagnating. The German market stands out positively for the first time in four years.”

The outlook for 2016 is similarly positive. A recent VDHG survey highlights its members' optimistic revenue forecasts, with more than 80 per cent of companies expecting growth.

The diagnostics sector generally operates in highly regulated markets where laboratory diagnostics are often seen as a cost factor, regardless of their wider economic benefits. “Increasing price pressure in the market pushes down the margins,” Borst notes. “This is due to comprehensive quotations and reduced reimbursements for laboratory services.” The VDHG is calling for an overall economic, technology and health

policy strategy that would allow its members to take full advantage of the health care system's growth and employment potential.

R&D is Germany's strength

Employment in the IVD sector is expected to have increased slightly in 2016. Forty per cent of the companies surveyed are intending to hire more staff. Customer service, sales and marketing specialists are particularly sought after. Because the IVD sector is one of the most innovative in Germany, it also employs more than 12 per cent of its workforce in R&D. More than 10 per cent of revenues are spent on R&D, making the sector second only to pharmaceuticals and putting it ahead of the automotive and electrical engineering industries.

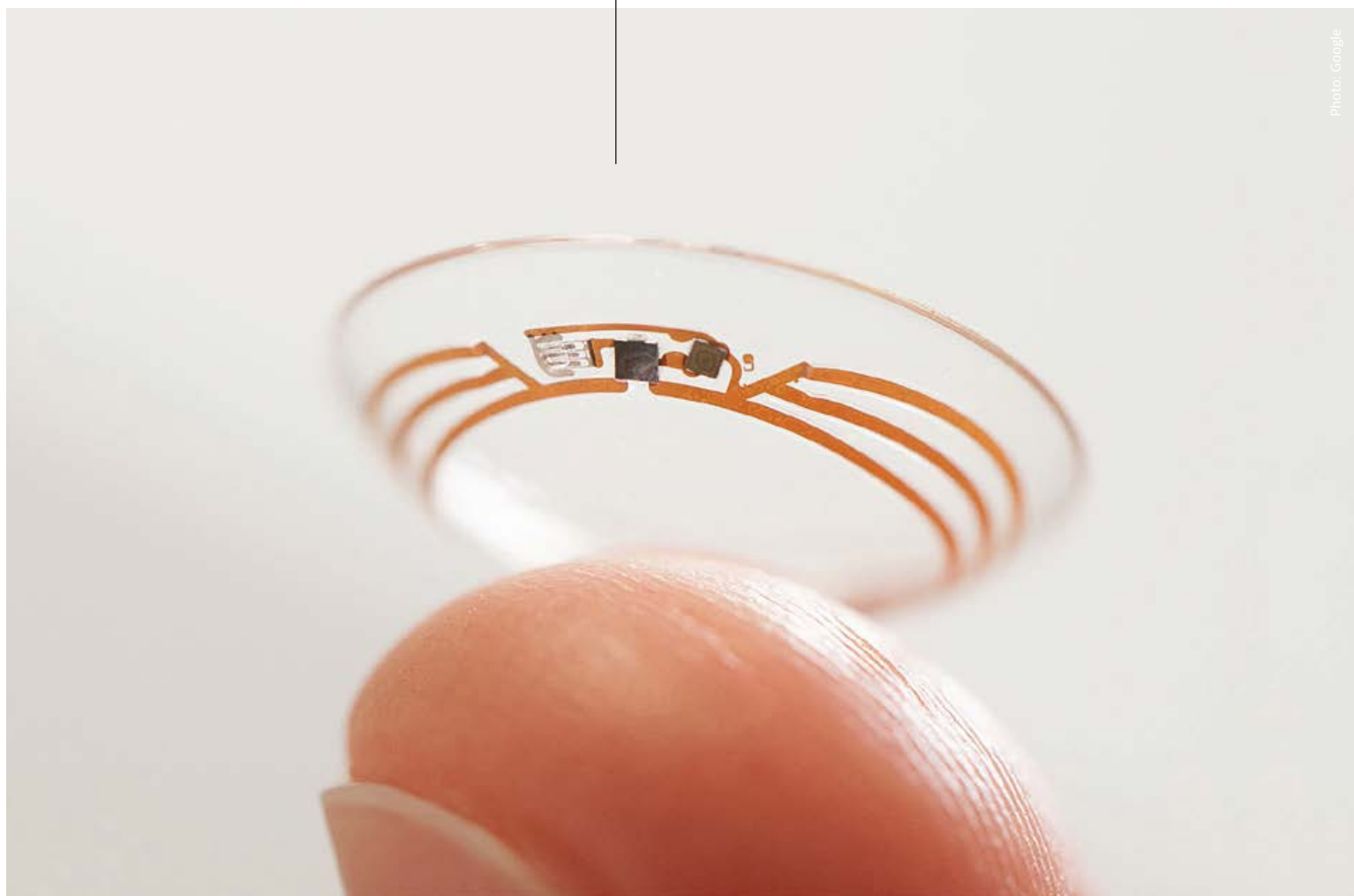
Plans by the German government to streamline licensing and testing procedures are expected to have a further positive effect on IVD R&D investment. Overall, Germany's highly innovative IVD companies are in a strong position to increase their share of this highly lucrative market in the years to come.

Appy Days Are Here

The market for mobile health apps is booming. Be it app, sensor or hardware, developers with the right "app-titude" stand to make considerable gains in the coming years.

Contact: julia.ruehle@gtai.com

Fit for purpose: wearable technology and mobile apps can now monitor our health, well-being and fitness levels and even facilitate medical consultation and diagnosis.



John Smith is in training for an amateur triathlon. Fitted to his upper left arm is a pulse measuring instrument, around his right wrist a step tracker. Both feed statistics and monitoring into his cell phone, which is also tracking his speed, distance, location and the gradients of his route. When he's done, another app will tally up his nutritional requirements post-workout, while another provides the cool-down program to aid muscle recovery.

Meanwhile, his diabetic wife's phone buzzes on the living room table. A sensor in her body has detected low blood sugar and the buzz is to remind her to go and chew on a cola bottle. Welcome to the *wunderbar* world of the health app.

A buoyant market

The market for health apps is one of the fastest-growing within Germany's digital scene. An aging population increasingly concerned with its health and longevity, the rapid pace of digitization, the increased occurrence of chronic disease and heightened interest in health and fitness have all contributed to the phenomenon. Be it app, sensor or mobile health (mHealth) hardware development, or telematic tracking, there is value to be found all the way along the chain. Pricewaterhouse

**31 per cent of
Germans use
fitness trackers
to monitor their
vital signs**

Coopers (PWC) estimates that the global mHealth market revenue will reach €23bn by the end of 2017, while a number of forecasts see the German mHealth market growing to about €3bn in 2017.

A key segment of mHealth is monitoring. PWC forecasts that it will generate 72 per cent of total mHealth revenue in 2017. Due to the proliferation of wearable devices, the mon-

INNOVATORS

Five *wunderbar* German health apps



Tinnitracks

Cuts the frequencies out of music which create the 'ringing in the ears' that tinnitus sufferers hear.



Caterna Vision

A home schooling app for vision-impaired children.



Patientus

Facilitates online video consultation between patients and their doctors



MyTherapy

A diarizing app that tracks the progress of your therapeutic activities.



BetterDoc

Based on your symptoms, the app searches for the most suitable specialist in the area, thus bypassing an initial doctor consultation.

itoring of vital signs is expected to be even more dynamic over the next few years. According to Germany's Federal Association for Information Technology (BITKOM), 31 per cent of the German population uses fitness trackers to monitor their vital signs and 30 per cent of smartphone users install health apps which monitor vitals, search for physicians and pharmacies, help them lose weight or improve their sleep. Meanwhile, the most popular health apps are those related to nutrition, counting calories and workout.

However, as health and apps and devices become inextricably intertwined, there has been concern from German insurance companies and legislators about the volume of sensitive data pinging around and they have recognized the need for a clear strategy to weave such devices into the healthcare system. More pertinently, the wellness lifestyle apps must be sorted from the genuine medical devices and the good from the bad. As Federal Minister of Health Hermann Gröhe puts it, "clear standards in quality and safety are now necessary for patients, app producers and medical personnel, while we need to ensure that apps with a real use for patients are quickly integrated."

As such, the burgeoning market is likely to split into two well-defined segments: the wellness apps, such as those worn by our triathlete, and the medical apps upon which health insurance companies and doctors may rely, such as that used by our diabetic. Apps that are intended not only for fitness and wellness but to enable medical findings (e.g. heart rate monitoring) can be classified as medical devices. But developers should be aware that if a stand-alone software or app is placed on the market as a "medical device," it is subject to the same regulations as all other medical instruments, and must be verified in accordance with EU guidelines and CE-marked.

Forewarned is forearmed when entering this market. Germany's Federal Ministry of Health is feverishly working on clarifying the certification procedures for the two different categories. Data protection is a sensitive issue in Germany and robustly defended by laws, which are among the most stringent in Europe. Strategic partnerships with strong players already in the industry, such as health insurance companies, should be a critical part of the go-to-market plan.

The future is at our fingertips

But the good news is that the effort put into that preparation is unlikely to go wasted. Between 2013 and 2015, smartphone usage in 19 to 29-year-olds in Germany rose by 24 per cent. In the age group 30-49, it was 33 per cent. Overall, 62 million Germans are smartphone users (76 per cent of the population). The still-rising penetration of smart mobile devices Germany and the increasing availability of fast data networks offer good conditions for growth.

An aging but increasingly tech-savvy population is looking to the future. Monitoring apps and wearable devices are saving crucial hours on both sides of the doctor's desk and reducing the need for frequent visits to the doctor's surgery. Meanwhile legions of fit young Germans are increasingly relying on their devices to provide them with the data, competition and analysis that makes fitness more fun. A huge market awaits those who prepare to enter it well. But like getting fit, it's all about your app-titude.

Surrounded by lovely countryside, the compact university city of Jena is attracting a lot of attention from global high-tech companies looking for a location in Germany.

Foreign Direct Investment

Global companies that have invested in Jena

JABIL

US global manufacturing services group Jabil Circuit, Inc., (Jabil Optics Germany GmbH)



US cloud computing company Salesforce (Salesforce Commerce Cloud, Jena)

FEINTOOL

Swiss engineering group Feintool International Holding AG (Feintool System Parts Jena GmbH)



Swiss instrumentation and process automation technology group Endress+Hauser (Analytik Jena AG)



Israeli global technology group Orbotech Ltd. (Laser Imaging Systems GmbH)



Optics Balzers AG from Liechtenstein (Optics Balzers Jena GmbH)

City of Light

Jena is a vibrant and fast-growing hub for the high-tech industry. With international players setting up shop, the city is becoming known as eastern Germany's "Optics Valley."

Contact: vanessa.becker@gtai.com

For a small university city in eastern Germany, with a population of just 110,000, Jena is attracting a lot of international attention. Companies such as US global manufacturing services group Jabil Circuit, Israel's technology group Orbotech and Switzerland's ground-breaking engineering group Feintool have invested strategically in the region, which has enjoyed unprecedented growth in the last ten years.

The secret of Jena's success is rooted in its heritage as the cradle of Europe's optical and photonics industry. Carl Zeiss, the world-famous lens and camera producer, began his pioneering work here in 1846 – and in 1990, following reunification, Carl Zeiss Jena re-established its base here. Jena is also home to iconic glass manufacturer Schott and global photonics manufacturer Jenoptik.

"For more than 150 years our science city has been shaped by innovative, light-based technologies," says Jena's mayor, Albrecht Schröter. "As a center for research in the field of optics and photonics, the close connections between Jena's universities and commercial research facilities as well as the local industry have been a long-standing tradition and guarantee for success."

Center of technical excellence

Jena boasts several renowned research institutions, including three Max Planck Institutes; the Fraunhofer Institute for Applied Optics and Precision Engineering, the Friedrich Schiller University (est. 1558), the University of Applied Sciences, and three Leibniz Association institutes relating to photonic technology, natural product research, infection biology and the science of aging.

Jena's more recent emergence as a Mecca for high-tech is no random occurrence. The local economic development agency (Jena

FACTS & FIGURES

97

per cent

of Jena's manufacturing sector companies would recommend the city as a location.

Jena quick facts

105,000

Inhabitants

26,000

University students

40,000

Employees

4,500

Researchers

to promote cooperation in photonics and to establish transnational R&D projects in the fields of materials, components and systems, optoelectronics and sensor technology. Last year it launched an internationalization project focusing on North America, Japan and South Korea.

Attracting foreign investment

One of its newest members is Jabil Optics Germany, formed last year when the US parent company consolidated its optics business by bringing together Sypro Optics (acquired from Carl Zeiss), Kasalis and the former Jabil Embedded Camera Group. Jabil Optics is aiming for future breakthroughs in such technologies as miniaturized projection systems for consumer electronics.

According to Wilfried Röpke, managing director of Jena Wirtschaft, foreign companies are investing in a broad range of technologies, not just in the field of optics. "Jena is internationally known for its optical tradition, but also increasingly for life sciences technologies, such as medical and laboratory equipment, precision engineering as well as digital technologies like e-commerce," he explains. "In addition we have 4,500 researchers and more than 23,000 students plus strong networks between business and science; all of which offer ideal conditions for the establishment and growth of high-tech companies."

Foreign investors who are considering Jena as a location would be advised to get acquainted with the business scene first, the infrastructure and the expectations of local customers. Companies which have thrived here are typically long-term, strategic investors who have done the groundwork and carefully plotted their route to success. Making contact with the local development agency might be the first milestone in that journey.

Wirtschaft) and the business community have a proactive approach to incubating talent and the infrastructure is in place: there are two technology parks, JenA4 and Jena21.

Playing a key role in the city's success is OptoNet, a thriving technology cluster that represents the leading photonics players in the region such as Jena-Optronik, pioneers in multi-spectral space cameras and 3D imaging, LASOS, which produces high-precision lasers, and ALS, which develops robotics solutions for healthcare.

The award-winning organization, which has 100 active members, strengthens the sector by promoting international visibility. OptoNet works with partners all over the world

Showtime: Hannover Messe

The world's leading industrial show Hannover Messe (April 24-28th 2017) will focus on "integrated industry" as a practical reality and a commercial super-driver.

The 2016 Hannover Messe, which put innovations in integrated industry in the spotlight and was opened by President Obama, was hailed as a huge success. So this year's fair will consider the commercial applications of the technologies and their impact on industry, the workforce and society. In 2017 we can expect mature Industry 4.0 technologies to hit the market and the digitization of energy systems. The world's biggest industrial technology show sets out to demonstrate how even small companies can pinpoint and harness the power of digitization. Markets Germany talks to two experts in the field. For more information, visit www.hannovermesse.de

Why is Germany a leading light in integrated industry?

OLIVER SEILER: Germany has always had a strong industrial production landscape which accounts for around 30 per cent of gross national income; but "Industrie 4.0" has become a central part of Germany's industrial strategy and is now part of the culture. You can see this in the effort put into initiatives like Plattform Industrie 4.0 and Arbeit 4.0 (which applies Industrie 4.0 concepts to the work space). Germany's R&D expenditure and landscape is difficult to match, both in terms of well-qualified labor available and the government support and funding available to investors. This has created an intense synergy between industry and research institutions, leading to better definition, refinement and integration of the technologies into German companies.

How does integrated industry make German companies more competitive?

ASHA-MARIA SHARMA: Some companies have reported an 80 per cent improvement in internal processes, which is adding value across industrial sectors and leaving more room for innovation. Others have reported better channels of communication with end users and a

WHAT OUR EXPERTS SAY

Integrated industry



Asha-Maria Sharma, director of service industries at Germany Trade & Invest (GTAI), and Oliver Seiler, director of mechanical and electronic technologies at GTAI, talk to Markets Germany about the leading role the country is taking in Integrated Industry.

significant improvement in integration with external partners. This heralds the end of the "one size fits all" era of mass production, with products becoming more bespoke and efficiently made.

What are the opportunities for foreign investors in Germany?

SHARMA: Investors will have access to the 500 million-strong EU market through its largest economy. Then there is the chance to get involved in Germany's fertile R&D landscape. The identified sectors of growth are big data, the internet of things, smart services, robotics and automation, micro-electronics and sensor technology.

Integrated industry has also boosted the energy industry. How is this trend set to develop?

SEILER: "Integrated energy," as it is becoming known, will have a large impact. The intelligent networking of the plethora of new players in the industry is paramount to achieving the energy transition (*Energiewende*) project's ambitious targets. You have volatile sources of renewables attempting to match relatively inflexible energy demand; integrating and storing these energies requires vast distribution networks. Foreign investors can add considerable value in these areas.

How important is the relationship between producers and IT providers?

SHARMA: Software is increasingly an embedded element in machines, production facilities and products. ICT sectors such as big data and the internet of things are identified as having the highest potential for growth. A recent study showed that digitization is increasing across all producers, both in terms of multiple uses and intensity of use. IT companies play a critical role in these processes.

Germany's Chinese Tiger

The CEO of China Telecom Germany, Mr. Jie He, looks back on five years of supercharged growth at his company's HQ on the banks of the Main River, Frankfurt.

Germany is the number one target for greenfield investment from China in the world – €6.9bn was invested between 2000 and 2014 – and China Telecom Germany has been the direct beneficiary of this economic convergence. Since 2011 profits have grown annually, with a 75 per cent increase expected for 2016. CEO Jie He looks back on five glorious years.

“We’re the perfect example of how businesses are benefitting from the solid economic relations between Germany and China. These glorious years have been a golden decade,” says the normally reserved Mr. He with a big smile. “Many German companies invested in China and vice versa. Close bilateral economic relations led to a great demand for exclusive telecommunication

ers and in doing so has significantly boosted our business.”

The German arm of China Telecom Europe has five data-processing centres and offers services in three areas: wholesale supply of China Telecom (CT) products and services to foreign operators (e.g. Deutsche Telekom, Swisscom and Orange), exclusive data connections for Chinese businesses and start-ups in Germany and German-speaking businesses operating in China (Gelita, Bosch, VW, Bei Qi Foton), and last but by no means least, ICT solutions in buildings and factories purchased in Germany by Chinese companies through mergers and acquisitions (M&A). As M&A accounts for the lion's share of Chinese investment in the last five years, this factor alone might account for CT's extraordinary success story.

GmbH was founded in 2010 with an initial workforce of just two. The team now consists of 32 staff and next year Mr. He anticipates they will need to double their office space. Company HQ is currently on the 15th floor of the Westhafentower on the Main river. Mr. He chose the location for its excellent accessibility, in the immediate vicinity of the main train station, highway and airport, enabling fast access to customers. The telecoms veteran knows better than anyone that “speed means efficiency.”

Cultural cooperation

Unusually for a Chinese start-up, all employees, including Mr. He himself, were hired locally. The German staff look after the German customers and are responsible for marketing and project management, while the Chinese staff – who all completed their training in Germany – attend to the Chinese companies in Germany. All staff have Chinese language skills. “There are always cultural differences,” says Mr. He, “and only by remaining in constant exchange and engaging in team-building can we gradually eliminate all misunderstandings.” Every year he organizes advanced training for the German staff in China, to enable them to become more familiar with the culture and its people.

Mr. He's advice to potential Chinese investors is first and foremost to respect the needs of the local market: the company needs to be based in situ and should utilize the local workforce, with all its advantages. Secondly, before investing, the German market should be properly researched so that suitable products can be customized or developed with a pre-defined strategy.



»The last ten years have been a golden decade.«

Jie He, CEO China Telecom Germany

connections among companies doing business internationally, to ensure business information can be transferred securely and seamlessly. That was our opportunity: the German market gave us the chance to offer our premium services to important custom-

Speed means efficiency

A graduate of telecommunications engineering, Mr. He established the branch office in Frankfurt single-handedly in 2008 to scout out new customers and marketing opportunities. China Telecom Deutschland

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Federal Ministry
for Economic Affairs
and Energy

on the basis of a decision
by the German Bundestag

How to Obtain Valid, Certified Translations for German Authorities

“Sworn translators” can perform officially certified translations, which are then freely recognized by all German authorities.

The German authorities require certified translations for certain types of documents, including those needed for starting up a business in Germany, for example commercial registry excerpts, company contracts and powers of attorney.

What is a “certified translation”?

When talking about certified translations, it is important to know that the term “certification” has a particular meaning in Germany when relating to translations, because a “sworn translators” system is in operation here. These translators must meet certain criteria in order to be sworn in by the court. As such, they are authorized to confirm the accuracy and completeness of a translation by providing their signature and stamp, but exclusively in the language combinations for which they have been approved.

Directory of sworn translators and interpreters

So how do you procure a certified translation which is guaranteed to be accepted by the German authorities? There is an official directory listing all sworn translators for written texts (and interpreters for verbal negotiation), and their direct contact details: <http://www.justiz-uebersetzer.de/>. Only these translators can perform officially certified translations, which can then be freely recognized by all German authorities.

Nationwide recognition

Certified translations according to the German system are recognized right across the

»Confusion resulting from the term is due to the fact there is no definitive name for Germany’s special situation.«



Christine Schmitt

Publicly appointed and sworn
Japanese and English document translator
for Baden-Württemberg

country, i.e. if you require a translation for a registry office in Munich, it does not have to be performed by a Bavarian translator, but can be done by a translator from anywhere in Germany. So if you choose a translator from North Rhine-Westphalia, for instance, the wording on the stamp might say “Japanese translator authorized by the presiding judge at the Düsseldorf Higher Regional Court,” but the translation can be submitted to authorities anywhere in Germany.

An ambiguous term

The confusion resulting from the differing interpretation of the term “certified translation” is partly due to the fact that there is unfortunately no definitive name for Germany’s situation, since the term “certified translation” says nothing about the special background. This type of translation might be better termed something like “certified translation in accordance with the German system,” because the simple term of a “certified translation” gives the impression that this sort of certification can be issued by any official authority, similar to a “certified copy,” which can be issued by the receptionist at any town hall or district branch office. As this system is not well known, and because there is no specific term for it, many people buy translations produced by translators certified under systems different to the German one or translations stamped by embassies or translation agencies, but these are generally not accepted by the German authorities and have to be redone here with the added cost this entails.



Asia Favors Germany

Recognizing the importance of investment from the Asia-Pacific region, Germany Trade & Invest took an active role in the Conference of German Business 2016 in Hong Kong.

Trade ministers and ambassadors from across the Asia-Pacific region and Germany gathered in Hong Kong last November to meet with over 800 German and Asian business leaders and take part in the biannual Asia-Pacific Conference of German Business (APK).

Germany Trade and Invest (GTAI) hosted a dynamic panel discussion, "Business Location Germany – Strategies for Successful Market Entry." Panelist Matthias Machnig, state secretary of the Federal Ministry for Economic Affairs and Energy (BMWi) in Germany, underlined the great investment opportunities, investment security and the innovative ecosystem that Germany offers foreign investors. He pointed to the excellent universities and research institutes, world-class vocational training system and highly skilled employee base as key factors in attracting investment, especially in the high-tech sector.

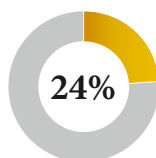
»The only way to become a top tier company is to go to a top tier market.«

The Chairman/CEO of GTAI Dr. Benno Bunse backed this up with some bullish figures for foreign direct investment (FDI) in recent years. To the end of 2015, 2,300 Chinese companies were registered as having invested in Germany; while there were at least 1,300 Japanese investments – Japan being the Asian country with the most established invest-

FACTS & FIGURES

€27bn

Between 2010 and 2014, FDI stocks in Germany from Asia-Pacific increased by 37 per cent, totaling €27bn*



In 2015, 24% of all non-M&A investments in Germany (greenfield or expansion projects) originated from Asia-Pacific.**€27bn.*

260

investment projects makes China the biggest Asian investor in Germany in 2015.**

5,000

foreign-owned companies in Germany come from Asia-Pacific and employ over 230,000 people.+

* Bundesbank.

** GTAI

+ Markus Database maintained by Bureau van Dijk

ment tradition in Germany. An additional 92 investment projects came from India, South Korea, Taiwan and Australia.

Asia's platform in Europe

Some influential Asian businessmen then offered their experiences of investing in Germany: "The local authorities were very straightforward and supported the project quickly and cooperatively," said Jeff Bi, CEO of Chinese company Greatview Aseptic Packaging Co. Ltd., about its investment in eastern Germany. The size of the German market played a crucial role in the investment decision.

"The only way to become a top tier company is to go to a top market. Germany is a top market," said Jie Lin, managing director of Chinese communications company Phicomm's European arm, which is planning to build its European headquarters near Munich for around €100m. "Germans are focused on perfection," he added. "The staff are strict and serious, very disciplined and qualified, as well as highly efficient."

"Our goal is to become a global player. We chose Germany as our foreign platform, because we found the right partner in Bielefeld," explained Japanese businessman Kaz Nishihata about the decision of his IT service company NTT-DATA Corporation to invest. Japanese healthcare giant Sysmex Corporation which has had a presence in Germany since 1980 and employs 1,500 people, cites excellent R&D facilities and the large number of SMEs with state-of-the-art technology as key advantages for Sysmex Europe GmbH. Kazuya Obe, member of the managing board, comments: "We have great respect for the traditional corporate culture in Germany. We see the preservation of it as a key to future success."

Top Investments

Each year Markets Germany asks the business development agencies of the German federal states to name their most important or interesting investments of the year. Here are some excerpts from the report.



Photo: ArcelorMittal

A few years back Swiss pediatrician and diabetic expert Yves Nordmann had the idea of making traditional nutritional and dietary counseling more effective with the help of smartphones. After getting together with healthcare strategist Dr. Kai Eberhardt, he co-founded Oviva. The young company has recently set up shop in Brandenburg's state capital Potsdam to penetrate the German market.

Oviva is the 47th company from Switzerland to locate to the east German state. "Brandenburg has a good reputation in

Switzerland. Oviva is in good company with well-known Swiss firms like the faucet manufacturer Franke Aquarotter, the railway technology company Stadler, the wood-processor Krono in Heiligengrabe and the IT specialist Enersis," says Dr. Steffen Kammradt, managing director of the Brandenburg Economic Development Board (ZAB).

High quality of living in Hamburg

Ranked in the top ten global cities for "quality of life" by *The Economist*, Hamburg has become an attractive investment location for

The steel group ArcelorMittal is going to invest €40m in its factory in Bremen, north Germany.

international companies, boasting a dynamic economy, high sustainability and environmental ratings and a low crime rate, together with a rich cultural landscape.

Hamburg is now home to one of the largest Chinese wind turbine manufacturers in the world, Envision Energy, which was brought over with the assistance of the Hamburg Business Development Corporation (HWF). Following Envision's successful transition, a second major turbine manufacturer is now negotiating a move to the city with the support of Hamburg's Liaison Office (HLO) in Shanghai.

Norwegian Xeneta Marketing GmbH is an online database for the comparison of freight rates which recently launched a subsidiary in Hamburg. The German office is responsible for launching and marketing products and software which are used to monitor, compare and optimize freight rates.

Bremen expands its waistline

Bremen is about to benefit from a substantial investment boost as ArcelorMittal, the largest steel group in the world, invests €40m in its factory in north Bremen. The company produces more than 3.5m tons of crude steel annually and employs approximately 4,500 people.

Turkish rim manufacturer CMS Jant ve Makina Sanayi A.S. also opened a new logistics center in Bremen last year. The company makes over 9m aluminum rims annually, 1.5m of which are for the German market. The rims arrive by container ship and are transported from Bremen to automobile manufacturers all over the country: Daimler, Audi, BMW and Volkswagen are just some of their illustrious customers.



Read our full report online at

[www.gtai.com/
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The Italian Connection

How two great manufacturing nations are working closely together to drive growth and advise companies wanting to do business in Italy and Germany.

GTAI INSIGHT

Berlin meets Milan



We talk to Robert Scheid, who heads up GTAI Milan, and Stefanie Burgdorff from the GTAI's Executive Unit Strategic Partnerships team in Berlin, who recently participated in a month-long exchange in the Milan office.

In 2009 Germany Trade and Invest (GTAI) opened an office in Milan under the same roof as the German-Italian Chamber of Commerce (AHK), but the two countries' economies have benefited from a close cooperation between AHK and GTAI for over 30 years. Markets Germany spoke with Robert Scheid, who heads up GTAI Milan, and Stefanie Burgdorff from GTAI Berlin about the special relationship that exists between the two great industrial nations.

Mr. Scheid, how exactly does the cooperation between the GTAI and the AHK in Milan work?

ROBERT SCHEID: The exchange allows both organizations to better serve the needs of companies, who are ultimately the biggest beneficiaries. It is a true example of a win-win situation. The AHK works closely with both German and Italian companies and so is able to provide GTAI with excellent contacts. This helps us gain useful insights into the challenges companies are facing, new market opportunities as they arise and the way the real economy ticks. At the same time the AHK benefits from the wealth of data provided in our reports, which are used for events, delegation trips and information requests from companies. The end result is a richer information pool for the AHK and increased networking opportunities for GTAI. This provides improved support for companies operating internationally.

Both organizations must be inundated with business enquiries. Do they work together to answer them?

SCHEID: Absolutely. Italian and German companies come with a stream of questions about doing business in the respective countries. Given our complementary areas of expertise, with GTAI providing information on the specific markets and AHK advising the companies, it is natural for us to share requests for information in order to provide the best and quickest response to the customer. Even though we are separate organizations, our common goal is to increase opportunities for the German economy, so we always try to provide one face to the customer and introduce each other as partners. For example, GTAI holds briefings for German business delegations which are hosted by

the AHK, while meetings with potential investors are conducted jointly.

Ms. Burgdorff, Italy is the second most prolific industrial country in the EU and a vital trading partner for Germany, but how important is Germany as an investment location for Italian companies?

STEFANIE BURGDORFF: To give you an idea, about 20 per cent of Italy's foreign direct investment (FDI) projects in Western Europe are implemented in Germany. That's a significant proportion. There are approximately 2,800 Italian companies active in Germany, mostly located in Bavaria and North Rhine-Westphalia, and they employ about 135,000 people.

What have been the main sectors of Italian direct investment in Germany in recent years?

BURGDORFF: Interest in greenfield investments – where the parent company builds its operations on foreign soil from the ground up, from the construction of new facilities to the establishment of a new distribution network – has grown significantly over the past five years. Over a third of the Italian FDI projects in Germany took place in the fashion and textile industry during this period. The majority of projects focused on retail and production activities, with a growing number in mechanical engineering and the consumer goods industries.

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GTAI: Supporting Investors

The experts at Germany Trade and Invest's Berlin office are dedicated to helping foreign companies who are interested in investing in Germany.

GTAI maintains close links with potential overseas investors. Each year our employees are in contact with some 3,000 companies who are considering investment in Germany. We can advise on the details of market entry, assist in location scouting and facilitate access to local partners and networks. Our sales strategies include approaching companies directly, distributing helpful literature as well as organiz-

ing networking events. GTAI also maintains a presence at trade fairs around the world and on social media.

Current and future trends

In order to provide relevant and in-depth information, GTAI's experts continuously analyze different sectors and identify future topics that make Germany an interesting business location. We scrutinize current investment

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flows and analyze market potential. Our service also provides critical information on funding, financing and legal matters.

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