INDUSTRY OVERVIEW

The Medical Technology Industry in Germany

ISSUE 2017/2018
Global demand for innovative medical technology solutions continues to grow as we live longer, healthier lives. “Medical devices made in Germany” make a significant contribution to enhancing patient health care and quality of life around the world. Medical devices developed in Germany benefit from a world-class research and business environment, with the sector’s predominantly small and medium-sized companies enjoying an international reputation as innovators and market leaders. Internationally, the “Made in Germany” seal continues to be held up as a guarantee of quality. This is especially the case in the medical device sector. In 2016, almost 70 percent of medical technology products made in Germany were exported to international markets.

Domestically, more than 99 percent of the country’s 82 million residents are covered by health insurance. German health insurers cover around two thirds of Germany’s total annual health spending of EUR 344 billion or 11.3 percent of GDP. The out-of-pocket market is worth around EUR 60 billion. With its state-of-the-art infrastructure and its central location in Europe, Germany is also an ideal location for serving surrounding European countries with an additional potential market volume of more than EUR 1,500 billion.
The German Medical Technology Industry in Numbers

Medical Technology Made in Germany
The German medical technology industry, made up almost entirely of small and medium-sized enterprises, is highly innovative and generates a large share of its revenues from exports. In 2015, the approximately 1,200 medical device manufacturers (>20 employees) and their 130,500 employees generated EUR 27.6 billion in sales – an increase of more than nine percent over the previous year. Export markets are particularly important to German companies – around two thirds of sales in 2015 were generated outside the domestic market. Exports grew nearly nine percent to a total of EUR 17.6 billion in 2015. Today, Germany is the world’s third largest manufacturing nation with a share of 10.2 percent of worldwide medical technology production. This is directly behind the USA (39.6 percent) and China (11.1 percent), with Japan (6.1 percent) and Switzerland (5.3 percent) following Germany.

Growing Export Demand
Medical technology “Made in Germany” is highly valued around the world. Although the US remains the largest single market and demand from China continues to grow, the largest share of German exports actually stays within Europe. Approximately 41 percent of German exports go to EU member states and another 10 percent to other European countries. Eighteen percent of exports are shipped to North America and Asia respectively.

Setting International Standards
Close collaboration between science and industry has helped establish Germany’s medical technology sector as an international landmark of quality, performance and safety standards. A number of institutions – including the German Joint Federal Committee (JFC) and notified bodies including TÜV and DEKRA - are responsible for ensuring the safety and reliability of medical technology products and services produced in Germany. The industry is also subject to EU directives and regulations governing certification and marketability. Implementing essential industry norms like ISO 13485 (regulation of quality management systems) and ISO 14155 (clinical evaluation of medical technology) are common practice. Put together, this leads to medical technology developed and made in Germany that meets the highest quality standards.

Innovative Cluster Networks
Germany is home to more than 30 specialized cluster networks focusing on medical technology. Their goal is to achieve continuous innovation in research and development as well as in manufacturing by connecting companies, hospitals, universities, and other research institutions. Dedicated cluster management teams help obtain funding for joint R&D projects, provide share facilities, and organize educational training programs for their members.

German Medical Device Manufacturer Revenue Development in EUR billion

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue generated abroad</th>
<th>Revenue generated inland</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>7.8</td>
<td>7.8</td>
</tr>
<tr>
<td>2011</td>
<td>7.8</td>
<td>7.7</td>
</tr>
<tr>
<td>2012</td>
<td>7.7</td>
<td>7.9</td>
</tr>
<tr>
<td>2013</td>
<td>9.0</td>
<td>10.0</td>
</tr>
<tr>
<td>2014</td>
<td>16.4</td>
<td>16.4</td>
</tr>
<tr>
<td>2015</td>
<td>17.6</td>
<td>16.4</td>
</tr>
</tbody>
</table>

Source: BVMed 2017

German Medical Technology Exports by Destination 2015 in EUR billion

<table>
<thead>
<tr>
<th>Region</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Union</td>
<td>41</td>
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<tr>
<td>North America</td>
<td>18</td>
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<tr>
<td>Asia</td>
<td>18</td>
</tr>
<tr>
<td>Europe (non-EU)</td>
<td>10</td>
</tr>
<tr>
<td>Middle East</td>
<td>4</td>
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</tbody>
</table>

Source: BVMed 2017
Healthcare in Germany

Healthcare Expenditure
Healthcare expenditure in Germany totaled EUR 344 billion in 2015; representing a more than four percent increase on the previous year’s spending level. The amount spent is equivalent to 11.3 percent of GDP or EUR 4,213 per capita.

Health Insurance
With around 88 percent of the German population enrolled in a public health insurance plan, the public health insurance system plays the dominant role in the allocation of healthcare funds. Eleven percent of the population opt for private health insurance, with less than 0.2 percent of the population having no insurance cover.

Public health insurance providers covered EUR 200 billion of total healthcare expenses in 2015. Private health insurance companies reimbursed an additional EUR 30 billion of medical expenses. The remaining amount is covered by government budgets, state-mandated long-term care insurers, the social pension fund, state-mandated accident insurance providers, employers, and private households.

In- and Outpatient Care
In 2015, outpatient care accounted for nearly 50 percent of annual health expenditure. The most significant outpatient facilities included doctor’s offices (EUR 51.5 billion) and pharmacies (EUR 46.3 billion). Inpatient and partial inpatient institutions accounted for EUR 128.8 billion of total expenditure, of which EUR 89.5 billion was incurred by hospitals.

Hospital Care
In Germany, 1,956 hospitals, with a total capacity of more than half a million beds, treated more than 19 million patients in 2015. The average hospitalization period was 7.4 days. The country also had approximately 1,151 preventative care and rehabilitation facilities with nearly 164,466 beds treating around two million patients. The average rehabilitation stay was 25.3 days. According to the German Hospital Federation, hospitals also provide specialized ambulatory care to a further 18 million outpatients – a figure that is set to rise.

Germany’s Health System – Facts and Figures 2015
- More than 99 percent of Germany’s 82 million residents are covered by health insurance
- Total annual health expenditure: EUR 344 billion (11.3% of GDP)
- Hospital expenditure: EUR 89.5 billion
- Outpatient expenditure: EUR 51.6 billion
- Number of hospitals: 1,956 (one third private ownership)
- Number of hospital beds: 498,000
- Diagnosis Related Group (DRG) System (hospital sector): 1,200 DRGs, 179 additional remuneration titles
- Number of active medical doctors: 369,000
- Number of dentists: 73,000

Total Annual Health Expenditure 2015
in EUR billion

Germany 335.4
France 239.9
UK 181.9
Italy 148.3
Spain 97.3

Source: OECD 2016
Medical Technology Trends

Germany’s Hidden Champions
German medical technology is cutting edge. A variety of companies – nearly all of them small and medium-sized – develop and commercialize innovative devices across the range of more than 500 thousand individual products within the entire scope of medical technology. Many specialize in very specific fields of applications and product types. While these companies often operate in niche markets, they are very often global leaders in their respective fields. As innovators, those companies need to be able to adapt to global market trends quickly.

Demographic Change
Germany’s over-65 population will increase to 24 million by 2035 – a seven million increase over the current 17 million. As such, 65-year-olds will represent a third of the domestic population – with people aged 50 years and older accounting for half of the total population. Long neglected as consumers of private consumer goods and services, yesterday’s senior citizens have become today’s “golden agers” – perhaps the most important consumer community of the future. Companies who establish a foothold in Germany’s forerunner “silver economy” are well positioned to launch into European and international markets.

Digital Health in Germany
Mobile health solutions are the main driver of the significant growth recorded in the digital health market. As defined by the World Health Organization, “mobile health” (also “mHealth”), covers medical and public health practices supported by mobile devices. This includes medical applications and “apps” that connect to medical devices and sensors (such as bracelets or watches) or act as personal guidance systems, health information services, and medication reminders. Current forecasts indicate that the main source of revenue will not come from application downloads, but instead from mHealth hardware sales.

Monitoring: Wearable Devices
The monitoring of vital signs using wearable devices is the key mHealth segment. According to PriceWaterhouseCoopers, monitoring will generate 72 percent of mHealth turnover in 2017. mHealth solutions enjoy widespread consumer acceptance and continue to grow in popularity – almost one in three people use health trackers to monitor their physical condition. According to current estimates, the domestic mHealth sector will have a market value of around EUR 3 billion in 2017.

Industry Spotlight – The Dental Sector
Many segments within the German medical technology sector reflect changing trends relatively quickly. Germany’s dental sector is a particularly relevant example for early innovation adoption.

The German dental industry represents 17 percent of entire medical technology sector manufacturing in Germany. More than 60 thousand different products cover the complete spectrum of dentistry; from diagnostics through preventive medicine to tooth restoration. The country spends more on dental health per capita than any other country in the European Union, with the country’s 150-plus public and private health insurers spending EUR 16.7 billion on dental care in 2014 alone. Europe’s biggest dental market is expected to keep expanding, thanks to growing dental health awareness among the population – with an increasing willingness and ability to pay for preventative and corrective treatments alike. The gap in unmet medical and cosmetic treatment need continues to rise as the population ages and has access to an increasing range of dental technology solutions. Price-sensitive patients and dental health consumers also benefit from the new economies of scale that are created – especially in the lower price dental implant segment. Fully integrated CAD/CAM systems with 3D scanning technology, used both intraorally and in dental labs, together with novel ablative and additive manufacturing systems have accelerated the manufacturing process significantly.
MARKET OPPORTUNITIES

**European and German Medical Device Regulation**

**CE Marking**
International companies serving the German market are required to meet German and European health and safety legislation requirements. Specific German regulations must also be complied with in addition to European medical device directives (MDD) and medical device regulation (MDR). Medical device manufacturers are required to declare conformity to European Union legislation (Conformité Européenne – "CE") for all devices with an intended medical purpose. The CE mark can be applied to the device once conformity has been declared:

- The Medical Devices Directive (MDD) applies to all general medical devices not covered by the Active Implantable Medical Devices Directive or the In Vitro Diagnostics Directive (93/42/EEC).
- The Active Implantable Medical Devices Directive (AIMDD) applies to all active devices and related accessories intended to be permanently implanted in humans (90/385/EEC).

**Conformity Assessment**
Medical devices, unlike pharmaceuticals, are not certified by governmental institutions but by notified bodies working on their behalf. There are some 60 such notified bodies throughout Europe, of which 10 are headquartered in Germany (e.g. TÜV SÜD and DEKRA). In the case of low-risk products, the manufacturer can declare conformity with EU regulation without involving a notified body. The risk classification criteria are provided in Annex IX of the European Medical Device Directive 93/42/EEC which, together with the intended use, is the basis for risk classification in the individual case. In addition to the fundamental legal framework provided by the EU, additional German regulation is in place for the following:

- Use and upkeep of medical products
- Prescription requirement and pharmacy requirement for medical products
- In-house-manufacturing of medical products
- Refurbishment of medical products
- Safety manager and medical products

**Revision of the European Medical Device Regulation Framework (MDR)**
The European Commission initiated a revision of the existing regulatory framework for medical devices in 2012. A transition time of three years is in place until the new regulation becomes effective after having passed the legislative bodies of the European Union and having been published in the Official Journal of the European Union on May 5, 2017. During this transitional period, time medical devices can be certified under the existing directive framework (MDD) from the 1990s. Given the maximum valid period of a CE marking of four to five years, this leads to the disappearance of MDD CE markings by approximately 2025. Selected key revisions of the new MDR are:

- Reclassification (some class I into class II, IIb into class III)
- Enforcement of unannounced (supplier) audits
- UDI database with 21 elements of information per device
- Individual clinical trials necessary for class III
- Clinical information to be published in public EUDAMED database
- Notified bodies to produce clinical trial reports
- New EU expert committee (Medical Device Coordination Group) may issue scientific statement based on clinical trial report of notified body
- Notified bodies to incorporate scientific statements (may provide certification with restrictions)

**Exemplary Product Risk Classification**

<table>
<thead>
<tr>
<th>Class</th>
<th>Risk</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class I</td>
<td>low risk</td>
<td>Walking aids, thermal packs, oral spatulas, medical apps, gauze bandages</td>
</tr>
<tr>
<td>Class IIa</td>
<td>medium risk</td>
<td>Ultrasound, dental fillings, hearing aids, contact lenses</td>
</tr>
<tr>
<td>Class IIb</td>
<td>medium/high risk</td>
<td>X-ray devices, dental implants, monitoring screens, defibrillators</td>
</tr>
<tr>
<td>Class III</td>
<td>high risk</td>
<td>Hip implants, heart valves, drug eluting products, active implants</td>
</tr>
</tbody>
</table>

Source: GTAI 2017
Reimbursement in Europe and Germany

28 National Systems in European Union
The first steps to accessing the European market usually include the declaration of conformity in compliance with the European Medical Device Regulation. However, having been approved for the European market, international manufacturers are then faced with national healthcare and cost reimbursement systems. In Germany, manufacturers are confronted with a system that is characterized primarily by statutory health insurance and, to a lesser degree, private health insurance. Both statutory and private health insurance are financed through insurance premiums (paid jointly by the insured person, their employer, the national pension fund etc). While most EU countries have a DRG system in place for the inpatient sector, there are a number of different institutions, financing and reimbursement systems in place across the 28 member countries in the union.

Innovation-friendly DRG System
The innovation-friendliness of the national health systems largely influences their uptake levels of new technologies and commercialization of new products. Germany’s inpatient system is especially innovation-friendly in terms of product safety requirements and the availability of immediate reimbursement. The German DRG system allows for any CE-certified medical device to be reimbursed under existing procedures and their DRG codes (unless prohibited in the individual case). While German authorities are merely executing a prohibition right in the inpatient sector, reimbursement of a novel technology in the outpatient sector is subject to approval in each product's case.

Optimizing Reimbursement for Inpatient Innovations
Pre-existing DRG codes and the corresponding fixed lump-sum budgets based on established technologies are not always sufficient to cover innovative device spending. Where this is the case, the German system offers the NUB procedure (Neue Untersuchungs- und Behandlungsverfahren – Novel Diagnosis and Treatment Procedure). With NUB status granted and individual OPS (Operations and Procedures Code) codes put in place, reimbursement can be increased significantly and a sustainable business case secured by the manufacturer. In 2016, the German health authorities introduced an additional scrutiny procedure within the Health Care Strengthening Act by introducing § 137h Social Code Book (SGB) V. This reflects in part the stricter stance of the new European MDR aimed specifically at medical devices of increased risk class IIb and III or active implants with an especially invasive character. The G-BA (German Joint Federal Committee) is now required to perform benefit assessments for devices using a novel scientific-theoretical concept whenever an NUB procedure is initiated.

Outpatient Sector Reimbursement
There are two independent general agreements for the private health insurance and statutory health insurance systems in the outpatient sector, based on which a nationwide billing system for approved and paid services has been agreed. The Einheitlicher Bewertungsmaßstab (EBM – “Uniform Evaluative Standard”) is applicable for the statutory health insurance sector. The G-BA is required to assess and confirm the diagnostic or therapeutic benefit of novel diagnosis and treatment methods as well as the medical need for use and the product’s economic viability before a new method may be adopted in the EBM. The comparable regulations for private health insurance schemes are specified in the “Official Schedule of Fees for Physicians.” Individual contracts can be concluded between insurers and manufacturers for products and services that are not covered by the statutory health insurance system.

German Market Access after CE Certification and Clarification of Reimbursement Status

| First step to take at EU level: CE certification (MDD/MDR) |
| Second step to take at national level: German Act on Medical Devices (MPG) and reimbursement legislation Social Code Book 1 SGB V |

In-patient sector
Reimbursability granted subject to basic principles of quality of care and/or efficiency not being violated

Out-patient sector
Reimbursability subject to approval
MARKET OPPORTUNITIES

Germany’s Medical Technology Landscape

Industry Hotspots
Germany’s medical technology industry stretches across the entire country, with the town of Tuttingen, in the south-west, perhaps being the most well-known of the country’s numerous medtech hotspots. The sheer density of device manufacturers is often explained in terms of the local precision manufacturing heritage and, more specifically, cuckoo clock production. Different medical technology segments are dotted around the country, with medical optics, for example, being well represented in the eastern German city of Jena, with some globally leading manufacturers still bearing the city name in their own company names.

The small and medium-sized company nature of most German medtech manufacturers makes cooperation with academic, scientific and other manufacturer partners a common element of company strategies. Pooled resources allow advantageous synergy effects to be effectively realized and research and product development costs to be cut through joint purchasing initiatives. The close proximity of medical universities, research institutions and large manufacturers to each other often constitutes the nucleus of local medtech clusters that support the industrial value chain at the local level. Today those medtech cluster networks, funded by national and regional governments, are equipped with staff and budgets of their own and represent the most significant landmarks in Germany’s medtech industry landscape.

European Cluster Excellence Initiative
The European Cluster Excellence Initiative (ECEI) was launched by the EU Commission in 2009 as part of the European Union’s efforts to foster growth and creation of world-class clusters across the EU. The European Secretariat for Cluster Analysis (ESCA) was subsequently established in order to offer practical advice to Europe’s cluster management organizations. Today, ESCA is a network of cluster experts from more than 30 countries that consults cluster policy makers and promotes cluster management excellence through benchmarking and quality labelling of clusters and their management organizations. In Germany, 10 cluster networks with activities in the medical technology sector have already been ECEI certified.

German Medical Technology Company Size by Revenue 2015

Source: Statista 2016

go-cluster Initiative
The Federal Ministry for Economic Affairs and Energy “go-cluster” excellence program brings together around 100 innovation clusters from across Germany. Cluster members are at the cutting-edge of innovation and represent the technological diversity within the country’s industry and technology sectors. The initiative provides financial stimulus – in the form of support for innovative services and funding for novel solutions – to optimize cluster management allowing member clusters to position themselves as highly effective and visible international clusters. Membership provides numerous advantages to innovation clusters, actors and partners.

www.clusterplattform.de
Medical Technology in Germany: Manufacturing Clusters

City or Area of Cluster Location
- 10-20 Companies
- 20-40 Companies
- 40+ Companies

Source: GTAI 2017 based on Marcus Datenbank, Bureau van Dijk
Europe's Talent Pool

Excellent Tertiary Education
Germany enjoys a long and successful tradition in mechanical medical engineering and high quality manufacturing. Medical technology companies and their employees alike can rely on Germany's unique education system, which produces the largest pool of talents and skilled people in Europe. Most students by far enroll at the public university system, which is practically free of charge.

Academic Study for the Medical Technology Industry
According to the German Federal Statistical Office, Germany has a particularly high academic uptake rate. In the academic year 2015/2016, some 507,800 students – at more than 426 institutions of higher education – embarked on a course of academic study. Germany’s share of university students in the sciences, mathematics, computer sciences, and engineering is the second highest in the EU, with 29 percent of all students. Some 44 percent of the students are studying in fields relevant for the medical technology industry, with 593 individual university programs throughout the country related to medicine. There are more than 150 bachelor and masters programs for students to choose from in the medical technology field alone.

Dual Education System: Medical Technicians
Germany operates a dual vocational training system – combining the benefits of classroom-based and on-the-job training over a period of two to three years. A total of 323 different recognized trades can be learned with regard to medicine, with specific advanced training courses available to enable metal or electronics specialists to achieve status as recognized medical technicians. In close cooperation with the German government, the German Chambers of Industry and commerce (IHKs) and the German Confederation of Skilled Crafts (ZDH) ensure that exacting standards are rigidly adhered to, guaranteeing the quality of training provided across Germany. One in five German companies take part in the dual vocational training system, thereby turning apprentices into specialists who fit each company’s needs. Most apprentices receive an employment contract after training. More than 70 percent are taken on as employees in production-based industries, underlining the crucial importance of the training system. More than 1.3 million young people are currently in vocational training in Germany.

Competitive Labor Costs
High productivity rates and steady wage levels make Germany an extremely attractive investment location. The labor cost gap between Germany and its eastern European neighbors has been significantly reduced. In fact, Germany has gained the labor-cost edge in recent years. Since 2005, wages in the manufacturing sector have risen in most European countries (EU-28), with the growth rate averaging 2.7 percent. While some countries – particularly in Eastern Europe – experienced a rise of more than five percent, Germany recorded one of the lowest labor cost growth rates (2.3 percent) in the manufacturing sector within the EU. This has been another decisive argument in favor of Germany as a premium business location.

Highly flexible working practices such as fixed-term contracts, shift systems, and 24/7 operating permits contribute to enhance Germany’s international competitiveness as a suitable investment location for internationally active businesses.

Employee Distribution in the Medical Technology Industry in Europe 2015
in thousands

<table>
<thead>
<tr>
<th>Country</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>195</td>
</tr>
<tr>
<td>France</td>
<td>90</td>
</tr>
<tr>
<td>UK</td>
<td>71</td>
</tr>
<tr>
<td>Italy</td>
<td>68</td>
</tr>
<tr>
<td>Spain</td>
<td>23</td>
</tr>
</tbody>
</table>

Source: Statista 2017
Financing & Incentives

Incentives programs in Germany are available through different public funding instruments and for different funding purposes. The individual funding requirements may, for example, result from investment projects, research and development activities, personnel recruitment, working capital needs or other specific purposes. The different incentives instruments including grants, loans and guarantees are generally available for all funding purposes and can ordinarily be combined; thus matching the different business activity needs at different development stages of the company.

Investment Project Financing by Private Equity
Technologically innovative start-ups in particular have to rely solely on financing through equity such as venture capital (VC). In Germany, appropriate VC partners can be found through the Bundesverband Deutscher Kapitalbeteiligungsgesellschaften e.V. (BVK – “German Private Equity and Venture Capital Association”). Special conferences and events like the Deutsches Eigenkapitalforum (“German Equity Forum”) provide another opportunity for young enterprises to come into direct contact with potential VC partners. Public institutions such as development banks (publicly owned and organized banks which exist at the national and state level) and public VC companies may also offer partnership programs at this development stage.

Investment Project Financing by Bank Loans
Debt financing is a central financing resource and the classic supplement to equity financing in Germany. It is available to companies with a continuous cash flow. Loans can be provided to finance long-term investments, working capital and operational costs (R&D, personnel) and for bridging temporary financial gaps. Besides offers from commercial banks, investors can access publicly subsidized loan programs in Germany. These programs usually offer loans at attractive interest rates in combination with repayment-free start-up years, particularly for small and medium-sized companies. These loans are provided by the federal development bank KfW and also by regional development banks.

Investment and R&D Incentives
When it comes to setting up production and service facilities, investors can count on a number of different public funding programs. These programs complement investment project financing. Most important are cash incentives provided in the form of non-repayable grants applicable to co-finance investment-related expenditures such as new buildings, equipment and machinery. R&D project funding is made available through a number of different incentives programs targeted at reducing the operating costs of R&D projects. Programs operate at the regional, national, and European level and are wholly independent from investment incentives. At the national level, all R&D project funding has been concentrated in the High-Tech-Strategy to push the development of cutting-edge technologies. Substantial annual funding budgets are available for diverse R&D projects.

Labor-related Incentives
After the location-based investment has been initiated or realized, companies can receive further subsidies for building up a workforce or the implementation of R&D projects. Labor-related incentives play a significant role in reducing the operational costs incurred by new businesses. The range of programs offered can be classified into three main groups: programs focusing on recruitment support, training support, and wage subsidies respectively. Labor-related incentives play a significant role in reducing the operational costs incurred by new businesses.

Please visit our website for more incentives information: www.gtai.com/incentives

Incentives in Germany

<table>
<thead>
<tr>
<th>Funding purposes</th>
<th>Investments</th>
<th>Working Capital</th>
<th>Research &amp; Development</th>
<th>Specific Purposes</th>
<th>Personnel</th>
</tr>
</thead>
</table>

Financing supported by any of the following public funding instruments (combinations of instruments usually possible)

<table>
<thead>
<tr>
<th>Public funding instruments</th>
<th>Grants</th>
<th>Loans</th>
<th>Guarantees</th>
<th>Equity Capital</th>
<th>Mezzanine Capital</th>
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</thead>
</table>
SUCCESS STORY

Best Practice Example: Dental Wings

Company Information
Dental Wings is a leading provider of digital dentistry technologies whose solutions cover dental scanning, implant planning, prosthesis design, manufacturing and dental professional communication. Dental Wings was founded in Montreal in 2007 and now employs more than 150 employees, of which more than 40 are based in Germany. The company’s international offices are in Berlin and Chemnitz (Germany) and Lyon (France). Products are distributed by leading dental companies in over 45 countries around the world. The company’s vision is to create the largest global network of digitally enabled dental professionals, and equip them with diagnostic, design, and manufacturing tools that increase the efficacy, quality, and profitability of the services they provide to patients.

European Expansion
Dental Wings and its subsidiaries have had a presence in Germany for almost 20 years, providing planning, design, and 3D scanning technologies to the dental industry. The company’s guided surgery division is based in Chemnitz in Eastern Germany where it was established in the mid-90’s as IVS GmbH. In 2013, the company was acquired from Straumann AG, a global leader in the dental implant sector based in Switzerland. As part of an additional investment in 2014, Berlin was chosen as the location for the new European headquarters in order to combine operations in southern Germany with a facility in the Berlin’s Adlershof high-tech hub. The European HQ now operates as a software development center, repair and production facility, training and education site, and customer support center for Europe with particular focus on Germany.

Market Growth Opportunities
Dental Wings believes that the growth opportunities in the German market are strong compared to other countries. This is especially the case for digital products, as Germany’s dental professionals are strong adopters of digital tools, with demand for excellent quality and quick delivery times increasing. The company believes that Germany will continue to have a very strong dental market for the foreseeable future, most notably in digital technologies and advanced materials. Dental Wings itself is also developing a rapid subtractive process called laser milling, that cuts final dental restorations from high quality dental materials with unprecedented precision, flexibility, and simplicity. Their expectation is that in the very near future dental restorations will be produced predominantly by automated milling, 3D-printing, and eventually laser milling, rather than traditional manual techniques. This transition will allow highly skilled dental technicians to become even more creative and productive in achieving excellent clinical outcomes for patients.

Driving Innovation with German Partners
Dental Wings expects dental restorations to be predominantly driven by automated milling, 3D printing, and, eventually, laser milling – rather than traditional manual techniques – in the near future. At the 2017 IDS, the world’s largest dental industry fair that takes place every two years in Cologne, Dental Wings announced a cooperation with German innovation leaders to promote its novel manufacturing technologies. Dental Wings’ innovative 3D printing system is being provided via a partnership with rapidshape, a German rapid prototyping and manufacturing company based in Heimsheim near Stuttgart, and Shera Werkstoff-Technologie, a leader in materials and CAD/CAM sectors based in Lemförde near Osnabrück.

“In many ways Germany is the center of the European dental industry, providing a home to many of the biggest names in dental technology, materials, and services. Its central location, highly skilled workforce, and world-leading dental technology education system make Germany the obvious choice for expanding our European efforts.”

Michael Rynerson, CEO, Dental Wings
Industry Associations and Organizations

Germany Trade & Invest works closely together with the respective German industry associations to provide support to foreign medical technology companies seeking to settle in Germany.

Industry associations function as the local interest groups of business operators within a specific industry. They realize more than just the general functions of professional associations for their members. They also promote and represent the combined interests of the industry and trade companies; carry out active lobbying work by representing the interests of the company in their activities with municipal, state, and federal government authorities; offer various working groups as platforms for dialogue and exchange; and organize events and continuing education and training.

The associations also provide information about the local economic framework conditions in Germany and specific regions in the world. All members are also able to draw on the comprehensive advice and services of the responsible association. They are generally the first point-of-contact in the event of day-to-day business problems. Within Germany there are two associations dedicated to the medical technology sector.

**BVMed**

BVMed represents more than 220 industry and trade companies. Among the members of the association are 20 of the largest medical device manufacturers worldwide in the consumer goods sector. Its scope comprises the entire sector of medical dressings, technical aids such as ostomy and incontinence products or bandages, plastic disposable items such as syringes, catheters and cannulae as well as the implants sector of intraocular lenses, hip, knee, shoulder and spinal implants, heart valves and defibrillators and even artificial hearts. Homecare services and biotechnology procedures, such as tissue engineering, are further fields of activity of its members.

**SPECTARIS**

SPECTARIS is the German industry association for the high-tech, medium-sized business sector and representative body in the areas of medical technology, optical technologies and analytical, biological, laboratory, and ophthalmic devices. Innovation and growth characterize the different industry sectors. Technologies developed here are used in almost all branches of industry, making them an important motor for the German economy.

In the medical technologies sector, SPECTARIS represents around 160 companies in the industrial goods and appliances sector – predominantly small to medium sized enterprises are positioned within the sectors of industrial goods and medical appliances. The trade association Medical Technology provides its members with support and information in various business areas and topics. In particular: financing, hygiene and processing, compliance, regulatory affairs, HTA, market access, research funding, and public affairs.

"Health - Made in Germany" Export Initiative

The "Health – Made in Germany" export initiative is the first address for international partners looking to discover how they can gain access to and benefit from Germany’s longstanding commitment to innovation, quality and reliability in health care. The Federal Ministry for Economics and Technology (BMWi) initiative bundles key information and provides vital business contacts for new and fruitful cooperation.

Germany Trade and Invest would like to thank both associations for the support and information provided for the making of this publication.

www.bvmed.de

www.spectaris.de

www.health-made-in-germany.com
Our support services for your investment project

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Germany Trade & Invest’s teams of industry experts will assist you in setting up your operations in Germany. We support your project management activities from the earliest stages of your expansion strategy.

We provide you with all of the industry information you need – covering everything from key markets and related supply and application sectors to the R&D landscape. Foreign companies profit from our rich experience in identifying the business locations which best meet their specific investment criteria. We help turn your requirements into concrete investment site proposals; providing consulting services to ensure you make the right location decision. We coordinate site visits, meetings with potential partners, universities, and other institutes active in the industry. Our team of consultants is at hand to provide you with the relevant background information on Germany’s tax and legal system, industry regulations, and the domestic labor market. Germany Trade & Invest’s experts help you create the appropriate financial package for your investment and put you in contact with suitable financial partners. Our incentives specialists provide you with detailed information about available incentives, support you with the application process, and arrange contacts with local economic development corporations.

All of our investor-related services are treated with the utmost confidentiality and provided free of charge.
Gabriel Flemming is the senior manager responsible for healthcare in Germany Trade & Invest’s Chemicals & Healthcare team. He advises and provides support to international pharma, biotech and medical devices and related companies seeking to set up operations in Germany. He previously worked as a technology scout responsible for managing Deutsche Bank’s patent value funds.

For questions on how to establish your business in Germany, please contact Gabriel Flemming at gabriel.flemming@gtai.com

For more information about the medical technology sector in Germany, please visit our website: www.gtai.com/medtech

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About Us
Germany Trade & Invest (GTAI) is the economic development agency of the Federal Republic of Germany. The company helps create and secure extra employment opportunities, strengthening Germany as a business location. With more than 50 offices in Germany and abroad and its network of partners throughout the world, GTAI supports German companies setting up in foreign markets, promotes Germany as a business location and assists foreign companies setting up in Germany. All investment services and related publications are free of charge.

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