

**100**  
JAHRE  
INNOVATIONEN AUS  
ADLERSHOF

 **Berlin Adlershof**

Stadt für  
Wissenschaft  
Wirtschaft  
und Medien

# Berlin Adlershof

## City of Science, Technology, and Media







# Photovoltaics in Adlershof





# Photovoltaics in Adlershof

**Thesis one:**

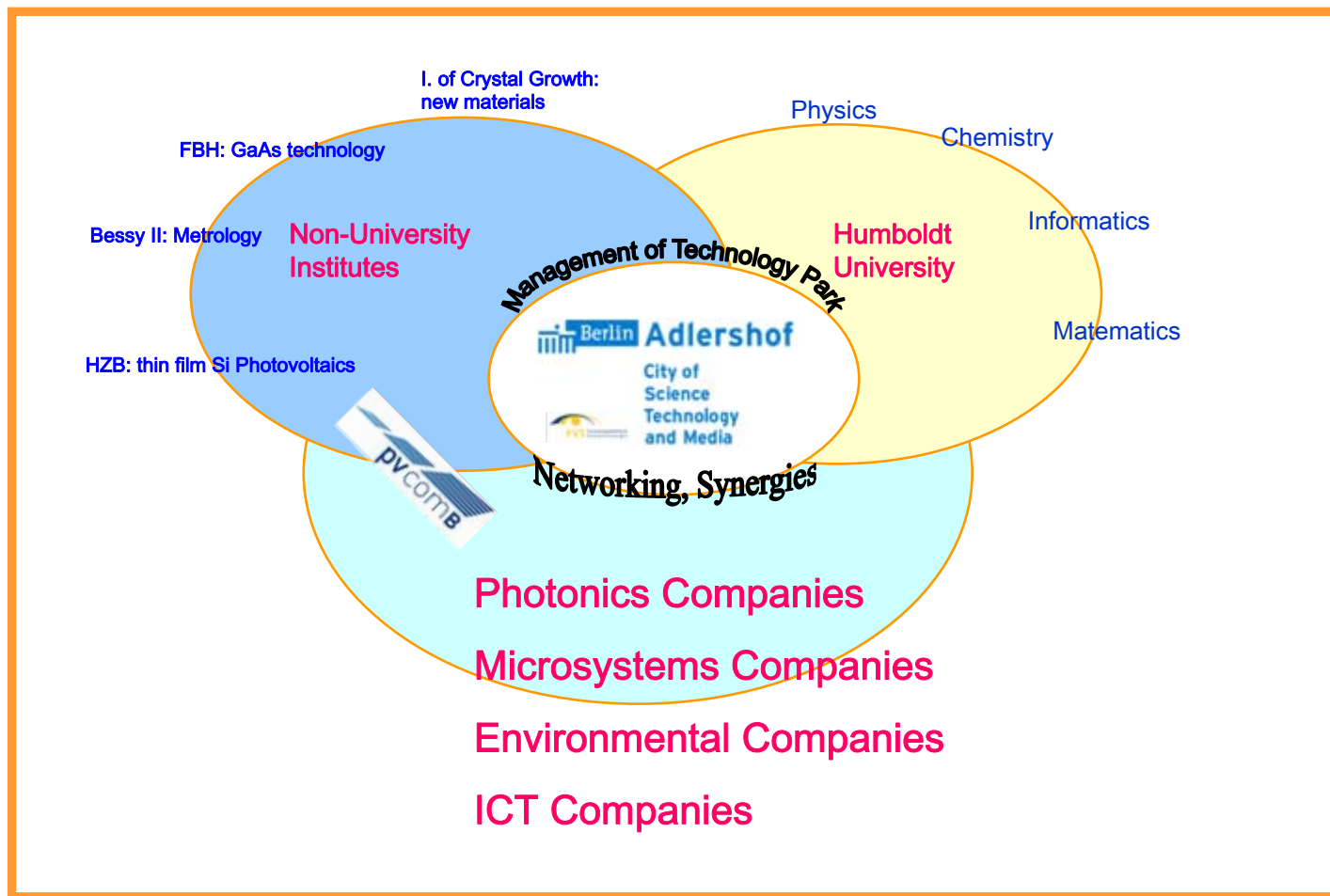
**Emerging of PV in Adlershof in only 3 years is a Success story**

**because**

**„the bed for PV was already been made“**



# PV Companies find in Adlershof:



as well as...



## Technology Centers

Center for Information and Media, Part I, Part II, and **Part III (opening 2010)\***

Center for Photonics and Optics

**Center for Material and Microsystems Technology (opening 2010)**

Center for Bio-, and Energy Technology I and II

**Center for Photovoltaics (Opening: Summer 2012)**

- Special technology infrastructure
- Flexible office and laboratory area
- High quality community and service facilities

**Rentable Floorspace of the existing Centers: 107,169 m<sup>2</sup>**

\*red coloured: under construction



## Photovoltaics in Adlershof

**Adlershof offers the complete value-added chain for photovoltaics:**

- Basic research and development in scientific institutes
- Production of cells and modules in enterprises
- Service companies covering the full spectrum of metrology and analytics
- Installers and suppliers
- Plots for test fields and roofs for photovoltaic power plants
- Home for new photovoltaic companies



# Photovoltaics in Adlershof

## Basic Research and Development in Scientific Institutes



- Thin film solar cells from cristalline silicon
- Deposition processes (PVD, CVD, UHV)
- Cell technology (wafers, semiconductors)
- Analysis of Materials by Synchrotron Radiation



- PP co-operative dev. projects for TF PV

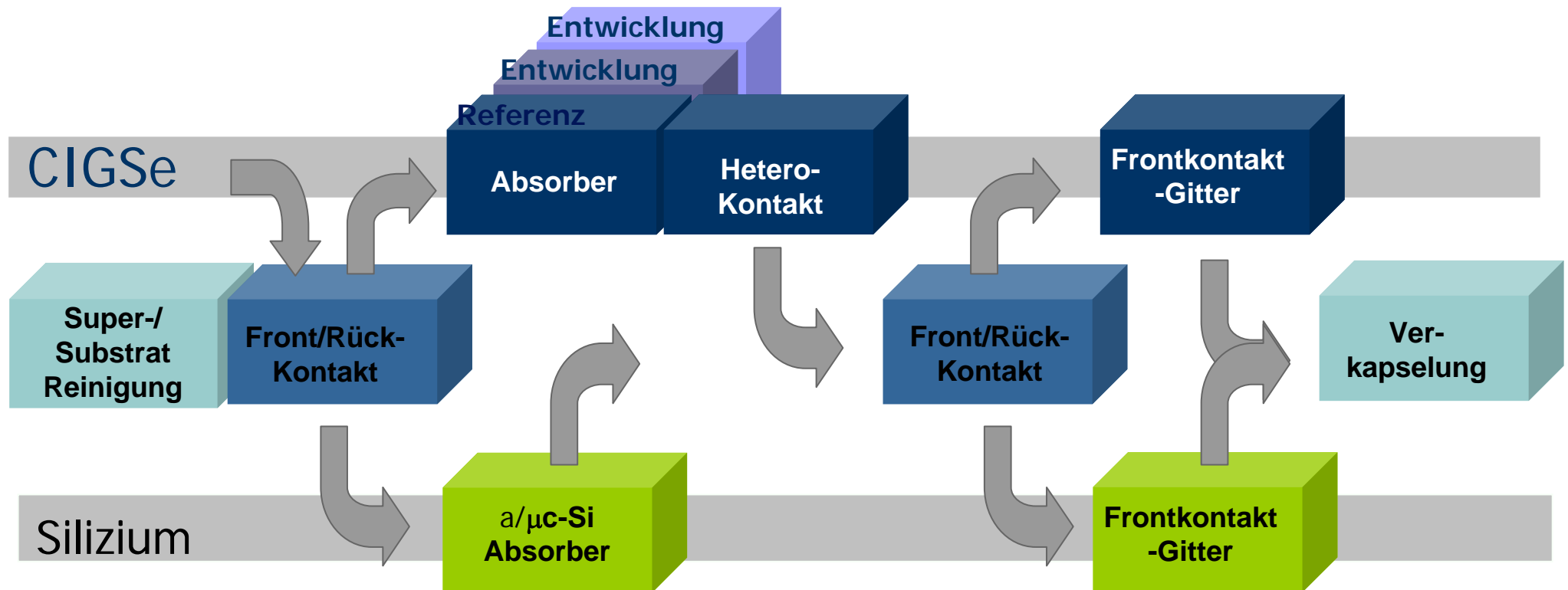


- Czochralski-semiconductors and dielectrics
- Thin Si crystal layers
- Silicon on glas for photovoltaic modules



- GaAs technology for specific applications

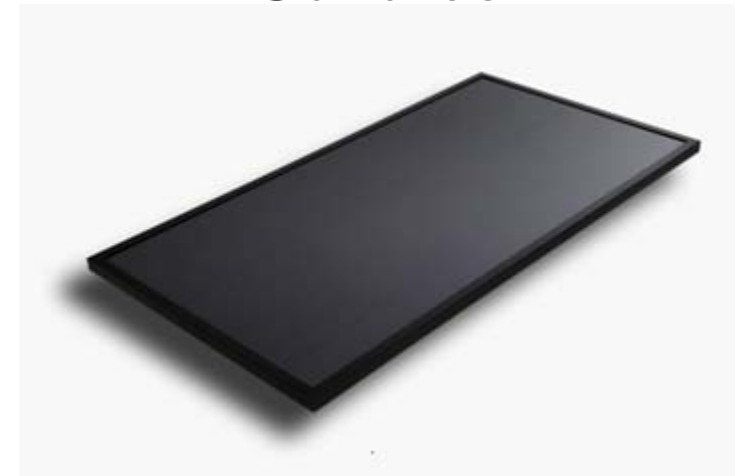
## 2 Reference-Technology Lines (Si & CIGSe/CIS)



## 1st Clustertool



CIS Module of  
Sulfurcell





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# Photovoltaics in Adlershof

## Production of cells and modules in enterprises



- Copper-Indium-Sulfide (CIS) solar cells and modules



- Copper-Indium-Selenide (CIGS) flexible solar cells



- Production of solar modules
- Photovoltaic systems for solar power plants
- Solar Movers and Energy Storage Reserch



- Utilization of dirty Si for solar cell production



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# Photovoltaics in Adlershof

## Metrology and Analytics

Institute for Scientific Instruments GmbH  
x-ray optics and analysis



- in-process measurement of wafers by X-Ray Spectrometry

**SENTECH**

- Thin film metrology and plasma process technology for the photovoltaic industry

**RTG** Mikroanalyse GmbH Berlin

- SIMS of thin layers for photovoltaic applications

**greateyes**

- electroluminescent measurements & characterisation of solar cells



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# Photovoltaics in Adlershof

## Installers and Suppliers



- EMC filters for photovoltaic installations



- Quantum dots for innovative new cell concepts



- Roofing and photovoltaic installations



- Association of research institutes on renewable energies (1.500 staff)  
Headquarters in Adlershof



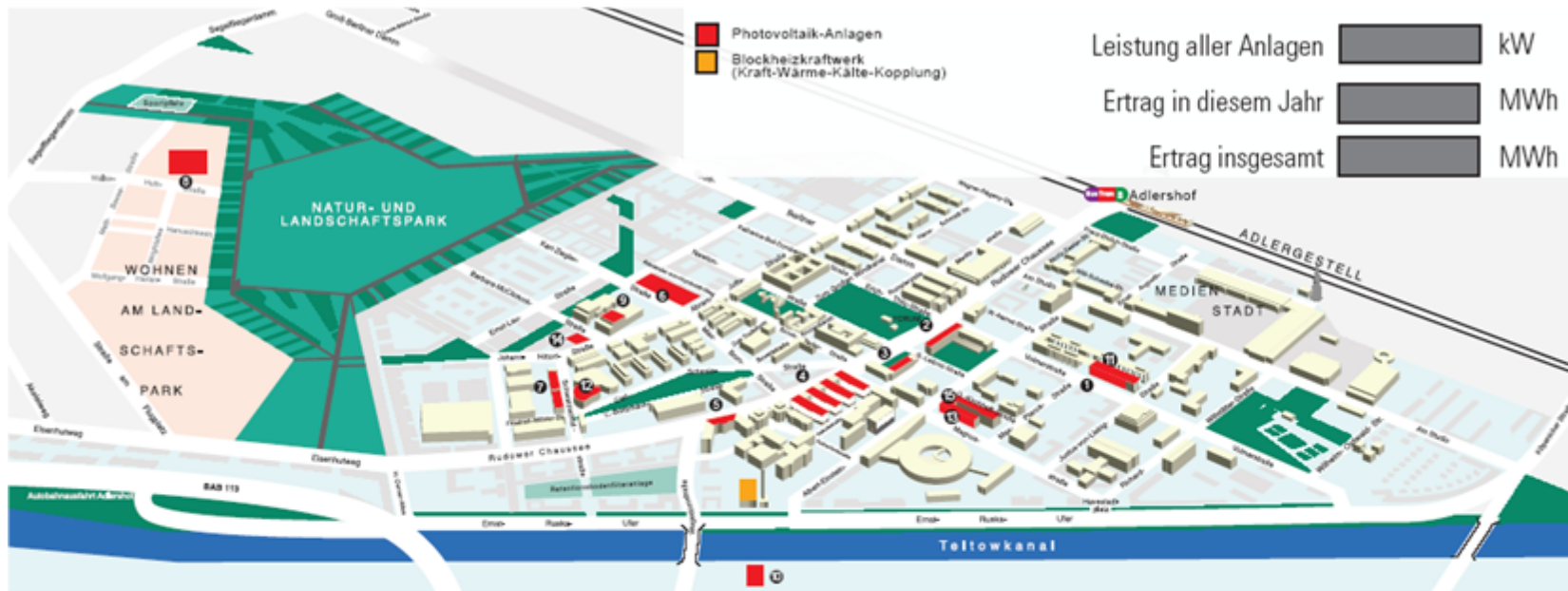
## Photovoltaics in Adlershof

**Adlershof offers the complete value-added chain for photovoltaics:**

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# Photovoltaic Installations in Adlershof: 412 kWp



Am Solarstrom-Projekt Adlershof sind beteiligt:

WISTA-MANAGEMENT GMBH  
 Adlershof Projekt GmbH  
 Adlershof Facility Management GmbH  
 GOS e.V.  
 BTB Berlin GmbH  
 Berliner Energieagentur GmbH  
 S.A.G. Solarstrom AG, Freiburg  
 Menag Energie GmbH

IZBM GmbH  
 SOLON AG  
 DACHLAND GmbH  
 Baugruppe Lebenstraum  
 Sulfurcell GmbH  
 DEIG GmbH  
 SolarTec AG  
 Joffe-Phys.-Techn. Institut

FUSS-EMV

- ① 14 kWp
- ⑩ 4 kWp
- ② 33 kWp
- ⑪ 3,2 kWp
- ③ 33 kWp
- ⑫ 48,8 kWp
- ④ 46 kWp
- ⑬ 3 kWp
- ⑤ 6 kWp
- ⑭ 39 kWp
- ⑥ 65 kWp
- ⑮ 25 kWp
- ⑦ 46 kWp
- ⑯ 29 kWp
- ⑧ 22 kWp



## Photovoltaics in Adlershof

Headquarters of



Opening: Jan 2009

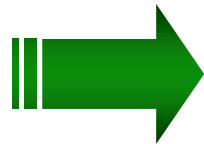
On top PV with 210 kWp

## Photovoltaics in Adlershof

75 MW CIS cell production and headquarters of



Start: Feb 2009



Opening: October 2009

building integrated PV (BIPV): 900 Modules with ~ 50 kWp



PV-Facade of the Center for Bio- and Environmental Technology, 14 kW<sub>p</sub>, 1998,  
AstroPower Apex-cells, Modules made by SOLON



The SIT foil coating of two buildings of the Photonics Center, 46 kWp, by DACHLAND GmbH using a-Si-Modules from United-Solar Ovonic ECD



Roof of the Environmental Center, 48 kWp, poly-Si modules by SOLON. installed in 2006, owner: DACHLAND GmbH



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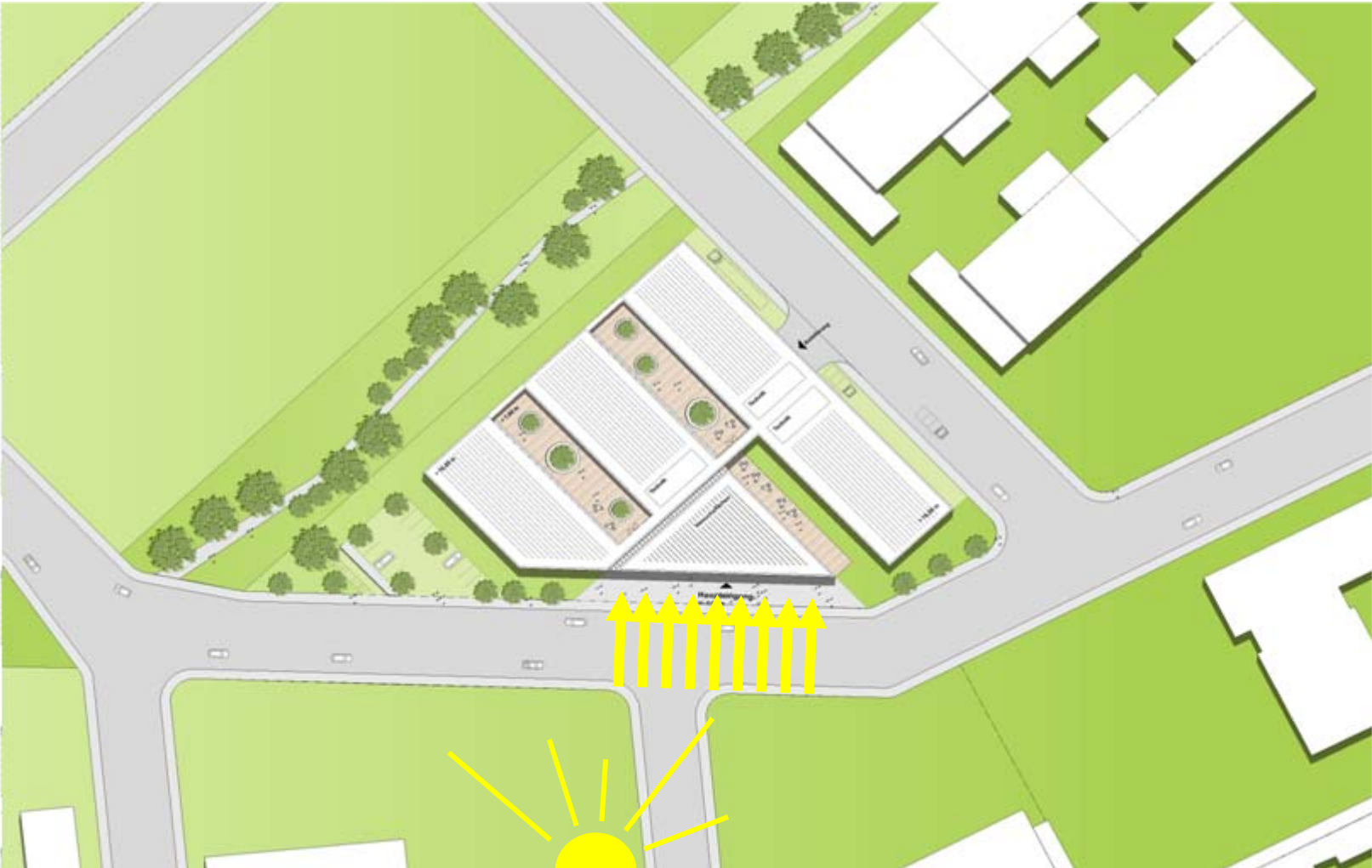
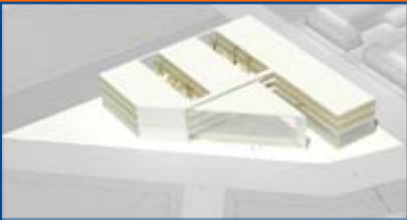
# Plots – Room for Growth





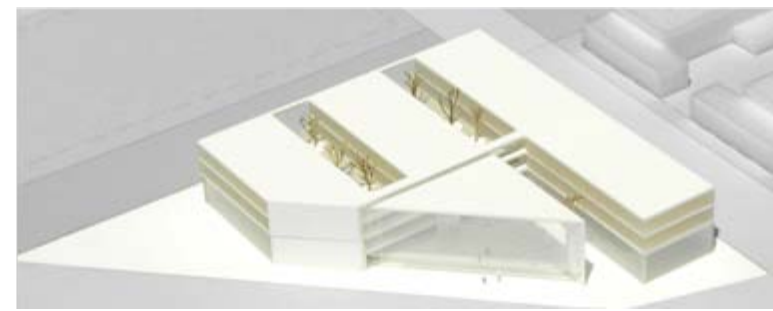
## Plots: one is occupied for a new PV Centre







**Planning ZPV: 8,000 m<sup>2</sup> rentable space; Net Costs: 26 Mill. €**





## Contact

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For further information, please see

[www.adlershof.de](http://www.adlershof.de)

