

# Berlin Adlershof City of Science, Technology, and Media presented to Union of the Baltic Cities, UBC Business Commission







# Location

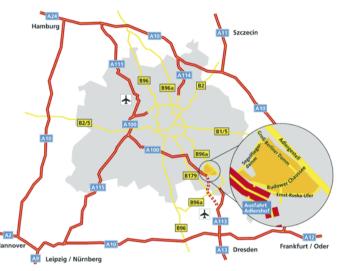
- Approx. 8 miles (15 km) to downtown Berlin
   Two Airports
- Tegel
- Schönefeld (BER; Berlin Brandenburg Airport)<sup>21</sup>

#### **Excellent access to public transport**

- 4 x urban railway, "S-Bahn" (30 minutes to downtown Berlin)
- 2 x tramways, "Tram" / "Straßenbahn"
- 2 x bus lines

#### Highway

• Exit "Adlershof" (15 minutes to downtown Berlin)

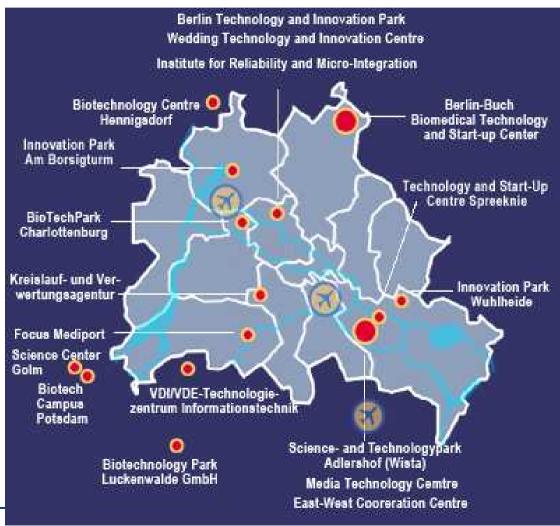




# Him Berlin Adlershof

#### Berlin-Brandenburg: Science and Technology Parks / Technology Centres

- density of the scientific infrastructure is unique in Germany
- this infrastructure provides the best conditions for technology-oriented companies
- 14 Technology Centers







## History

- First airfield for motorised aircrafts in Germany
- Foundation of the German Testing Institute for Aeronautics (DLV, Predecessor of DLR)
- First institute for the German Academy of Science in Adlershof
- Foundation of the guard regiment for the East German Ministry of State Security (since 1967 guard regiment "Feliks E. Dzierzynski")
- East German television established



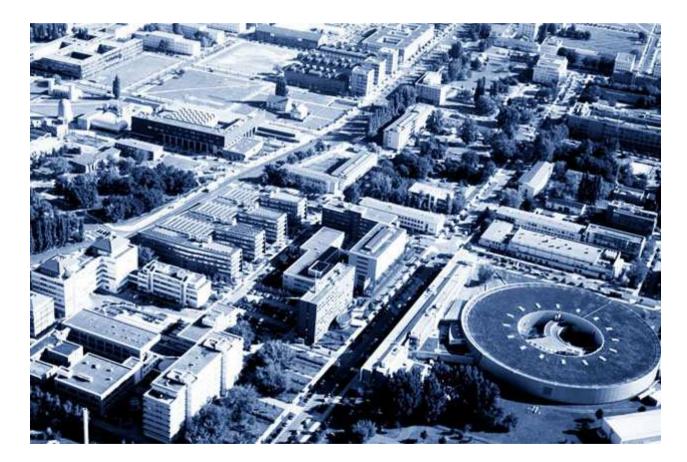


#### History

- **1990** Reunification of Germany. The Academy of Science and the East German state television both closed by the end of 1991
- **1991** Decision to build a Science and Technology Park in Adlershof Evaluation and establishment of non-university scientific institutes First start-up companies Decision to move the Humboldt University's Natural Science Institutes to Adlershof
- **1993** Adlershof designated as development area



## **Adlershof Today**



# Him Berlin Adlershof

### **Adlershof in Figures**

#### Area of development

420 hectares (1,038 acres)

#### **Total number of**

| Institutes | 17     |
|------------|--------|
| Companies  | 954    |
| Staff      | 14,942 |
| Students   | 8,438  |







# **Adlershof in Figures**

#### Science and Technology Park

11 non-university scientific institutes (1,760 employees)6 Humboldt University institutes (1,056 employees; 8,034 students)445 technology oriented companies (5,286 employees)

Media City 146 companies (1,763 employees)

#### **Industrial Estate**

363 companies (4,969 employees)





# Public and private investment in Adlershof (1991 – 2012)

|  | 1991 - 2005 |      | 2006 - 2012 |      | Gesamt   |          |
|--|-------------|------|-------------|------|----------|----------|
|  | Mio. EUR    | %    | Mio. EUR    | %    | Mio. EUR | %        |
| nvestitionen in Infrastruktur<br>nvestitionen und Kosten des Entwicklungsträgers)            | 503         | 34%  | 167         | 20%  | 670      | 29%      |
| vestment in Wissenschaftsinstitute<br>lumboldt-Universität und außeruniversitäre<br>stitute) | 506         | 34%  | 60          | 7%   | 566      | 24%      |
| nvestments WISTA MANAGEMENT  | 290         | 19%  | 72          | 9%   | 362      | 15%      |
| Private Investments  | 197         | 13%  | 541         | 64%  | 738      | 32%      |
| ΓΟΤΑL  | 1496        | 100% | 840         | 100% | 2336     | 100%     |
| *HU: 246 Mio.€ IGAFA: 320 Mio.€ (ges   | ch.)        |      |             |      |          | <u> </u> |

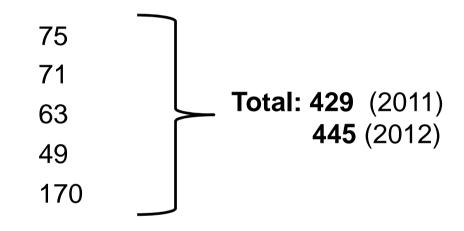


Berlin Adlershof

# **Sustainable Development**

Companies in the Science and Technology Park

IT and Media Biotechnology and Environment Photonics and Optics Microsystems and Materials Services



Turnover in 2011/2012 Subsidies in 2011/2012

€ 592 M€ / 637 M€ € 33 M€ / 31 M€





# **Non-University Research Institutes**

#### Leibniz Association

- FBH Ferdinand Braun Institute for High Frequency Technology
- IKZ Institute for Crystal Growth
- ISAS Institute for Analytical Science
- MBI Max-Born Institute for Nonlinear Optics and Short Pulse Spectroscopy

#### **Fraunhofer Association**

• FOKUS – Fraunhofer Institute for Open Communication Systems

#### Helmholtz Association

- DLR German Aerospace Center: Institute for Space Sensor Technology and Planetary Exploration, Institute for Transport Research
- Helmholtz-Center for Materials and Energy: Electron Storage Ring BESSY II, Institute for Silicon Photovoltaics





# **Non-University Research Institutes**

#### General

- BAM Federal Institute for Materials Research and Testing
- Dept. I, "Analytical Chemistry; Reference Materials"
- BTU Brandenburg Technical University Cottbus, workgroup Air Chemistry
- PTB National Institute of Natural and Engineering Sciences Berlin Adlershof, Photon Radiometry Department



#### **Technology Fields**

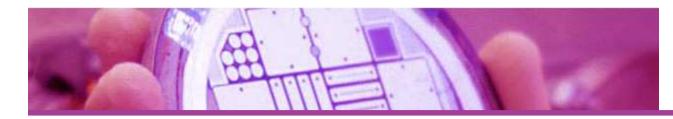


Photonics and Optics Photovoltaics/Energy

Microsystems and Materials

**IT** and Media

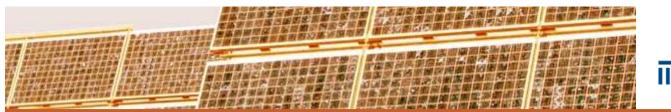
Biotechnology and Environment





# **Photonics and Optics** Fields of Competence

- Laser technology including laser medicine technology
- Optoelectronics including photovoltaic
- Spectrometry and Sensors
- Technical optics
- Synchrotron radiation
- Optical, electron beam, and X-ray analysis
- Telecommunication, fibers





# **Photovoltaics**

# Highlights of the Institutes and Companies



- Facility design, financing
- EMC filter for photovoltaic installations
- **xantrex** Rectifiers, controllers, systems



- Association of research institutes on renewable energies (1,500 staff)
- Headquartered in Adlershof



**Silicor** • Utilization of UMG Si for solar cell production



## **Microsystems and Materials** Fields of Competence

- Semiconductor crystals
- Reference Materials
- Special Materials
- Catalysts
- Chemical analysis
- Microsystems
- Precision engineering
- High vacuum technology



## **Microsystems and Materials**

The Network "Center for Microsystems Technology"



#### **Association of Berlin Research Institutes**

• Goals:





- Comprehensive project management
- Development of microsystems technologies and products
- Manufacture of prototypes
- Production of small scale series
- Functional analysis of products
- Consulting and training for companies
- Partnership in education
- Management located in Berlin Adlershof





# IT and Media Fields of Competence

- Production technologies
- Software Engineering
- ICT for healthcare
- Ambient intelligence
- Security technologies
- Transport and logistics
- Multimedia



## **Biotechnology and Environment** Fields of Competence

- Water, soil, and air analysis
- Analytics
- Biotechnology products and procedures development
- Pharmaceutics and Medicine
- Energy-saving processes



#### **Centres, Real Estate, Investment**





## **Innovation and Business Incubation Centre**

- Specific "incubation infrastructure"
- Benefits for start-ups: business plan consulting; office and conference services; financial consulting for grants and loans; agency for advancement and financing
- Platform for contacts and co-operations
- Floor space in total: 21,159 m<sup>2</sup>
- Incubation-Rate since 1991: over 200 companies



# International Business Incubator OWZ Berlin-Adlershof

- Business Incubation with the focus on East-West business
- More than 30 companies from 12 countries: Belarus, Czech Republic, France, Great Britain, Hungary, India, Kazakhstan, Pakistan, Poland, Russia, Ukraine
- Established 1997
- Floor space in total: 13,104 m<sup>2</sup>



# **Him Berlin** Adlershof

# **Technology Centres**

Photonics and Optics Photovoltaics Microsystems and Materials IT and Media Biotechnology and Environment

- Special technology infrastructure
- Flexible office and laboratory area
- High quality community and service facilities
- Floor space in total: 110,000 m<sup>2</sup>





# **IT and Media**

#### **New Centre (ZIM3)**

- Floor space in total: 6.761 m<sup>2</sup> (for about 25 enterprises)
- Investment: 8.6 Million euro
- Start of Construction: December 2009
- Completion: April 2010





## **Microsystems and Materials**

#### **New Centre (ZMM)**

- Floor space in total: 6.500 m<sup>2</sup>
- Special infrastructure with labs, clean room (1.050 m<sup>2</sup>), offices, pre-installed network for gases, central cooling system, high-speed communication network
- Investment: 30.5 Million euro
- Start of Construction: May 2009
- Completion: May 2011





# **Photovoltaic**

#### **New Centre (ZPV)**

- Floor space in total: approx. 8,000 m<sup>2</sup>
- Investment: approx. 26 Million euro
- Start of Construction: October 2009
- Completion: June 2012

Photovoltaic technology (PV) has emerged as a field of technology in Adlershof within three years. As a consequence of the rapid growth PV, WISTA MANAGEMENT has decided to have a new technology centre built.







## **Rental Space**

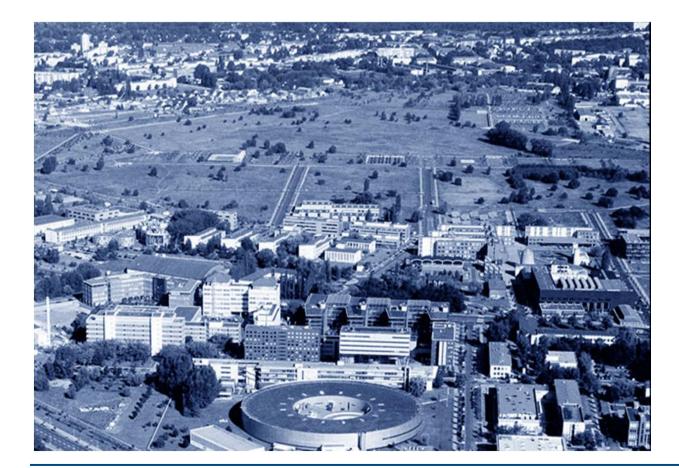
- Space in new buildings (Technology Centers), redeveloped old buildings and old facilities
- Minimum floorspace: 20 m<sup>2</sup>
- Maximum rental space per building: 500 m<sup>2</sup>
- Monthly rental price:
  - hall > 6.50 €/m<sup>2</sup>
  - office  $> 7.50 \notin m^2$
  - laboratory  $> 9.50 \notin m^2$
- Operating/additional costs per month approx. 2.50 €/m<sup>2</sup> (office use)
- Security deposit: 3 months net rent

(Sales tax not included)





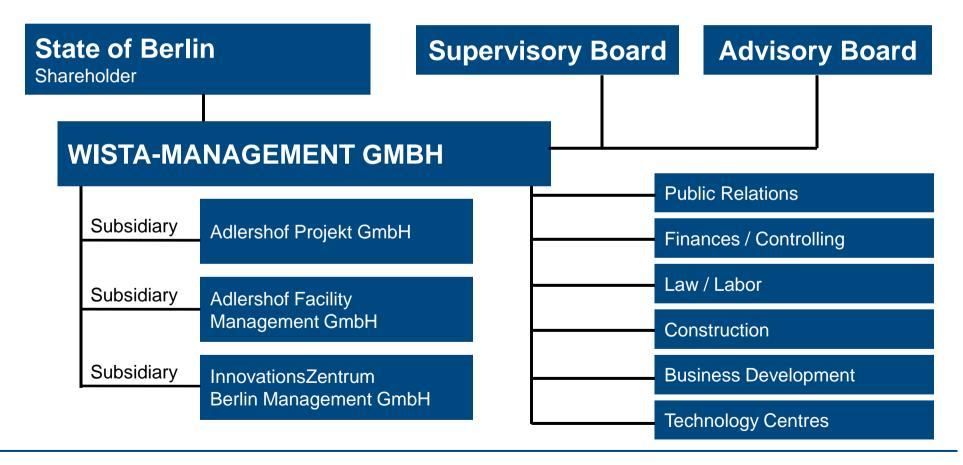
## Organisation







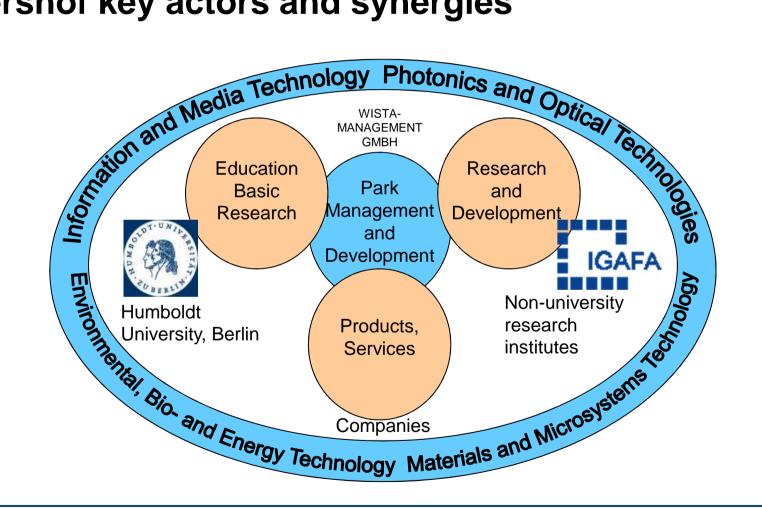
## WISTA-MANAGEMENT GMBH







#### Adlershof key actors and synergies







# **Growth Cycle**

| Generation/Seed            | Incubation | Growth             | Expansion   |  |
|----------------------------|------------|--------------------|-------------|--|
| University                 | IGZ/OWZ    | Technology Centres | Productive  |  |
| <b>Research Institutes</b> |            |                    | Environment |  |

#### Companies





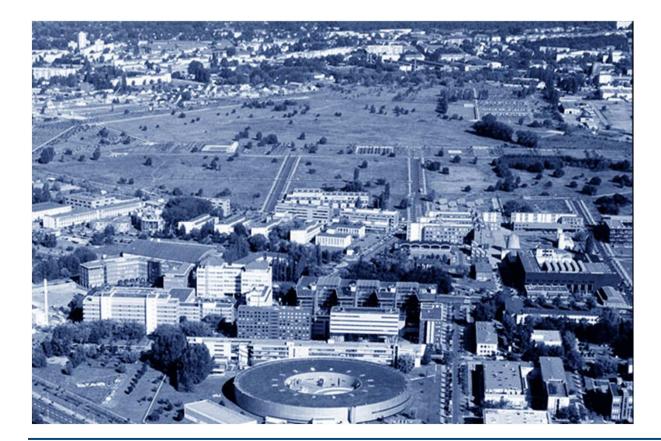








#### Some success criteria







## Success Criterion: Strong policy support



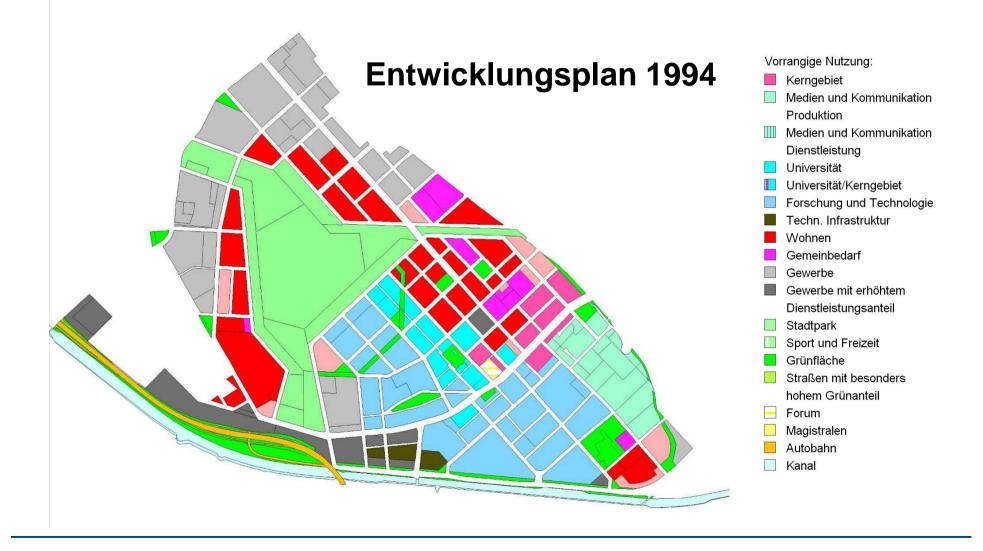
#### Area of development = Development zone

420 hectares (1,038 acres)

A legal act for a designated, protected "development zone"



# Him Berlin Adlershof





Education

**Basic Research** 

Natural Science Institutes

and

# Hill Berlin Adlershof

# Success Criterion: 3-ple helix structure

Research and Development Non-university scientific institutes

Park Management and Development WISTA-MANAGEMENT GMBH

Products and Services Small and mediumsized enterprises





## **Success Criterion: Profile, Image and Brand**

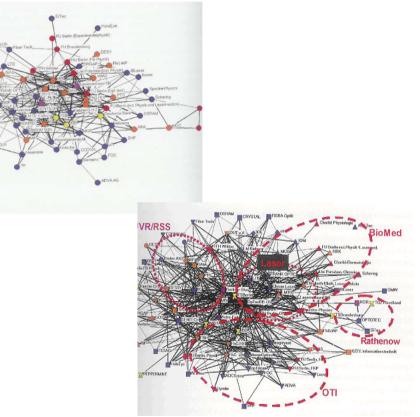
Long term development strategy

Clear strategic orientation on scientific, technology and economic profile

Awareness of available and necessary skills

Target oriented marketing and acquisition

Consequent growth alongside the selected profile



Regional Network OptecBB, 2000 and 2005 (Sydow et al., 2007)





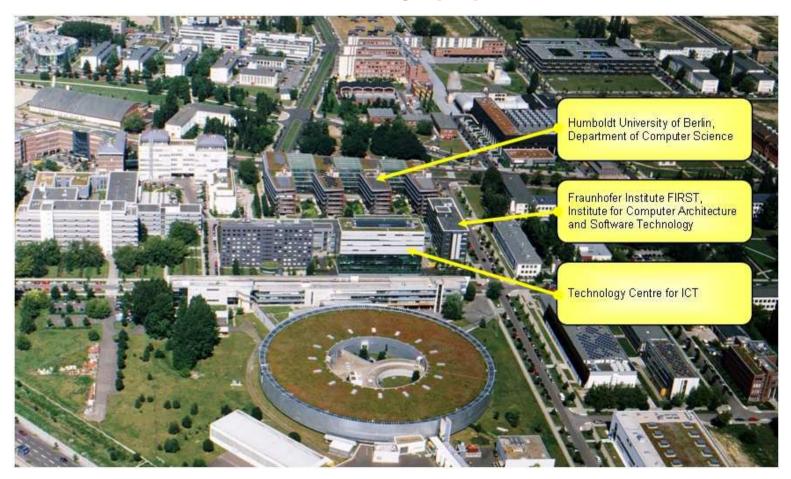
#### **Success Criterion: Proximity (photonics)**







#### Success Criterion: Proximity (IT)







#### **Success Criterion: growth phases connected**

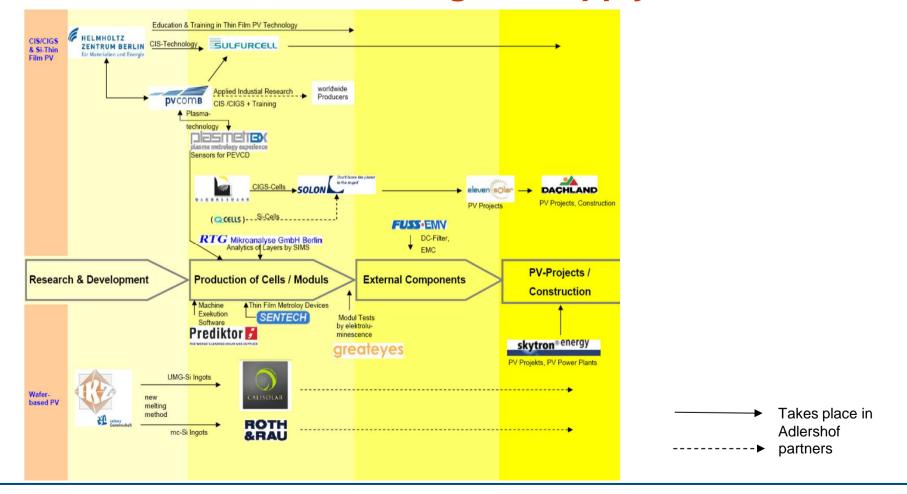
| Generation/Seed                   | Incubation | Growth                     | Expansion                 |
|-----------------------------------|------------|----------------------------|---------------------------|
| University<br>Research Institutes | IGZ / OWZ  | Technology Centres         | Productive<br>Environment |
| Companies                         |            |                            |                           |
|                                   |            |                            |                           |
| Advisory service                  | Coaching   | Infrastructure             | Project development       |
| Support                           | Networks   | Marketing                  | Internationalization      |
| Financing<br>12 – 18 p.a.         | 90         | Trade shows, Events<br>340 | approx 20 (premesis)      |

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#### Success Criterion: Coverage of supply chain







#### **Success Criterion: Space for growth on site**







#### **Success Criterion: space for growth on-site**







#### **Success Criterion: Strong GA/EFRE support**

# First incubator 1991 with 5 companies on 1,000 m<sup>2</sup> newspapers argued:

"Potemkin in Adlershof" "Adlershof – smoke and mirrors"







### Success Criterion finance model: Increasing private investment

|                               | 1991 - 2005 |     | 2010     |     |
|-------------------------------|-------------|-----|----------|-----|
|                               | Mio.<br>EUR | %   | Mio. EUR | %   |
| Infrastructure Investment     | 495.0       | 35  | + 70     | 14  |
| Investment in Res. Institutes | 426.9       | 30  | + 10     | 2   |
| Investments WISTA             | 233.1       | 17  | + 70     | 14  |
| Private Investments           | 197.2       | 14  | + 350    | 69  |
| Investments Service provider  | 56.2        | 4   | + 5      | 1   |
| TOTAL                         | 1,408.5     | 100 | 505      | 100 |



#### Services







### WISTA-MANAGEMENT GMBH Services for Companies

- Comprehensive building infrastructure
- Favorable rent and additional expenses
- Incubation and promotion of start-ups, Consultation for grants and loans, etc.
- Joint project development
- Participation in specialized networks
- Communication services
- Service Packages
- International contacts and support
- Local job exchange
- Conference and event services
- Participation/organization of exhibitions and fairs





#### **Services for Foreign Companies**

- Quick start via
  - Network services
  - International incubation service
  - Soft landing packages
  - Excellent High Tec Facilities
    - Lab and related office space at low rents for SME
    - Flexibility
  - Berlin Subsidies
    - Investment subsidies
    - Research subsidies
    - Personel recruitment subsidies





#### Adlershof "Market Access Point"

| Service Offers  | Target Group   | Service Provider   |
|---|--|--|
| <ul> <li>Access Office: fully equipped<br/>office in the STP premises; free of<br/>charge for 3-5 days to test the<br/>market</li> <li>Initial market information in the<br/>related tech-field provided by park<br/>management</li> <li>Preparation and organization of<br/>company meetings on request</li> <li>Secretary and back up office on<br/>request;</li> <li>Access to special networks</li> </ul> | <ul> <li>Potential clients from<br/>partner STP abroad<br/>(SME,<br/>larger companies,<br/>institutions)</li> <li>Potential investors</li> </ul> | <ul> <li>WISTA-<br/>MANAGEMENT<br/>GMBH:</li> <li>Bus. Development<br/>Team,</li> <li>Technology Center<br/>Management Team</li> </ul> |





#### **Berlin Business Welcome Package**

| Service Offers 7    | Target Group  | Service Provider   |
|---------------------|---|--|
| ISDN, PC, Internet) | Start-up support for<br>companies coming to<br>and settling in Berlin | <ul> <li>Berlin Partner</li> <li>WISTA-<br/>MANAGEMENT<br/>GMBH</li> </ul> |



Him Berlin Adlershof

## Why Adlershof?

- Education, research, and innovative companies in dynamic clusters
- Leading performance of the Business Incubation Centre
- Special technology infrastructure
- Flexible office and laboratory rental space
- Plots: buy and long-term lease, project development
- High quality community and service facilities
- Highly qualified staff
- Efficient networks
- Established basis for business with the international market
- Low costs in Berlin
- Favorable financial options



Him Berlin Adlershof

## Urban Hinterland

#### The District of Treptow-Köpenick

- Berlin's largest and very scenic district in the south-east
- High-quality housing estates
- Shopping Centres, nurseries, schools, restaurants, sports facilities in a dense neighborhood
- Cultural highlights (Old Town of Köpenick with a beautiful baroque castle on the waterfront, Treptower Park)
- Large forests and numerous lakes





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## Him Berlin Adlershof

