Medical Technology
Berlin-Brandenburg

Life Sciences
in der Hauptstadtregion Berlin-Brandenburg
Why Berlin-Brandenburg?

Key Location for Life Sciences

- International expertise in key areas of technology
- Highly qualified workforce
- Stable political environment
- Effective networks linking science and business
- Available sites for expansion, excellent infrastructure
- Vibrant entrepreneurial landscape
- Outstanding research environment
- Funding of R&D and Investments

Source: A.T. Kearney
The region Berlin-Brandenburg offers

- **Cutting Edge Science:**
  - Charité – largest university hospital in Europe
  - 5 universities, 4 colleges of applied science and 24 non-university research institutes (Max-Planck-, Helmholtz-, Fraunhofer Institutes etc.)

- **World Class Economic Basis:**
  - Global players: Bayer Schering Pharma, Menarini Group/Berlin-Chemie, Sanofi-Aventis, Altana Pharma (Nycomed Group), BASF
  - 194 biotechnology companies with app. 3,700 employees

- **Highly Qualified and Specialized Personnel:**
  - 3,000 life sciences graduates per year
  - 15,000 life sciences students within 80 different study courses

- **Excellent Infrastructure:**
  - 8 technology parks with lab and office space at moderate prices-
    Fast access to all European markets

- **Strong Governmental Support:**
  - Attractive grant programs for R&D, investment and personnel
  - Efficient regional networks
• With 194 biotechnology companies and app. 3,700 employees working in the sector, the Berlin region is Germany's premier biotechnology center and one of the top five biotech centers in Europe

• "Global Players" of the pharmaceutical sector are located here

• Excellent research infrastructure with effective networks: 350 scientific working groups with 5,000 scientists (at Charité only)

• Outstanding location for clinical trials

• A highly qualified labor force

• Infrastructure costs for R&D in the region are below international levels

• Comprehensive support programs for R&D, investment and personnel
Key Location Advantages:

- Long medical tradition: Charité University Clinic, clinic of one of most famous doctors in German history - Rudolf Virchow
- Outstanding international scientific environment
- Excellent supply networks, leading medical facilities (e.g. German Heart Center)
- With 120 hospitals the region is an important market for medical technology and services
- Largest R&D test market for pharmaceutical products, medical devices and materials
- Close proximity of companies and research institutes enables close co-operation on basic research, development and application.
- Growing interdisciplinary activity and co-operation between medicine, biotechnology, chemistry and optical technology, high level of business competence
Realize the potential:

- € 12.3 bn gross value
  this equals about 10 % of the joint gross value of Berlin and Brandenburg*
- 200 medtech production and medical service companies
- 194 biotech companies
- 22 pharma companies
- 120 hospitals in the region - 71 of them in Berlin -
- Charité: largest European university hospital
- 350,000 employees
- 29,000 physicians

* Source: Study of D.A. Ostwald/A. Ranscht, April 2007, “Rürup-Study”)
Medical Technology

- 180 manufacturing companies; emphasis on cardiology, laser-medicine, minimally invasive medicine, radiation therapy, and biomedicine

- Outstanding companies working in medical technology
  - aap Implants  www.aap.de
  - acritec  www.acritec.de
  - Berlin Heart  www.berlinheart.de
  - Biotronik  www.biotronik.com
  - Celon  www.celon.de
  - Eckert & Ziegler  www.ezag.de
  - W.O.M.  www.world-of-medicine.com

- Regional network:  www.tsbmedici.de

- Total industry turnover € 1 bn, 7,800 employees

- Market growth 2000 - 2005: 70 new companies, 1,200 new jobs
Global Player

- **Pfizer**
  - 48.4 billion USD; 87,000 employees (500 in Berlin)
  - focus: cardiovascular diseases, central nervous system, rheumatism & pain therapy, cancer, infectology & HIV, respiratory tracts, metabolic diseases, ophthalmology
  - [www.pfizer.de](http://www.pfizer.de)

- **Bayer Schering Pharma**
  - 10,267 billion EUR sales; 38,000 employees (4,340 in Berlin)
  - focus: gynecology & andrology, oncology, specialized therapeutics, diagnostics, radiopharmaceuticals
  - [www.bayerscheringpharma.de](http://www.bayerscheringpharma.de)

- **Sanofi-Aventis**
  - 15 billion EUR sales; 100,000 employees (1,930 in Berlin)
  - focus: cardiovascular diseases, thrombosis, central nervous system, oncology, diabetes/metabolic diseases, internal medicine, vaccines
  - [www.sanofi-aventis.de](http://www.sanofi-aventis.de)
• Berlin Chemie / Menarini Group  
  - 460 million EUR sales; 4,100 employees (1,300 in Berlin)  
  - focus: anti-infectives, asthma, cardiovascular diseases, oncology, pain therapy  
  www.berlin-chemie.de

• Dr. Mann Pharma / Bausch & Lomb  
  - 260 million EUR sales; 600 employees  
  - focus: ophthalmology, otolaryngology, sleep  
  www.mannpharma.de

• Nycomed  
  - 3,4 billion EUR sales; 12,000 employees (400 in Oranienburg)  
  - focus: gastrointestinal- and respiratory diseases, Imaging, OTC, pain management, osteoporosis, cardiology  
  www.nycomed.de
• Haupt Pharma
  - 122 million EUR sales; 800 employees (160 in Berlin)
  - focus: pharmaceuticals production, one of the largest European CMOs
  www.haupt-pharma.de

• CT-Arzneimittel
  - 149 million EUR sales; 200 employees
  - focus: generic drugs, approx. 1.100 products of over 180 active substances
  www.ct-berlin.de
Outstanding Research Institutions:

- German Heart Institute Berlin  
  [www.dhzb.de](http://www.dhzb.de)
- German Arthritis Research Center  
  [www.drfz.de](http://www.drfz.de)
- Fraunhofer Institute for Production Facilities and Construction Technology, Medical Technology Department  
  [www.ipk.fhg.de](http://www.ipk.fhg.de)
- Fraunhofer Institute for Reliability and Microintegration  
  [www.izm.fhg.de](http://www.izm.fhg.de)
- Max Delbrück Center for Molecular Medicine  
  [www.mdc-berlin.de](http://www.mdc-berlin.de)
- PTB - National Metrology Institute  
  Division of Medical Physics and Metrological Information Technology  
  [www.ptb.de](http://www.ptb.de)
- Robert Koch Institute for Infectious Diseases  
  [www.rki.de](http://www.rki.de)
Hospitals

- Largest hospitals in Berlin:
  - Charité - University Medicine Berlin: 3,200 Beds
  - Vivantes Network for Health: 5,000 Beds
  - HELIOS Kliniken GmbH: 1,700 Beds

- Specialist clinics:
  - Berlin-Marzahn Casualty Clinic: first fully digitalized hospital in Germany
  - Elisabeth Clinic – specialized Laser clinic
  - German Heart Center (DHZB): only training center for cardio-technicians in Europe
University Clinics with R&D

Charité University Hospital Berlin

- Oncology
- Neuro-sciences
- Immunology/transplantology/infectology
- Pneumology
- Cardio-vascular diseases/kidneys
- Genetics and genome sciences
- Inflammatory diseases
- Experimental and clinical endocrinology
- [www.charite.de](http://www.charite.de)
Clinical Research

• Charité – University Medicine Berlin:
  - largest university clinic in Europe
  - 75 clinics,
  - 3,500 beds,
  - 4 campuses
  - 500 clinical studies initiated annually
  - www.charite.de

• Charité Research Organisation (CRO):
  - www.charite-research.org

• In Germany costs for clinical studies are 20 - 30 % lower than in the USA and UK

• Conurbation with highly diverse proband and patient structure

• Location for Contract Research Organizations (CRO’s) operating around the world: e.g. Parexel
Regional Life Sciences Parks

1. Biotechnology Center Hennigsdorf
   www.biotechhennigsdorf.de
2. Campus Berlin-Buch
   www.bbb-berlin.de
3. Berlinbiotechpark
   www.berlinbiotechpark.de
4. Berlin Adlershof
   www.wista.de
5. Biotech Campus Potsdam
   www.biotechcampus.de
6. Biotechnology Park Luckenwalde
   www.bio-luck.de
7. GO:IN Innovation Center
   www.goin-potsdam.de
8. Innovationspark Wuhlheide
   www.ipw-berlin.de

Source: ZAB 2004
<table>
<thead>
<tr>
<th>Universities</th>
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<tbody>
<tr>
<td>Humboldt University</td>
<td>1,400 students in life sciences</td>
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<tr>
<td></td>
<td>Faculties of biology, chemistry and pharmacy</td>
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<td></td>
<td>Charité University Clinics with about 8,000 students</td>
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<tr>
<td>Free University</td>
<td>3,470 students in life sciences</td>
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<tr>
<td></td>
<td>faculties of biology, chemistry and pharmacology</td>
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<tr>
<td>Technical University</td>
<td>Institute for Construction, Micro- and Medical Technology</td>
</tr>
<tr>
<td>Potsdam University</td>
<td>Institute for Biochemistry, Biology and Nutrition Research</td>
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www.hu-berlin.de
www.fu-berlin.de
www.tu-berlin.de
www.uni-potsdam.de
Networks and Initiatives

• Berlin Center for Medical Technology (TSBmedici)  www.tsbmedici.de

• Center for Microsystem Technology (ZEMI)  www.zemi-berlin.de

• Network for Integrated Systems in Telemedicine (NEST)  www.nest-telemedizin.de

• Competence Network for Optical Technologies in Berlin and Brandenburg (OptecBB)  www.optecbb.de

• Imaging Network Berlin (INB)  www.imaging-netzwerk-berlin.de

• Cluster of Excellence “NeuroCure”  www.neurocure.de
• CEE countries have a vast need for medical technology.

• The healthcare sectors standard lies far below Western European standards.

• The CEE market potential relies on 100 Mio. new consumers.

• Germany is already the major supplier within this important market.

Berlin-Brandenburg offers:

• Highly qualified industrial and logistical structures

• Closeness to CEE markets

• Staff with experience in CEE countries and linguistic knowledge
Business Center for Central Europe

Berlin-Brandenburg: Excellent Transport Hub to all European Markets
Berlin-Brandenburg: offers ideal global and regional connections

Flight times in hours and minutes

- direct connection
- flight connection