

Innovation and Technology Transfer

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INNOVATION &
TECHNOLOGIE
TRANSFER —

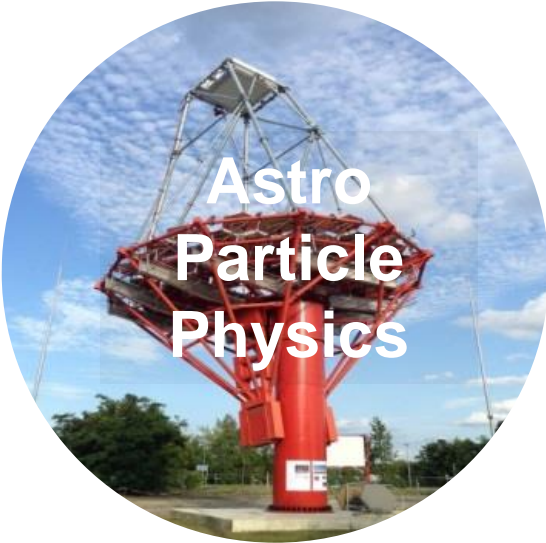
IraSME & CORNET Partnering Event Aachen

2018 November 26

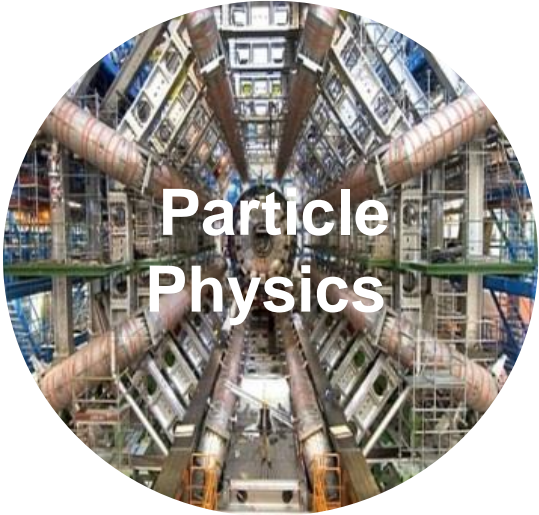
Dr. Sabine Jähmlich



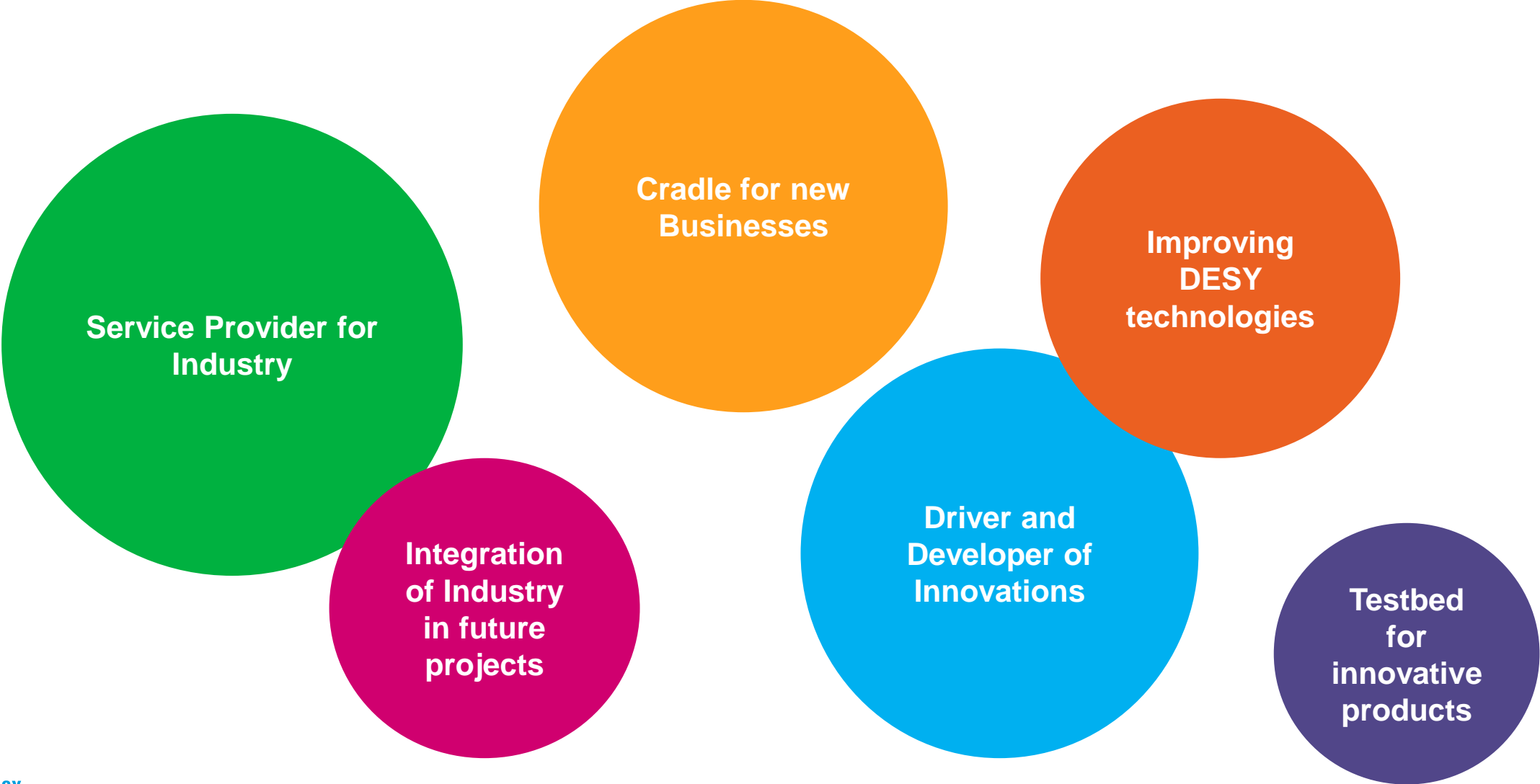
DESY - Areas of Research



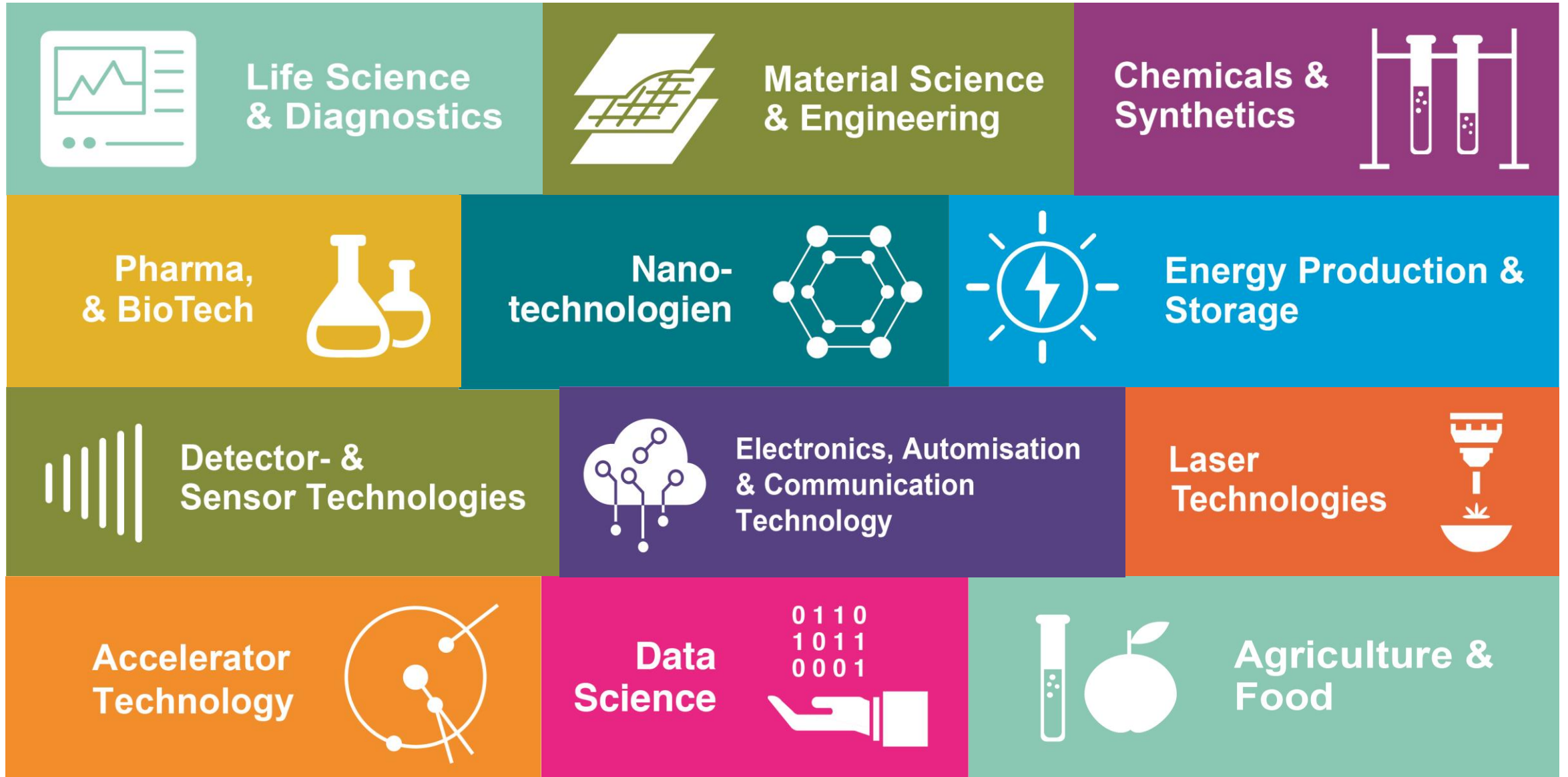
DESY.



DESY - Partner for Industry



DESY - Industry Sectors



Driver and Developer of Innovations

Exploitations & Patents

- Transfer of know-how and ideas from DESY to commercial use
- Use of DESY technologies directly, in an adapted or further developed form outside of research



Case - MicroTCA.4

Successful technology transfer

A standard for control electronics

- Applications in research and industry: Telecommunication, automation, logistics
- Goal: Establishing MTCA.4 as a standard in industry and science

Micro TCA Technology Lab

- Transfer MicroTCA.4 to research and industry
- Service & Support
- Tech-Shop
- Marketing
- Partner Network, annual meetings with approx. 200 participants



Service provider for Industry

Our innovation services

- Using research facilities and know-how such as **beamtime** at PETRA III and FLASH
- Offering specialized services at the **DESY Labs** (e.g. the Nano Lab)
- Prototyping and construction by the **DESY Workshops**
- „**One face to the customer**“: Consulting and guidance through the process
- Establishing long-term collaborations built on trust



Industrial Services as an integral part for future projects

Case: Effects of Fertilizer

Beamtime at PETRA III

Investigation of the effects of fertilizers

- Locally resolved measurement of the concentration of e.g. K, Ca, Zn in leaves
 - Microfocus X-Ray fluorescence measurements on PETRA
 - 2 D-map shows distribution and concentration of trace elements

Optimisation of the

- composition of the fertilizer
- effects of the fertilizer
- Quantity of fertilizer used (avoidance of overfertilization)



Carvalho, Mónica & Woll, Arthur & Niklas, Karl. (2016). Spatiotemporal distribution of essential elements through Populus leaf ontogeny. Journal of Experimental Botany. 67. erw111. 10.1093/jxb/erw111.

Thank you!

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Accelerators | Photon Science | Particle Physics

Deutsches Elektronen-Synchrotron
A Research Center of the Helmholtz-Association

Dr. Sabine Jähmlich

Industry Relations Manager

