

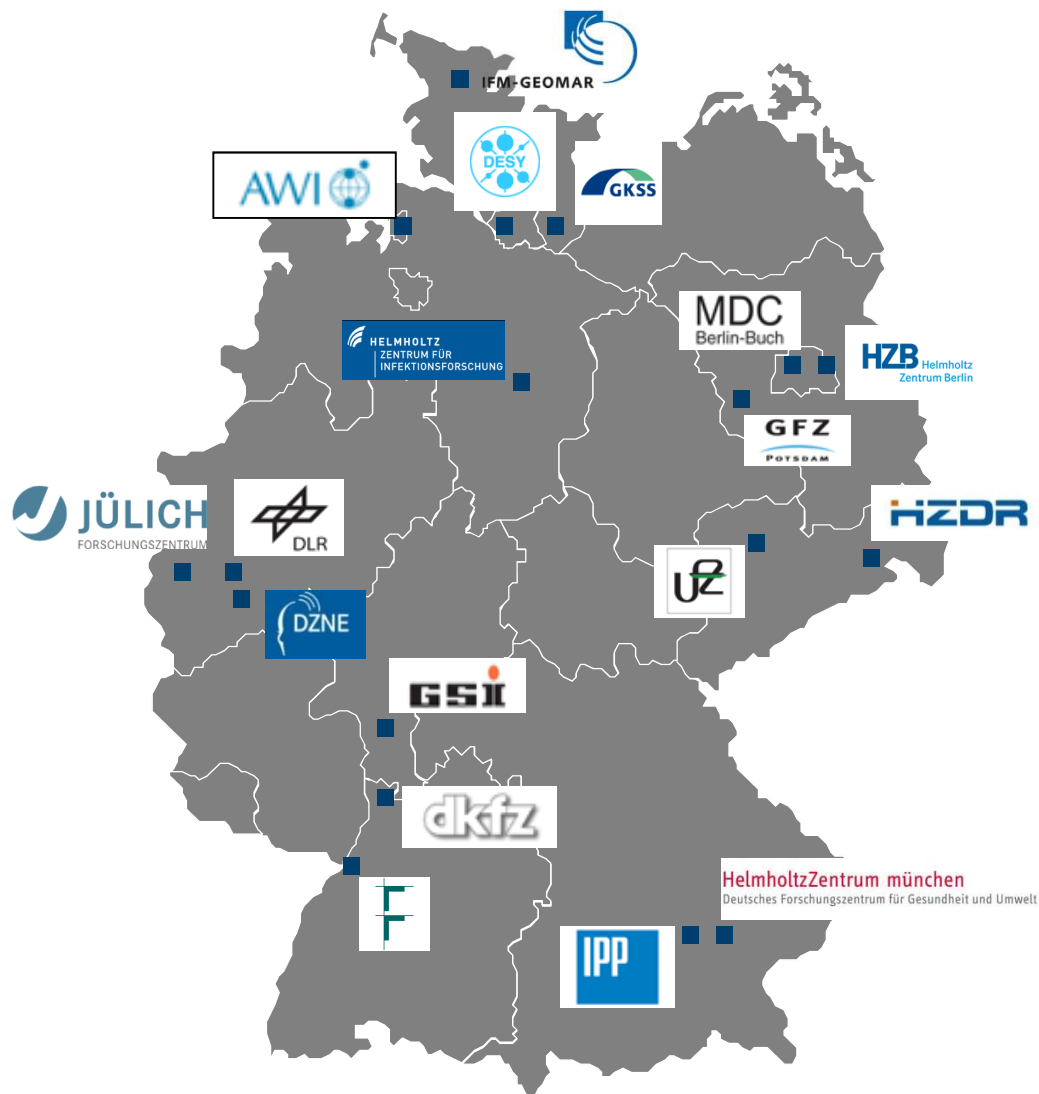
Forschungszentrum Jülich

Finding Tomorrow Today

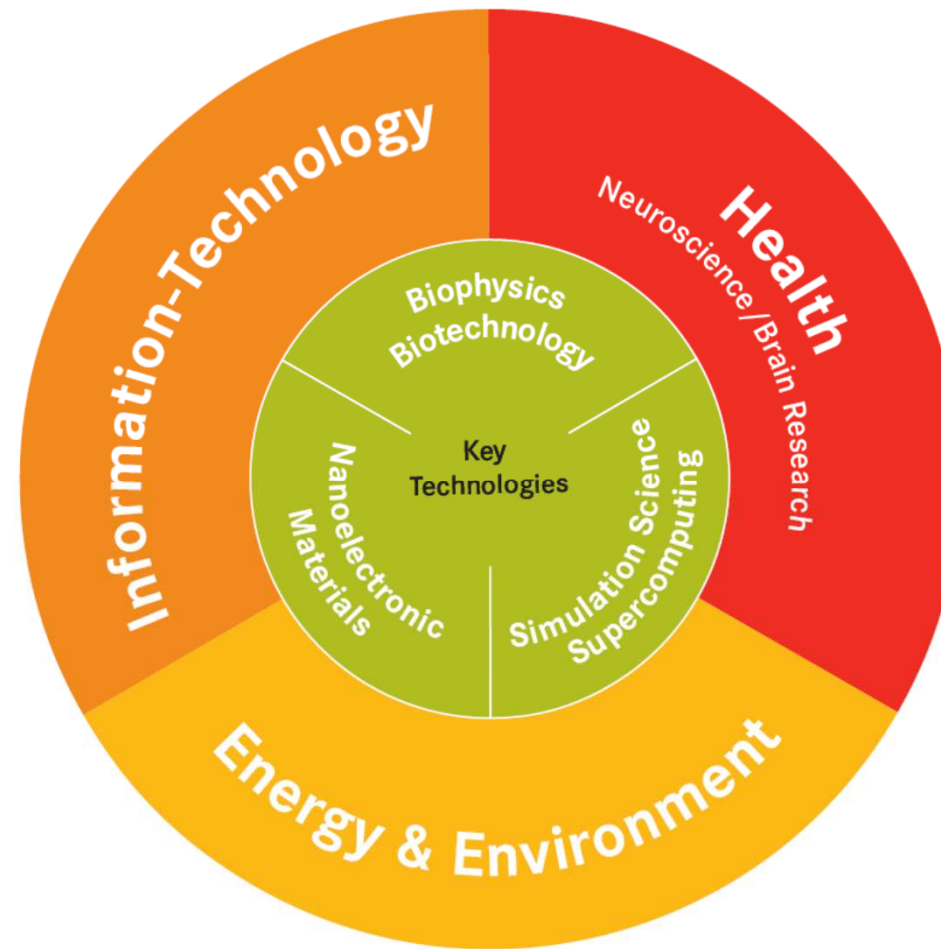
1st CHANGES workshop, 3 -5 September 2012

Sebastian M. Schmidt

The Helmholtz Association

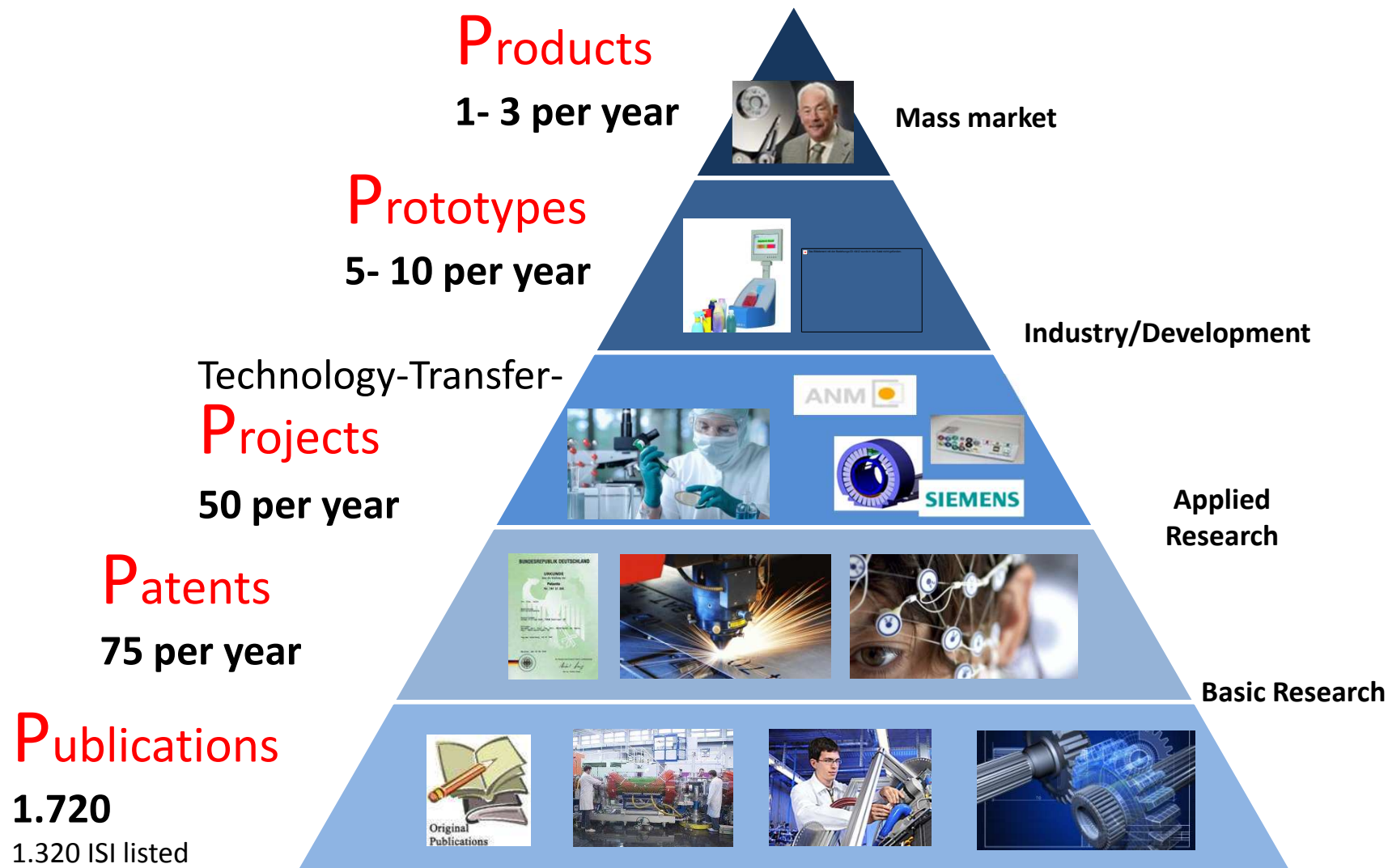


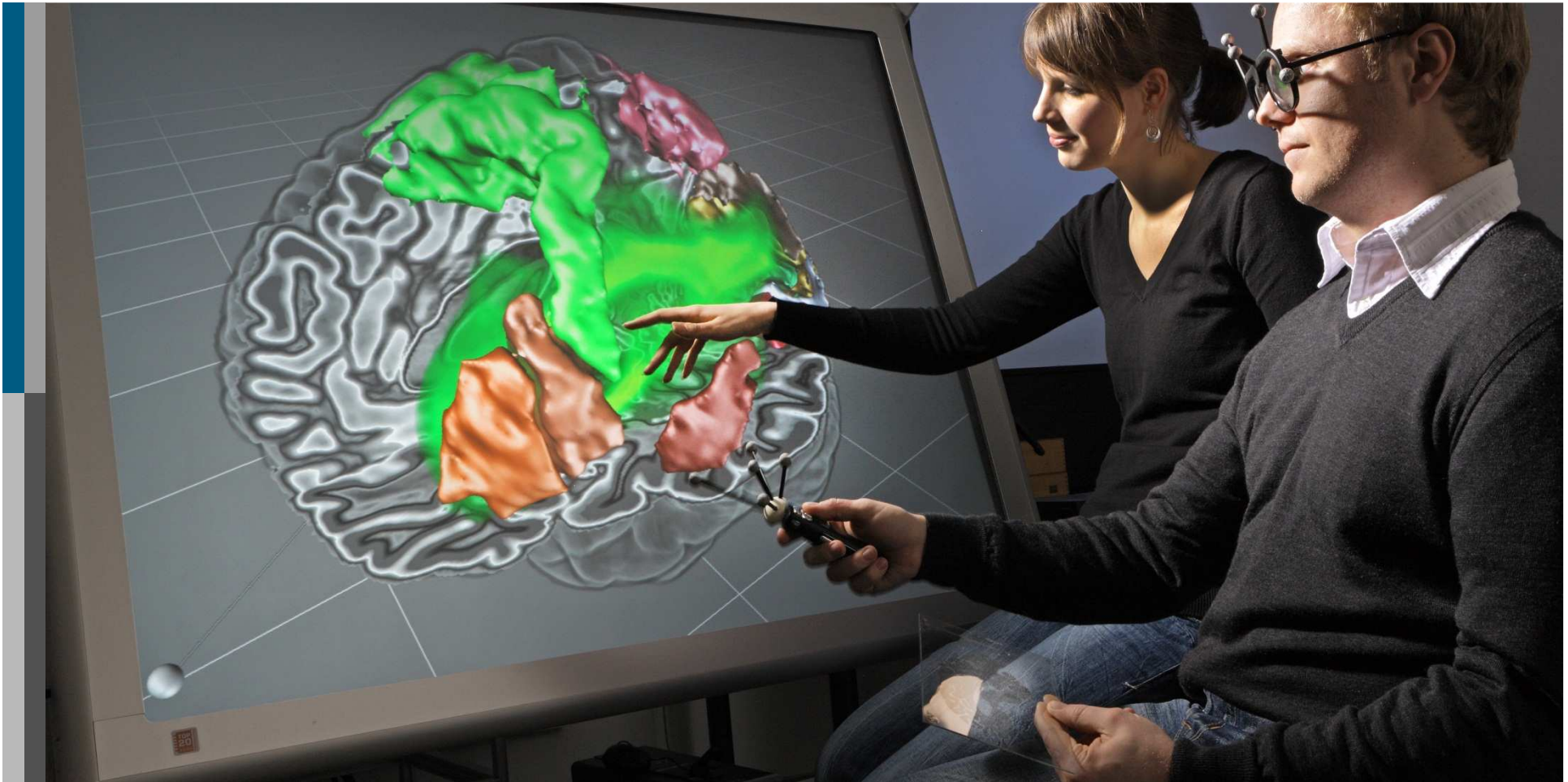
18 Centers
31,000 staff,
9,700 scientists and engineers,
5,300 doctoral students
budget: 3.3 billion €



**Research for generic key technologies
of the next generation**

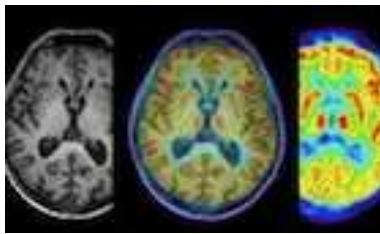
From Invention to Innovation



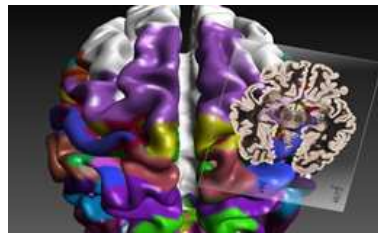


Health

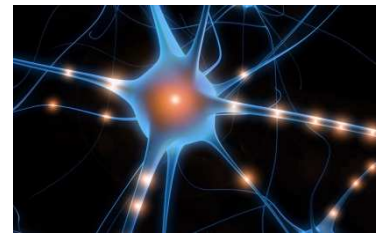
From basic to clinical research



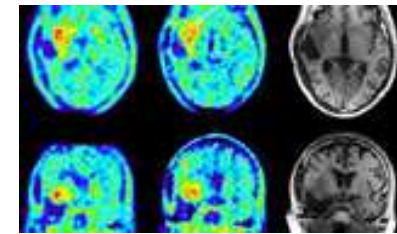
Imaging Techniques



Brain Atlas



Information network
brain



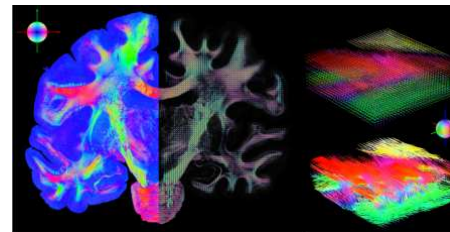
Tumor diagnostic



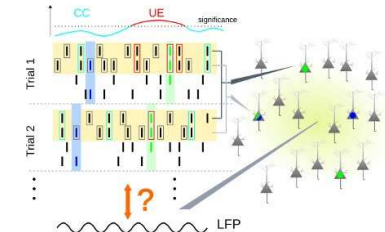
Neuromodulation



Nuclear chemistry



Fiber tracking



Statistical
neuroscience



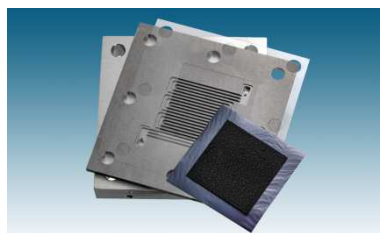
Energy and Environment



Energy and Environment



Material science for
“Green Coal” -
Technologies



Hydrogen Technology
(e.g. fuel cell)



Thin layer-Photovoltaics



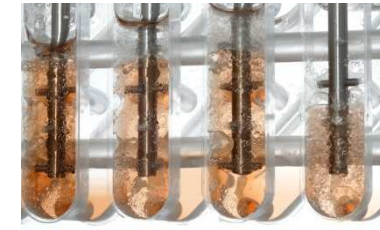
Materials for extreme
surroundings
(e.g. nuclear fusion)



Biotechnology, Phytosphere, and Agrosphere for a
“knowledge based bioeconomy”



“Chemistry of the
Atmosphere”



“Waste Management”
& Nuclear Safety research



Information Technology



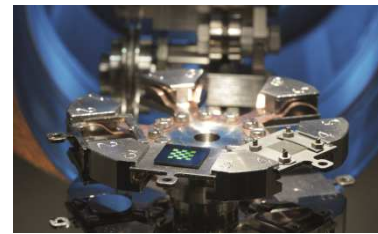
Information Technology



Supercomputer



GMR-Effect



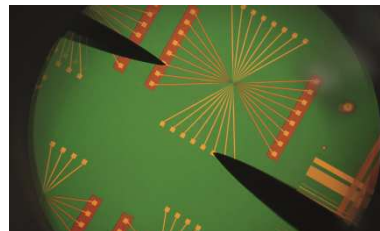
Spintronic



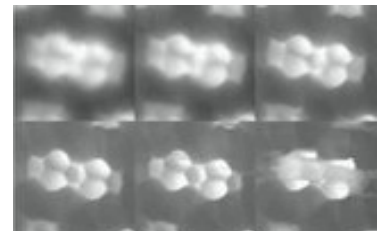
Bioelectronics



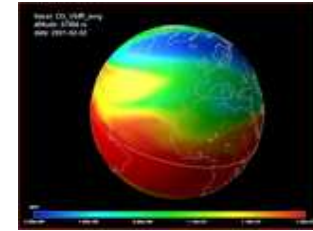
New Chip structures



Resistive Storage



Microscopy



Simulations



FINDING TOMORROW TODAY

1st CHANGES workshop

CHinese-**A**merica**N**-**G**erman **E**-**S**cience and cyberinfrastructure

Partners

- Chinese Computer Network Information Center (CNIC)
- US-American National Center for Supercomputing Applications (NCSA)
- Germany Jülich Supercomputing Center (JSC)

Mother organisations

- Chinese Academy of Sciences
- University of Illinois at Urbana-Champaign (UIUC)
- Forschungszentrum Jülich

High-level platform on Cyberinfrastructure and e-Science to discuss latest trends in supercomputing, sophisticated information techniques, and interdisciplinary applications