

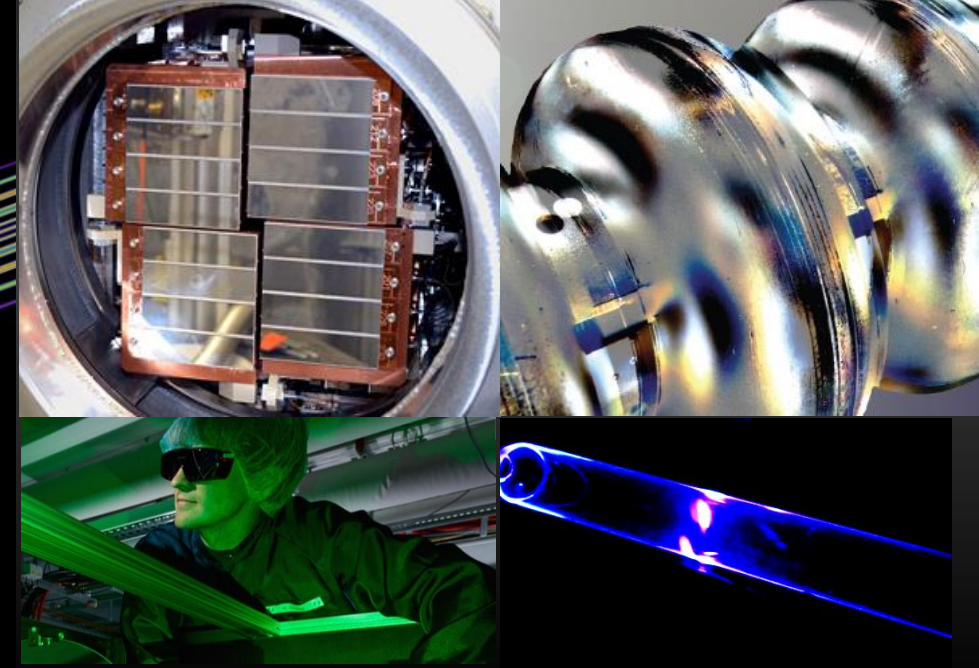
Matter and Technologies

The Program at DESY

Helmholtz Program: Matter and Technologies

Ties Behnke
Center Evaluation DESY, 5 – 9 February 2018

HELMHOLTZ
RESEARCH FOR GRAND CHALLENGES



Matter and Technologies

The program of today



Accelerator Research and Development:

Ralph Assmann



Detector Technologies and Systems

Heinz Graafsma



ARD Infrastructures

Hans Weise



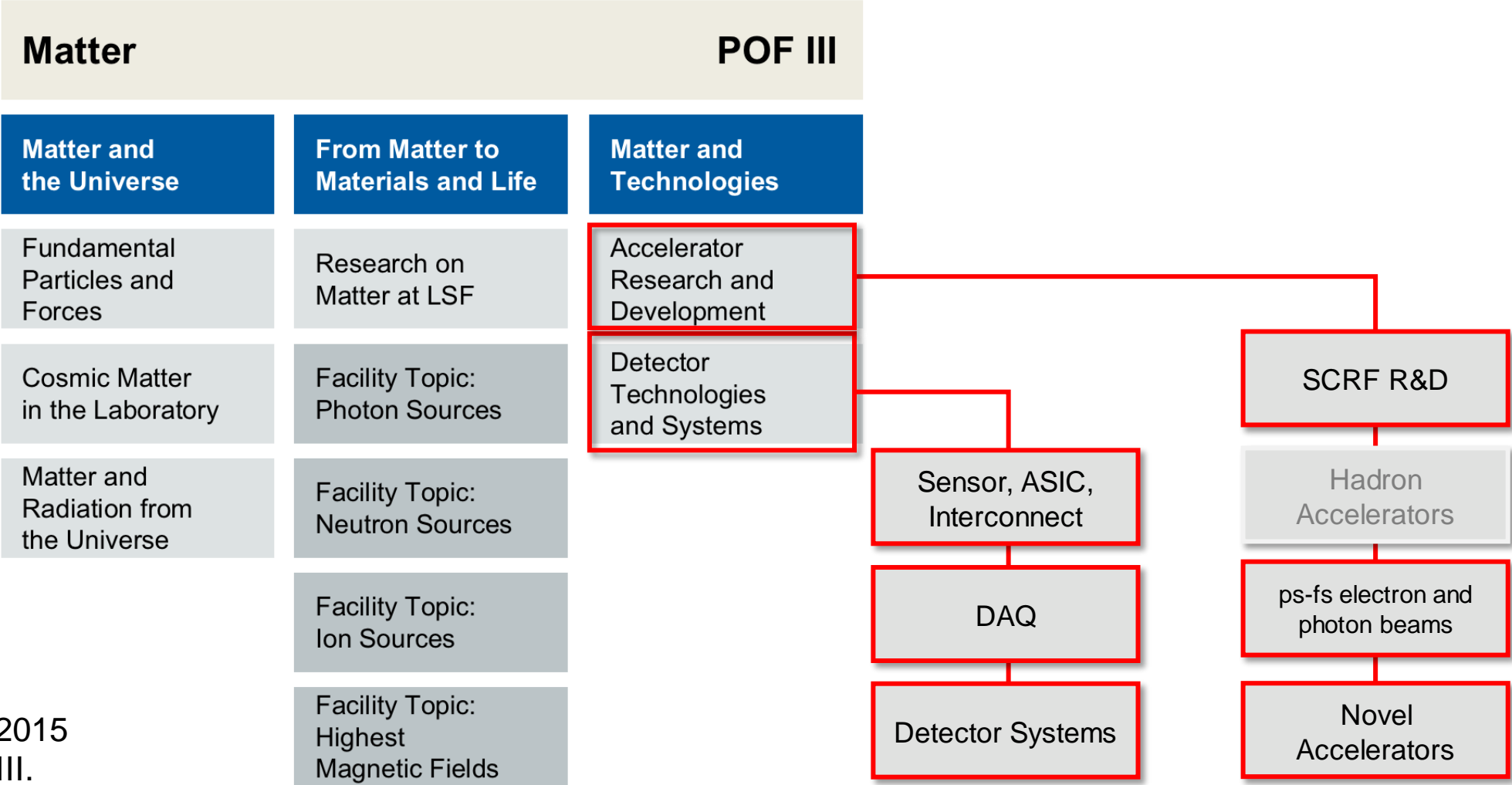
DTS Infrastructures

Doris Eckstein



Location within the research field matter

DESY contributions to DTS and ARD

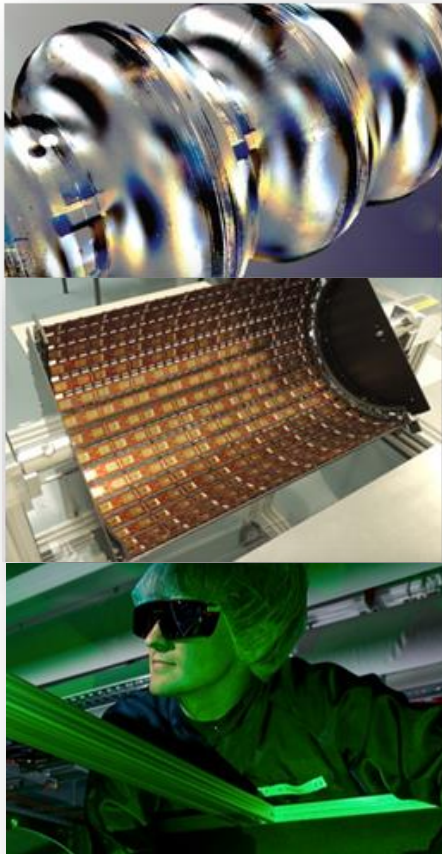


MT was established 2015
with the start of POFIII.

Our Mission

Prepare today for the science of tomorrow

Full lifecycle competence for technologies
in matter



High Tech

High risk

High potential



Innovation

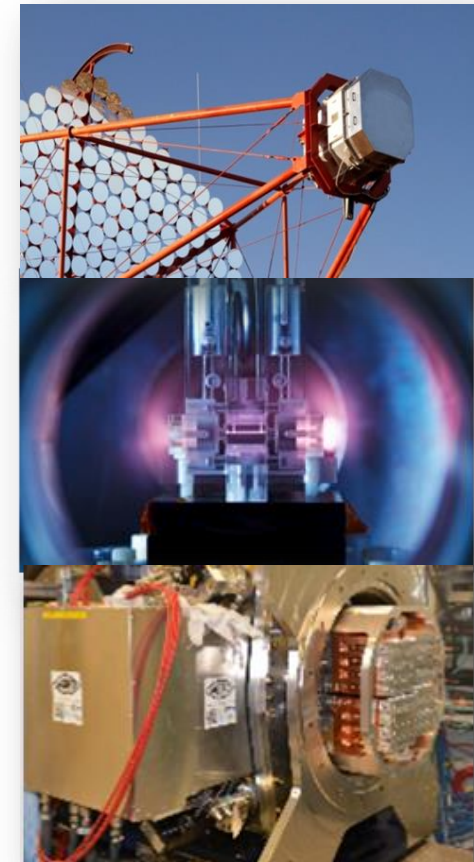
Commitment

Systems

Leadership

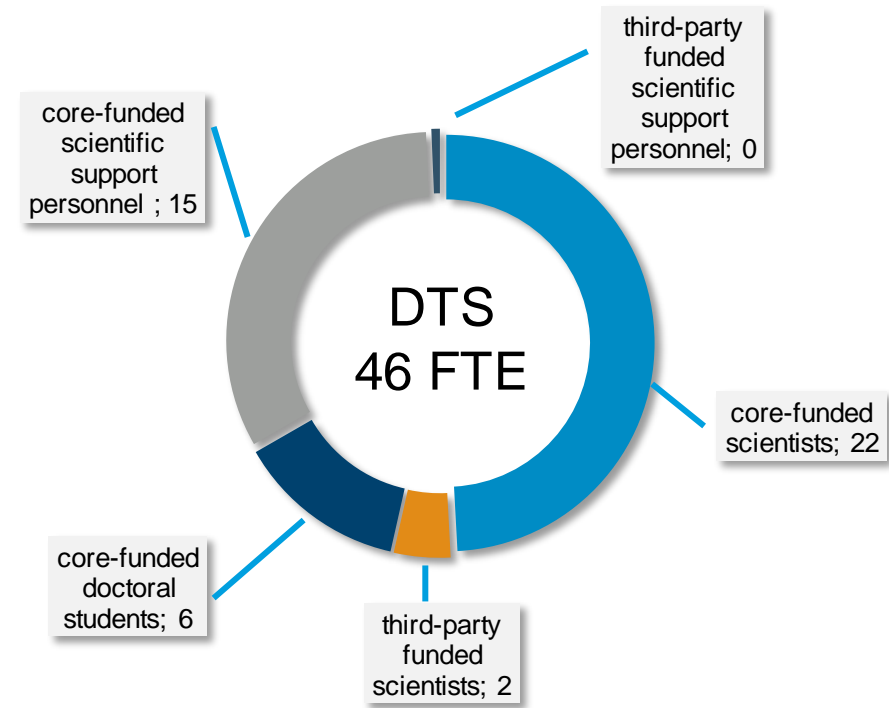
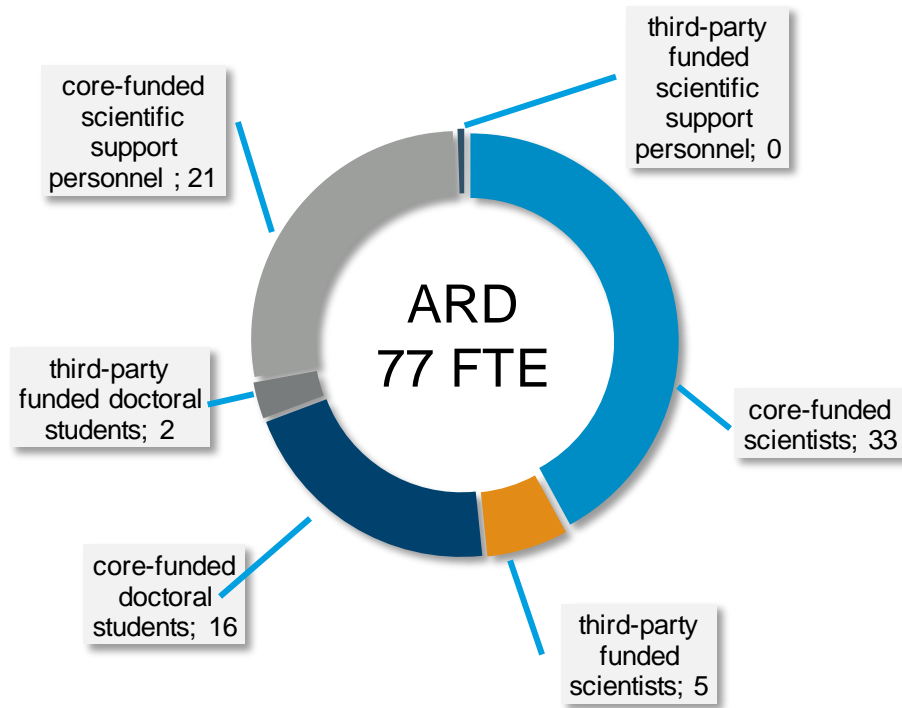
People

Talent



Some key numbers: MT@DESY

Core funded resources



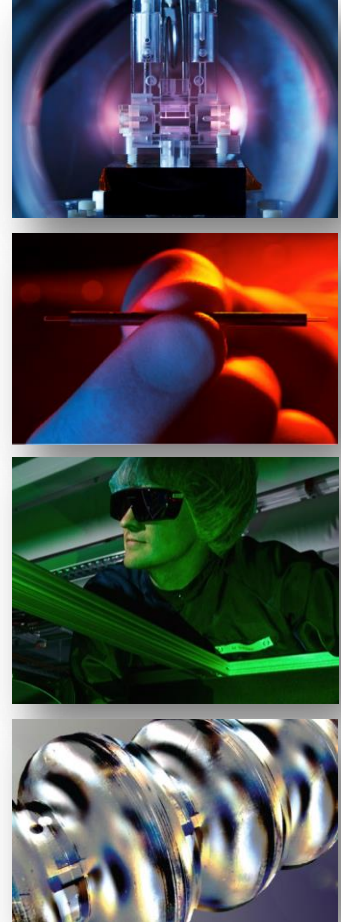
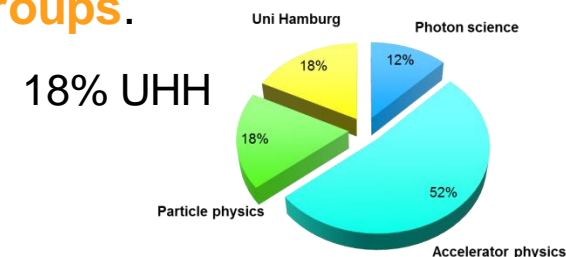
Both ARD and DTS are closely cooperating with a broad range of groups and people and profit from additional resources e.g. from support and technical people and infrastructures.

ARD and DTS are cross divisional activities: Contributions from all three divisions.

Personpower: Status and Evolution

ARD

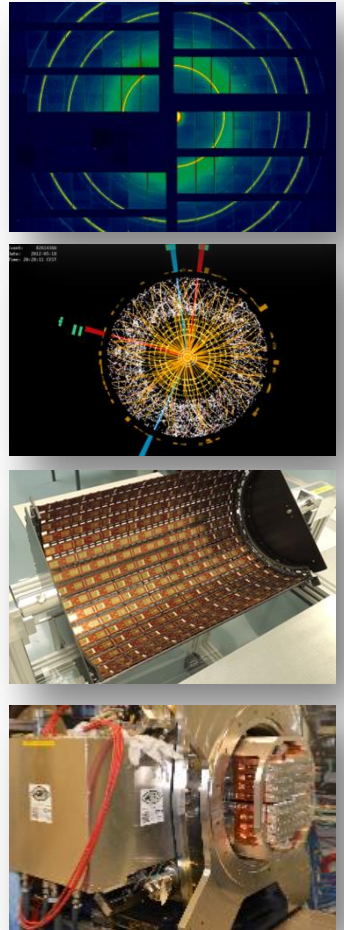
- ARD is a growing activity at DESY.
 - **200 DESY scientists/students/staff involved in ARD projects, many part time**
- ARD integrated into overall accelerator work
 - Synergies with operations and R&D driven by facility needs: no R&D islands
 - Ongoing build-up of activities and infrastructure
 - Reassignment of DESY experts to SRF R&D work after completion of XFEL construction: strong growth in 2017
 - Start of new third party funding projects in 2017: luVF “Plasma Accelerators”, ARIES EU project, others.
- University of Hamburg is a key strategic partner:
 - **37 researchers and students in University Hamburg groups.**



Personpower: Status and Evolution

DTS

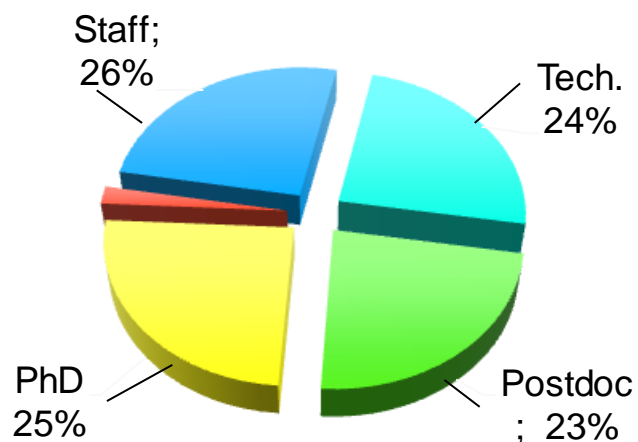
- DTS - Detector Development is a central activity at DESY.
 - **Around 100 people are involved, many part time**
- Strong integration into the photon science and particle physics divisions, strong links to accelerator division
 - Close link to the science, and to the application of the technologies
- Technical infrastructure is being improved, synergy on personpower through operations
 - Detector assembly facility
 - Test beam facility
 - Investment in interconnect technologies
 - Plans for a post processing facility
- University Hamburg is a strategic partner for detector development.



Talent Development

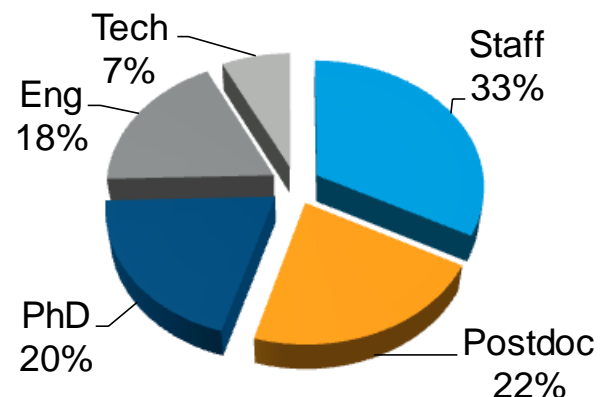
Brains for technologies

ARD



About 50%
young researchers

DTS



Cornelia Wunderer:
graduate of Helmholtz Academy (2016)

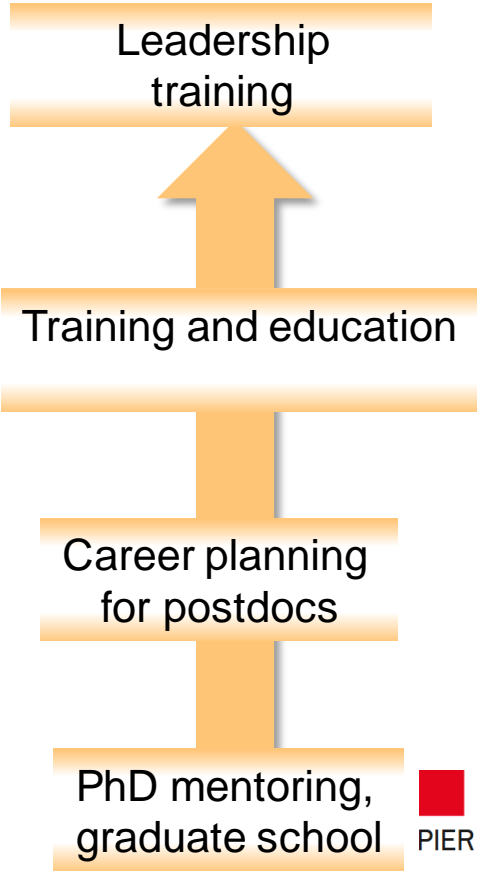
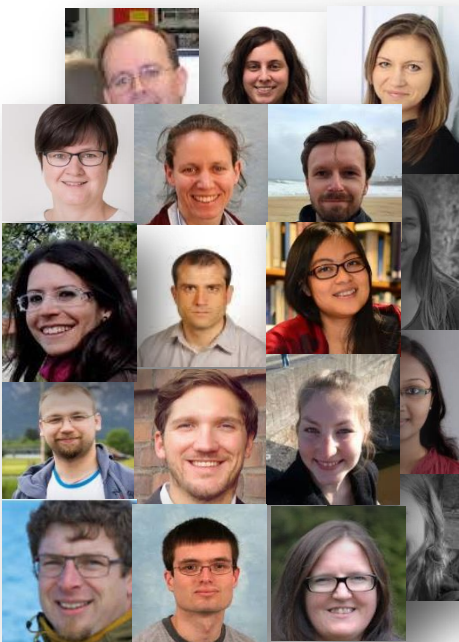
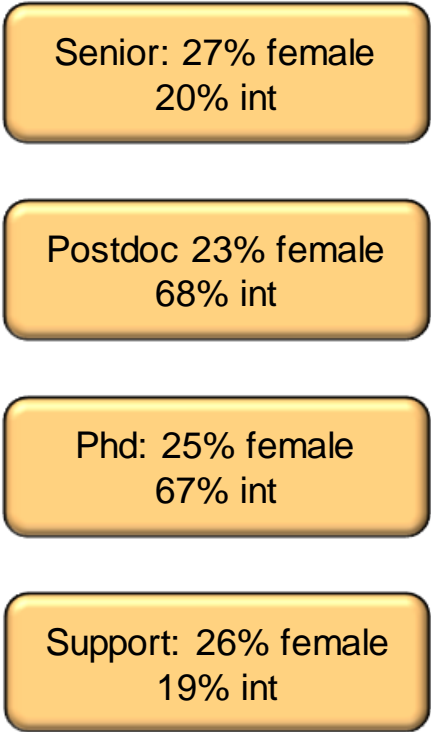
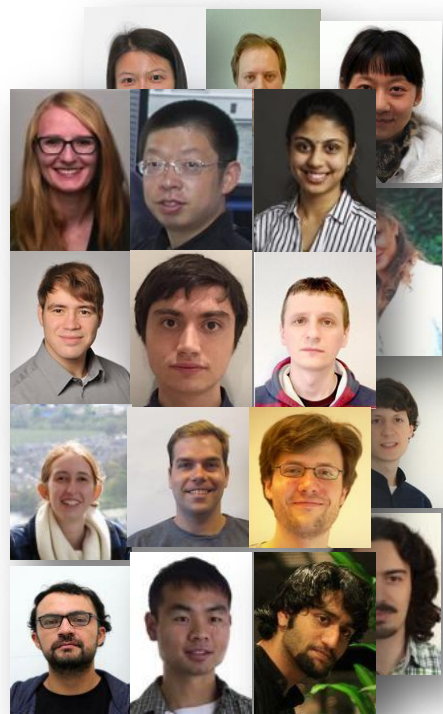


Maria Weikum:
2015 Posterpreis European Advanced
Accelerator Concepts Workshop EAAC2015



Simon Spannagel:
2017 DPG price for the best dissertation
in Germany in particle physics
Topic in instrumentation

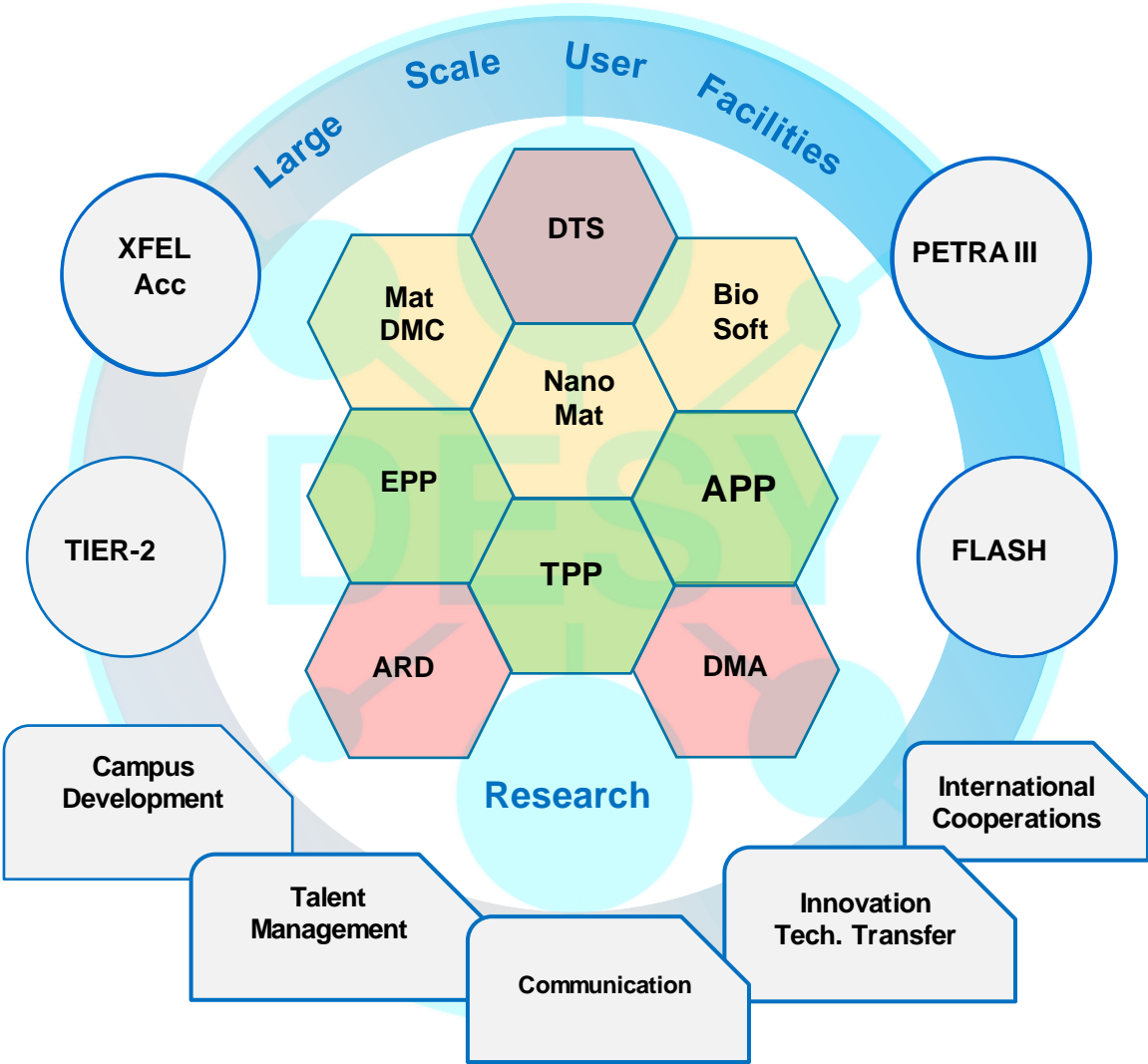
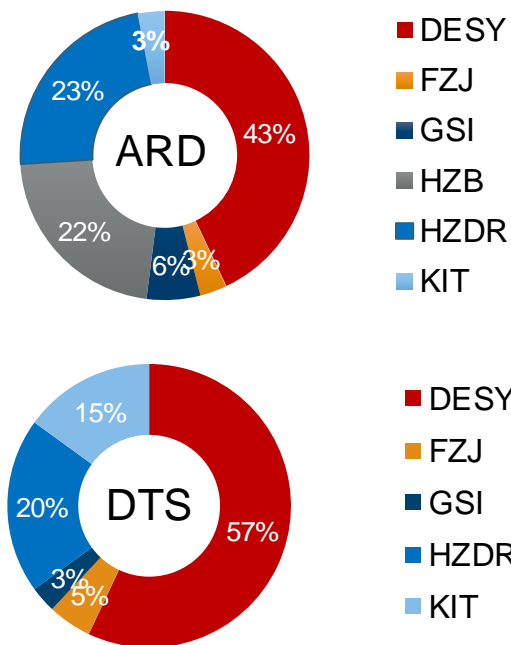
Talent Development



Contribution to center and program

Matter and Technologies are central elements of the DESY 2030 strategy.

DESY plays a central role in the overall Matter and Technologies program



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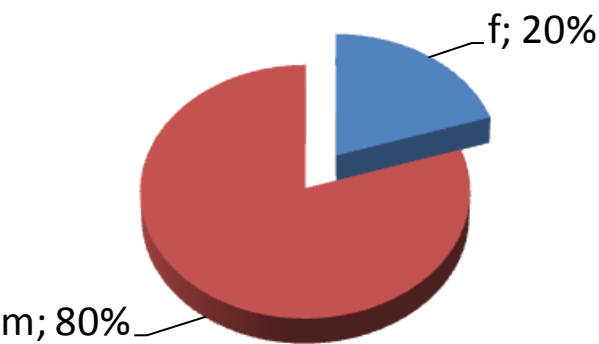


Backup

Talent Development

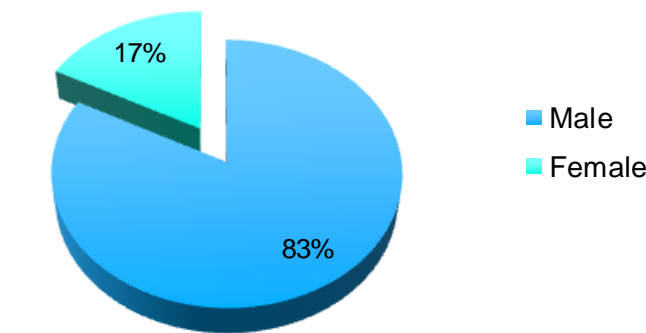
Developing talents and careers

DTS: gender distribution



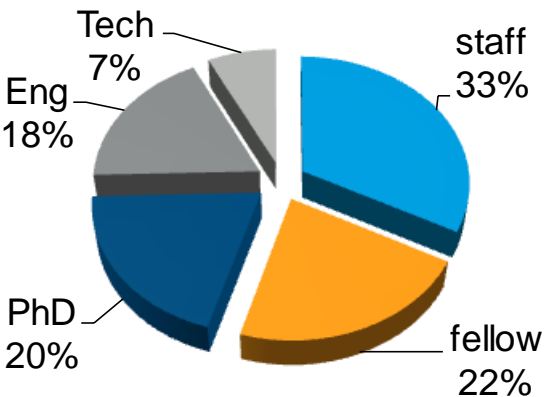
About 20% female researchers

ARD: gender distribution

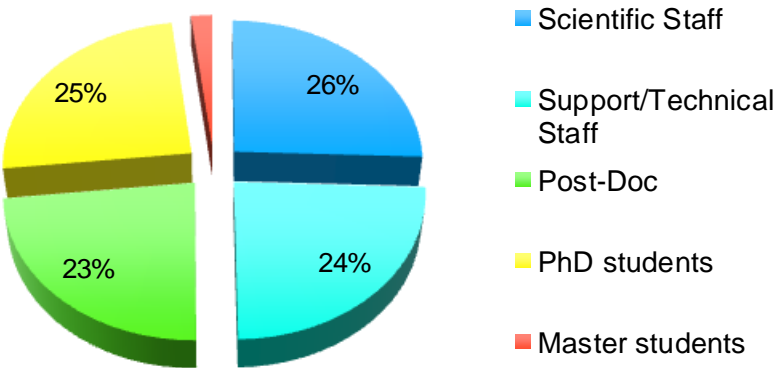


- Male
- Female

Strong participation of young researchers in the program:



About 50% young researchers



- Scientific Staff
- Support/Technical Staff
- Post-Doc
- PhD students
- Master students