



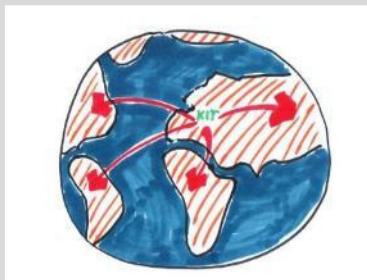
Cooperation and Coordination with China - a partner country of outstanding importance to KIT

Karlsruhe China-Germany Business & Culture Group Meetup

Karlsruhe, December 13th, 2017

Oliver Schmidt

International Affairs



Agenda

- A brief introduction to KIT – The Research University in the Helmholtz Association
- Internationalization at KIT in Research, Teaching and Innovation
- Cooperation with China



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Karlsruhe Institute of Technology (KIT)

In the City of Karlsruhe and the region



Energy
Mobility
Information

Karlsruhe Institute of Technology (KIT)



One legal unit



The mission



Three core tasks



Research



Teaching



Innovation

Profile sharpening topics



Energy



Mobility



Information



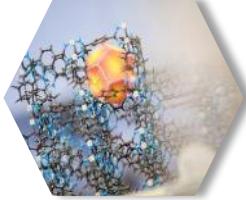
Status of May 2017

KIT Science Profiling – discipline diversity

Division I



Biology



Chemistry



Process
Engineering

Division II

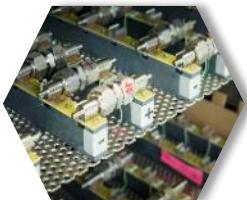


Informatics



Economics

Division III



Mechanical
Engineering



Electrical
Engineering

Division IV



Civil Engineering,
Geo- and
Environmental
Sciences

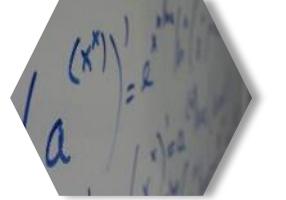


Architecture

Division V

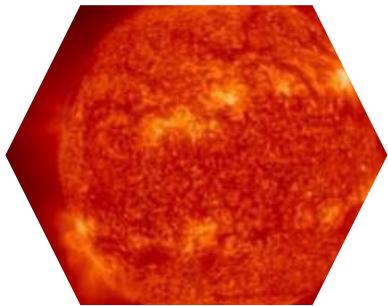


Physics



Mathematics

KIT Centers link discipline diversity



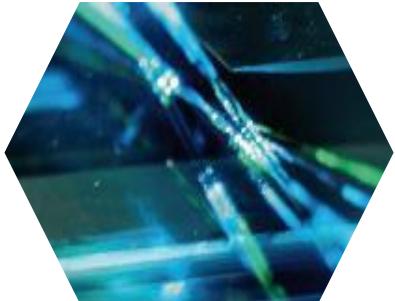
Energy



Mobility Systems



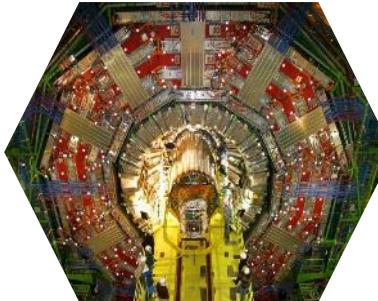
**Information
Systems
Technologies**



**Materials
Structures
Functions**



**Climate and
Environment**

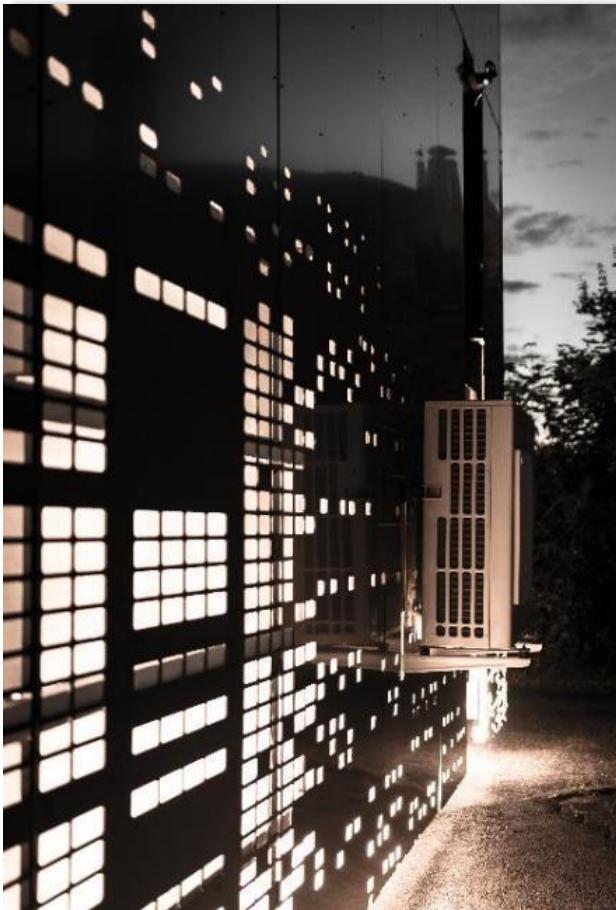


**Elementary Particle
and Astroparticle
Physics**



**Humans and
Technology**

Topics sharpening the profile of KIT



Energy

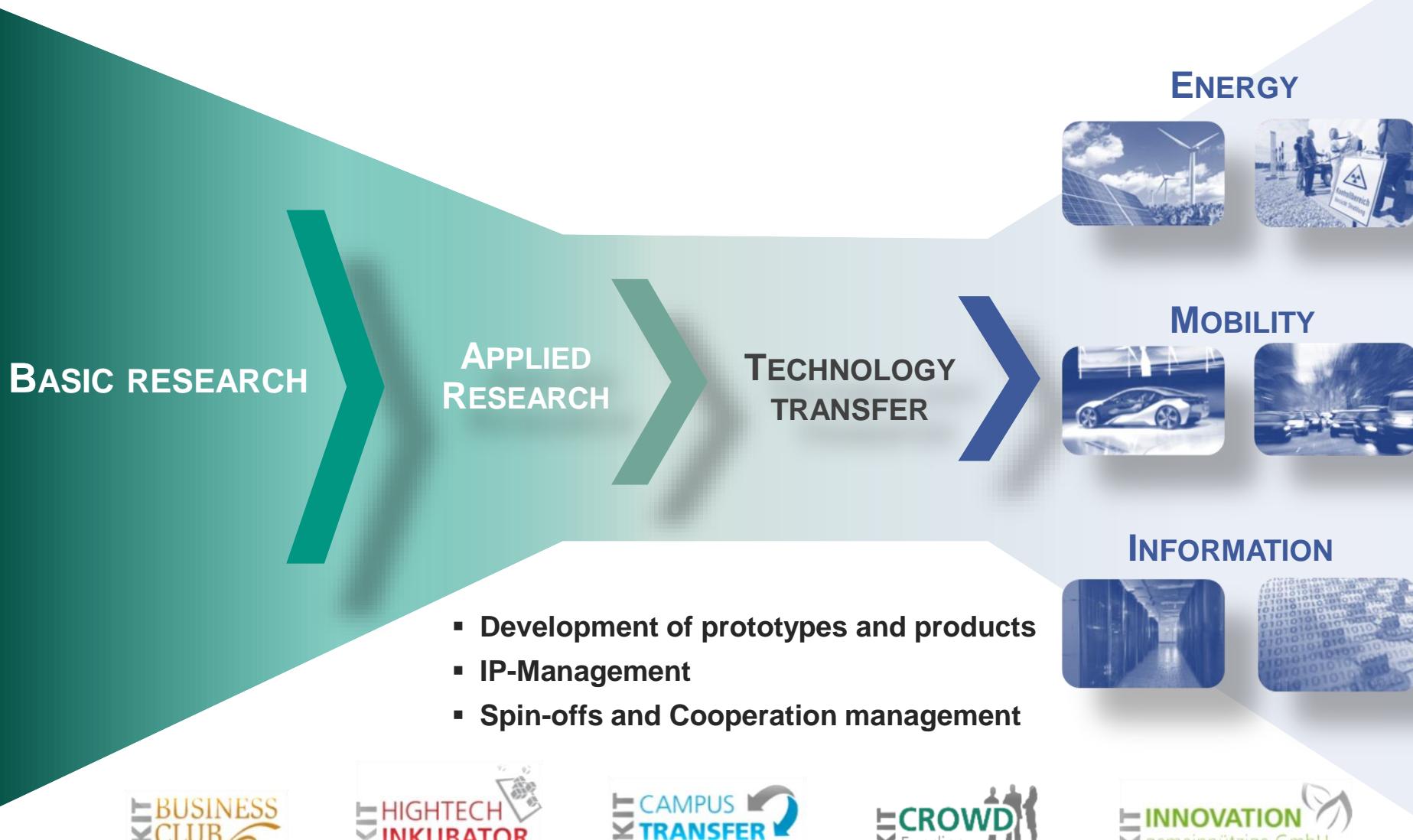


Mobility



Information

Innovation and technology transfer at KIT



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Profile sharpening topics



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Status of May 2017

Challenges of the 21st Century

Growth of World Population, Climate Change and Energy Transition

Global Carbon Emissions Reach New Record High

By Beckv Oskin Senior Writer | September 21 2014 01:00pm ET



The Eastern Hemisphere of Earth can be seen in this "blue marble" view captured by NASA's Suomi NPP satellite.

Credit: NASA/NOAA [View full size image](#)

Concentrations of carbon dioxide will surge to a new high in the atmosphere in 2014, scientists announced today in advance of the U.N. Climate Summit in New York City.

Global [carbon dioxide emissions](#) are projected to soar to 44 billion tons (40 billion metric tons) this year, a 2.5 percent increase from 2013 levels, according to joint studies published today (Sept. 21) in the journals *Nature Climate*

Change and *Nature Geoscience*. The new estimates come from the Global Carbon Project, an international effort to track the global carbon cycle, from sky to sea.

→ **Global problems can only be solved by international cooperation**

Quelle: FAO, IEA, U.S. Geological Survey, Global Carbon Project



World population

2011	7 bln. people
2030	> 8 bln. people

Need for food

2030 +> 40 %

Need for energy

2030 +> 50 %

Need for resources

2030 +> 100 %

Internationalization

Internationalization and strengthening internationality are common goals of



- industry, politics and society in Germany and Europe,
 - Federal and State Ministries (BMBF, BMWi, MWK, MW),
 - the region (TechnologyRegion and City of Karlsruhe),
 - the Helmholtz Association and of
 - KIT.



Internationalization and Internationality

“Internationalisation of higher education is the process of integrating an international and intercultural dimension into the teaching, research and service of the institution.” (Knight, 1997)



- *Internationalization* describes a *change process* of the international dimension of an organization in a defined period of time.
 - *Internationality* describes activities, which are empirically measurable and tangible at a particular point in time.



Current strategic developments at KIT



- overarching KIT 2025 corporate strategy adopted in 2016
- seven fields of action defined: KIT mission, science, teaching, innovation, young scientists, governance, central administration and technical infrastructure
- New field of action 8: Internationalization
 - Overall objectives, subgoals and measures are being developed with all stakeholders at KIT and its environment

Mission of the overall strategy KIT 2025 – connection with FA 8



- KIT is one of the big institutions of research and higher education in natural sciences and engineering in Europe.
- KIT makes significant contribution to solve global challenges, particularly in energy, mobility and information.
- An inspiring working environment and cultural diversity influence and enrich the living and working at KIT.



International Dimension

~20 %
International PhD
& Researchers

**24 Double
Degree-Programs**

Worldwide IP rights

>2000

>80 Mio. €
European Funding

Status of January 2017

> 1000
Registered cooperation partners
in 65 countries

**KIT-China Branch
Suzhou**

17
International
Alumni Clubs

**29 International
PhD-Programs**

International students
~22%

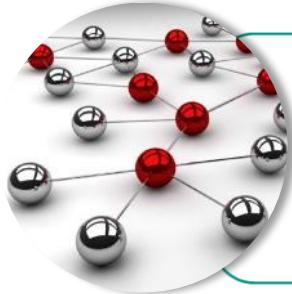


International strategic partnerships, networks and target regions



Bilateral partnerships

- Commissariat à l'énergie atomique et aux énergies alternatives - CEA, France
- Universidade de São Paulo, Brazil



Strategic and thematic networks

- CLUSTER-Universities, Europe
- HeKKSaGOn-Network, Germany and Japan



Bilateral partnerships with selected regions

- Eucor – The European Campus
- Interdisciplinary research platform China

KIT China Branch

Wisdom Center Suzhou Industrial Park



Opening Ceremony of KIT China Branch
卡尔斯鲁厄理工学院中国研究院开业典礼

May 16th, 2014 Suzhou · 苏州

Conference and Training Room



中德工业4.0技术展示创新
中德工业4.0技术展示创新



Opening Ceremony Industry 4.0 Innovation Center 2015

Industry 4.0 Demonstration and Innovation Center



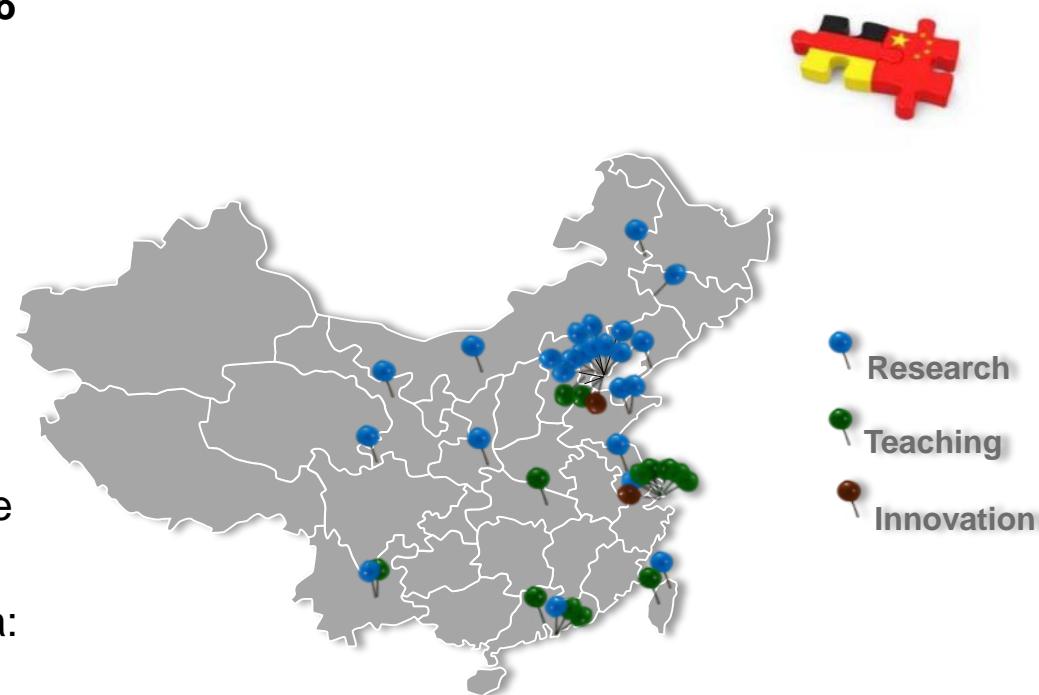
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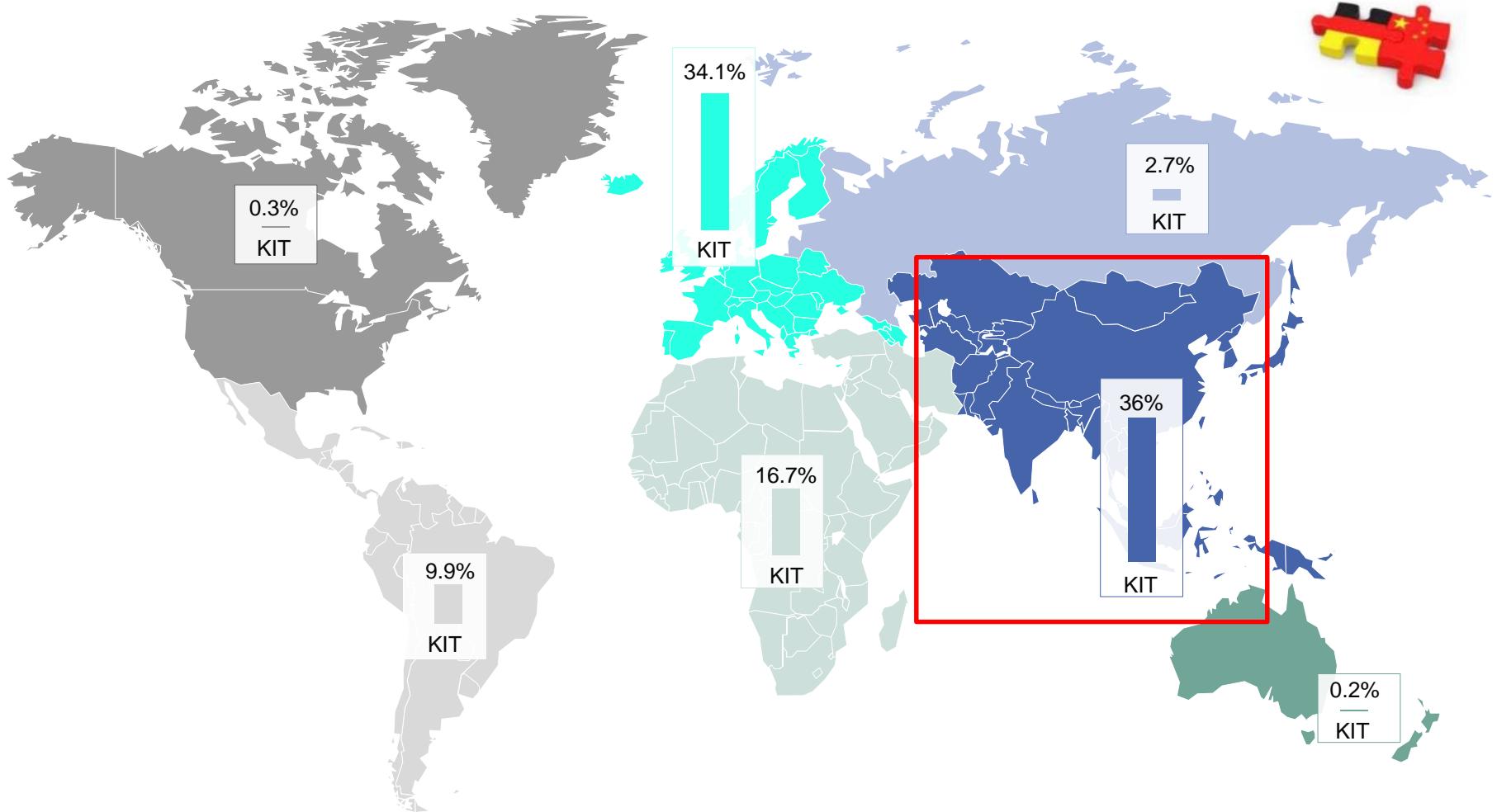
China – activities and collaboration

- More than **120 collaboration projects** with **over 50 partner institutions** in **16 cities** (teaching & research)
- KIT is founding member of the **Sino-European Engineering Education Platform** (SE3P)
- KIT is member in the **Sino-German Network on Electro Mobility** (coordination TU9)
- General agreement between the Helmholtz Association and the Chinese Academy of Sciences (CAS)
- Every 20th student at KIT is from China: **currently 1,923 Chinese students**
- KIT-assessment office at Beijing Institute of Technology (BIT)
- Strategic Partnership project with universities in Nanjing, Suzhou and Shanghai



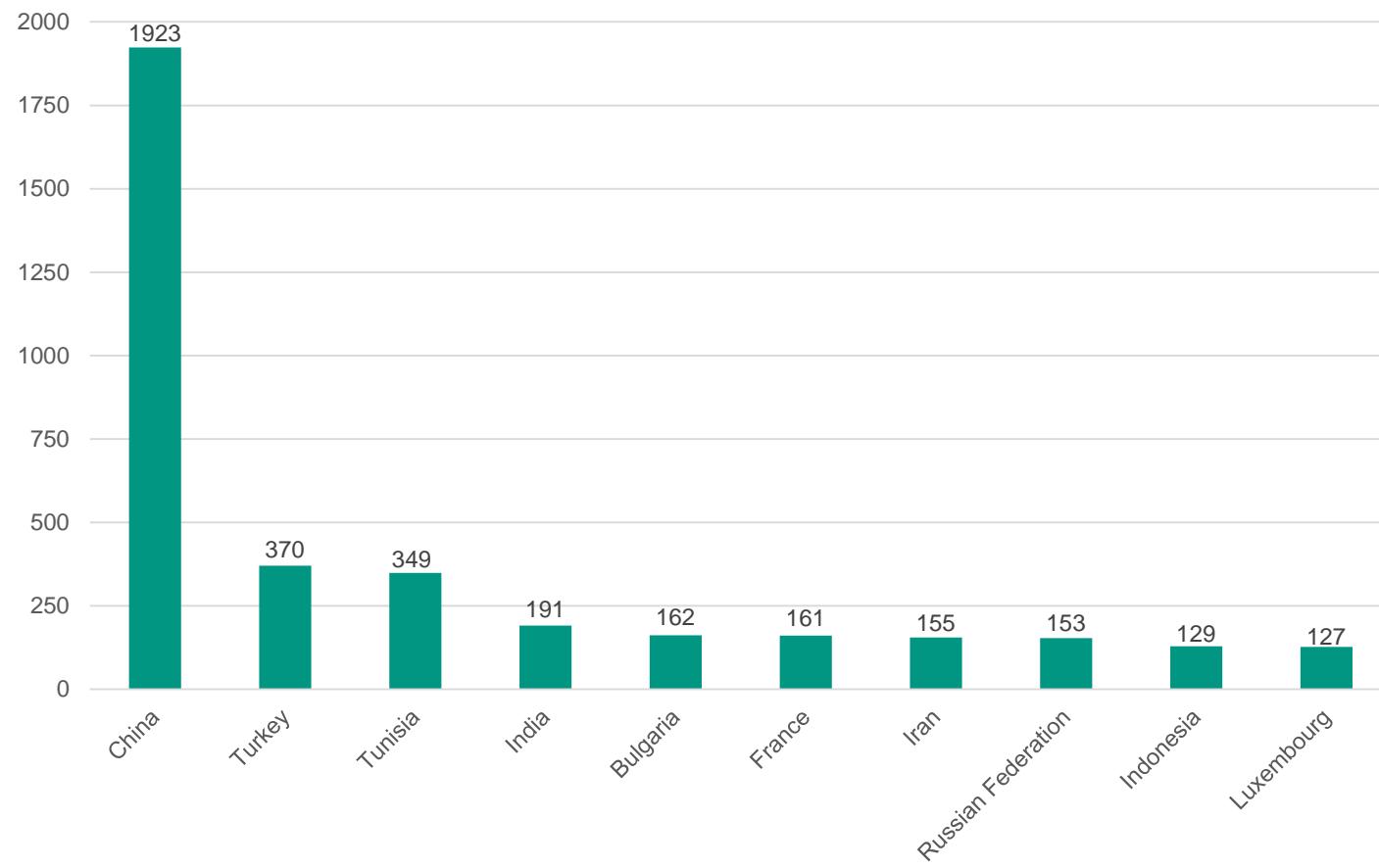
Internationality at KIT

Origin of International Students



Source: Federal Statistical Office, KIT (SU INTL) | Analysis and visualization: rheform 2016

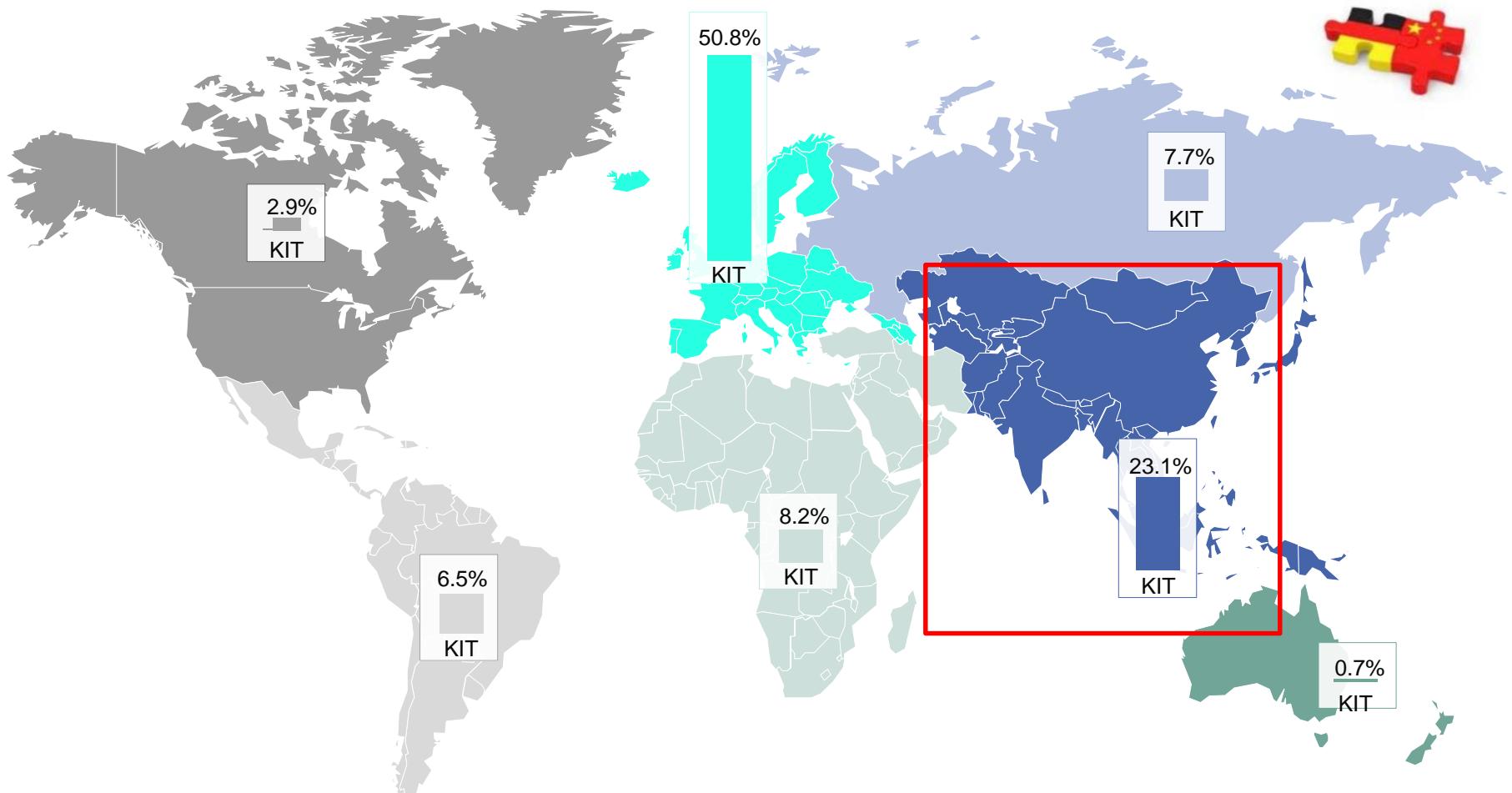
International Students at KIT: Top 10



Bar chart: Nationality of international students at KIT (top 10).
Source: KIT student statistics, 13 Okt. 2017

Internationality at KIT

International Researchers

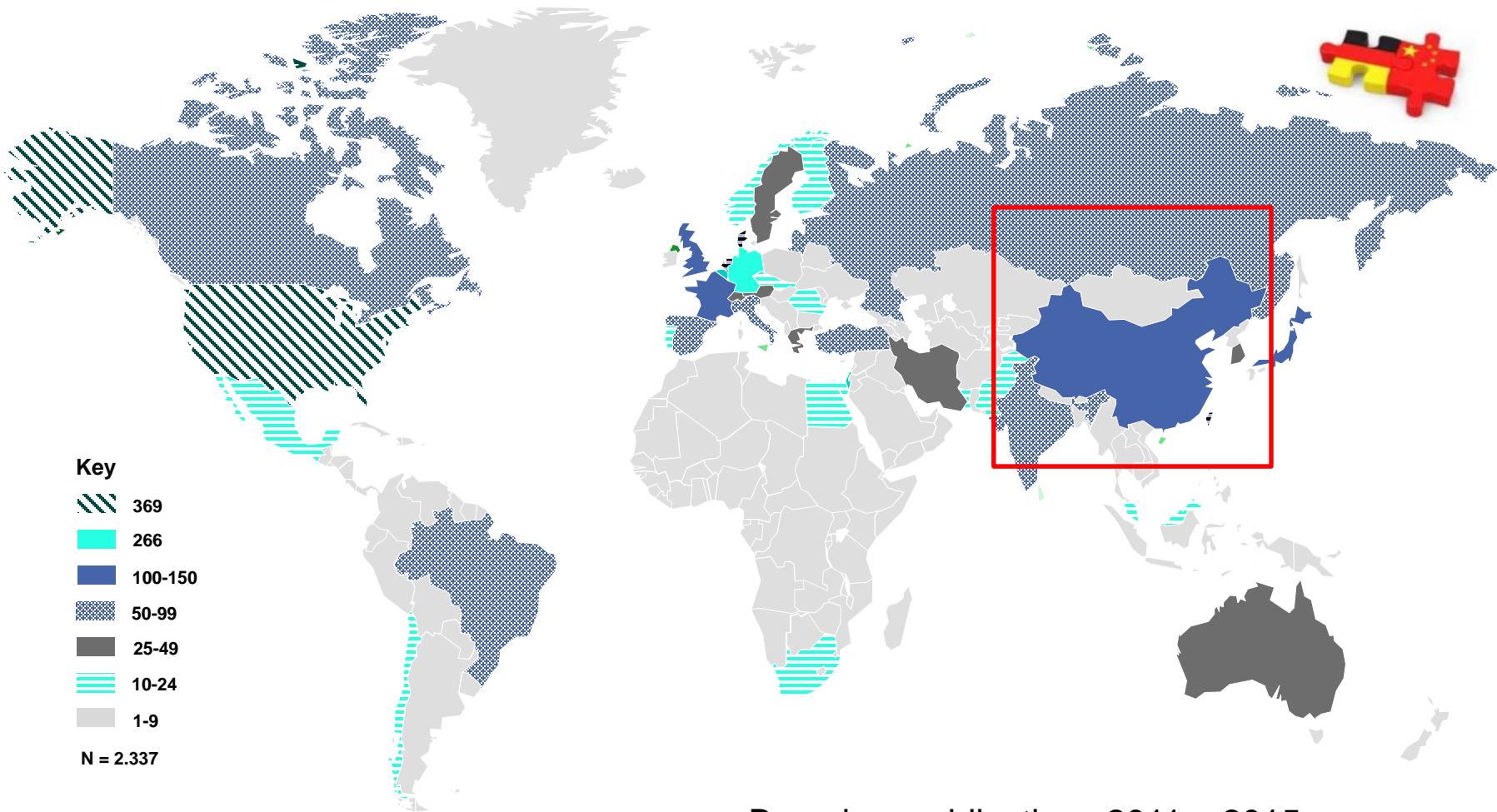


*The analysis covers staff of the university sector exclusively.

Source: Federal Statistical Office | Analysis and visualization: rheform 2016

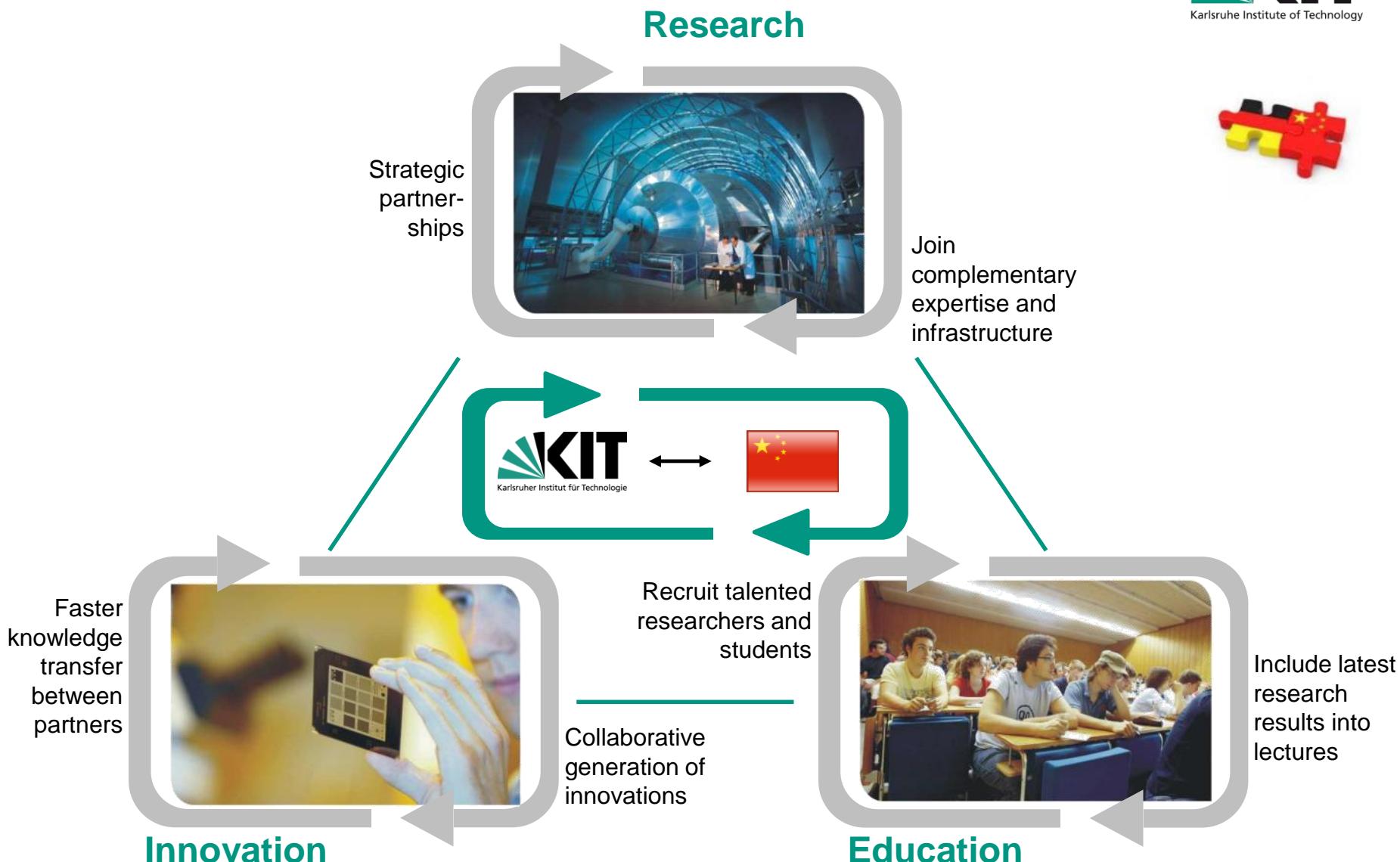
Internationality at KIT

Scientific Cooperation Projects

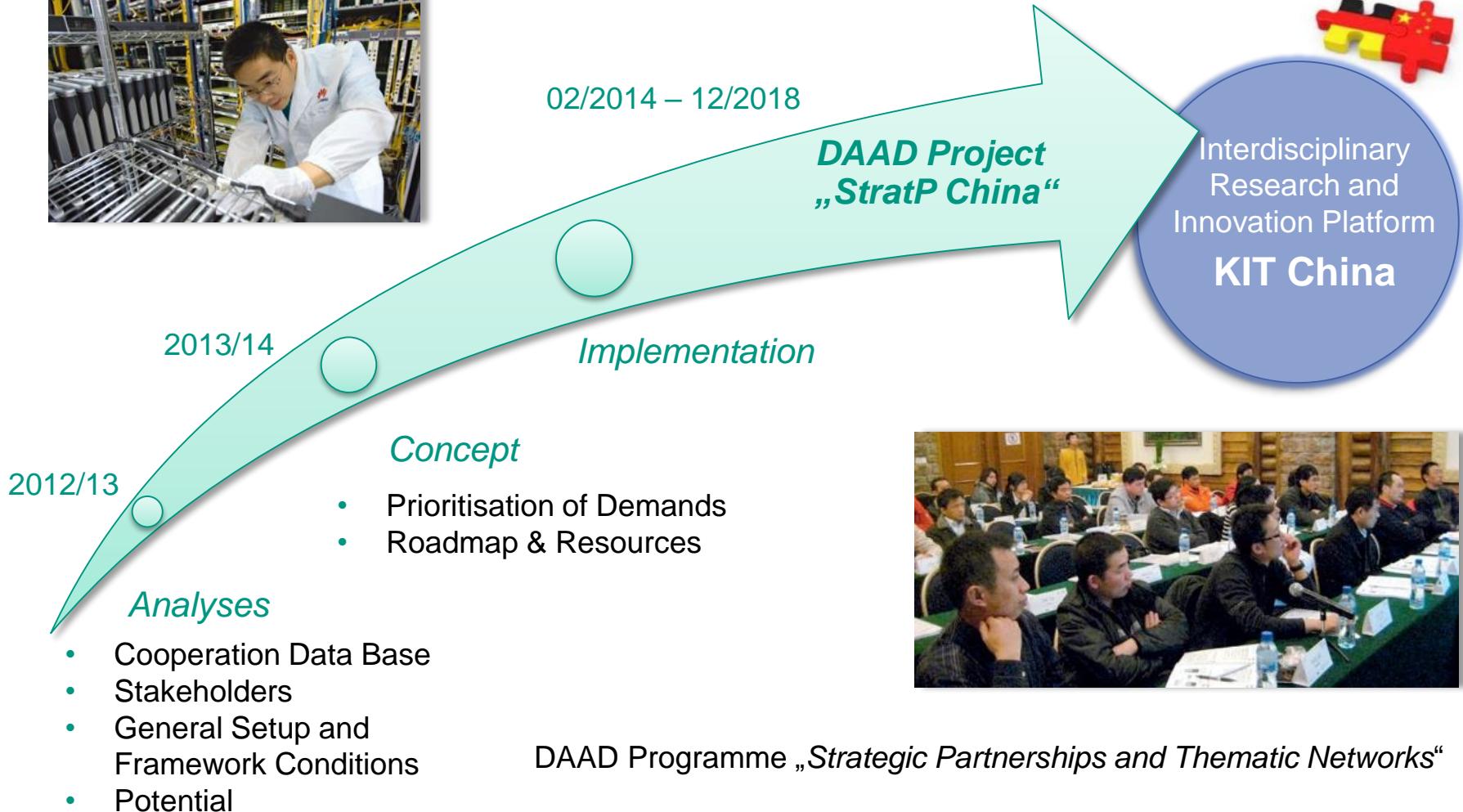


Source: Elsevier, May 2016 | Visualization: rheform 2016

KIT China Strategy

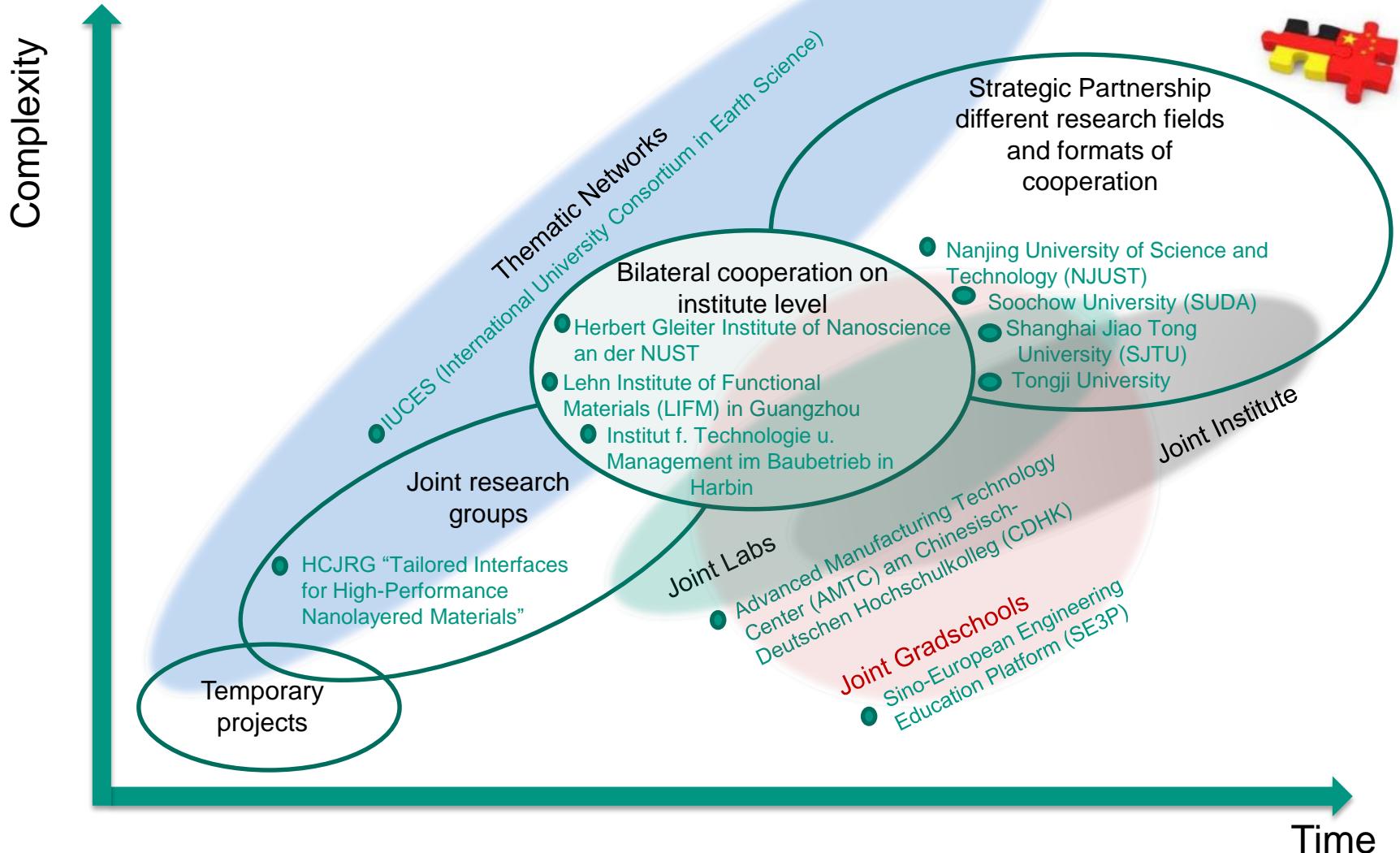


Strategy process of China activities



DAAD Programme „Strategic Partnerships and Thematic Networks“

Diversity of activities



StratP – Strategic Partnership with selected partner institutions

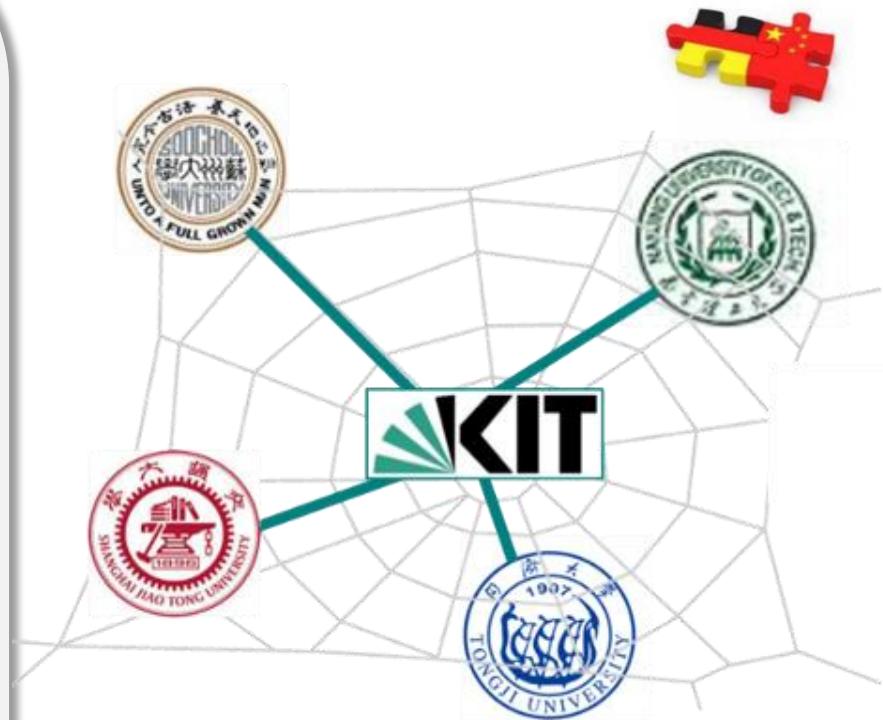


KIT in the Jiangsu Province and the Shanghai Metropolitan Region

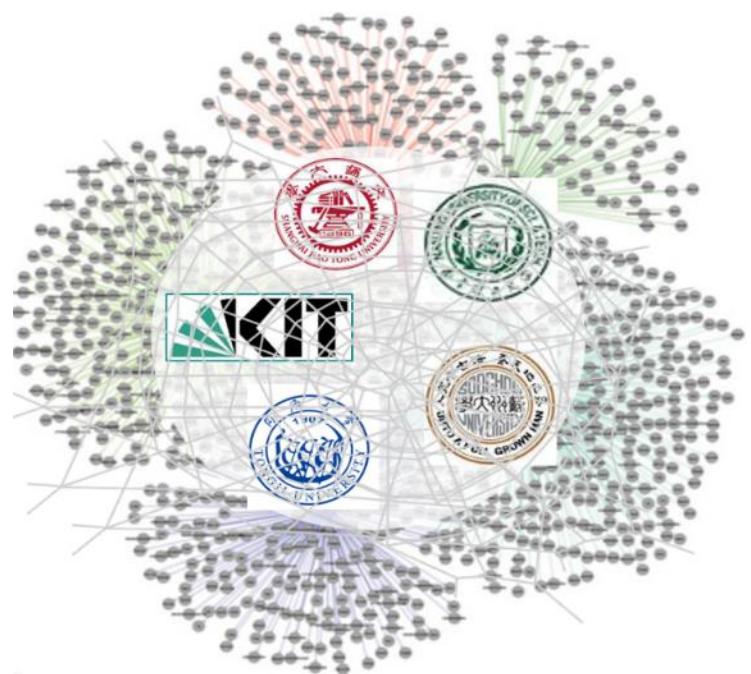
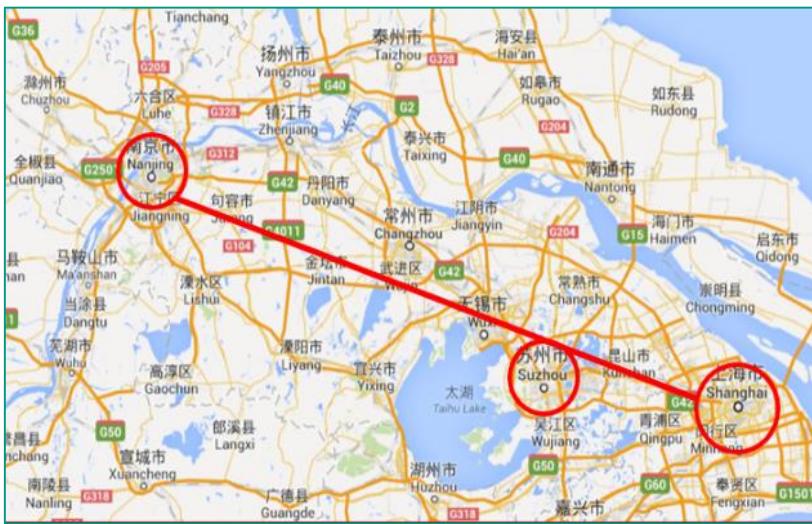


Strengthening bilateral Partnerships

- Nanjing University of Science and Technology – **NUST**
Material Science and Nanotechnology
- Tongji Universität Shanghai – **TUS**
Mobility Systems and Production Science
- Soochow University – **SUDA**
Production and Social Science
- Shanghai Jiao Tong University - **SJTU**
Biotechnology, Material Science and Engineering



Establishing an Interdisciplinary Research and Innovation Platform



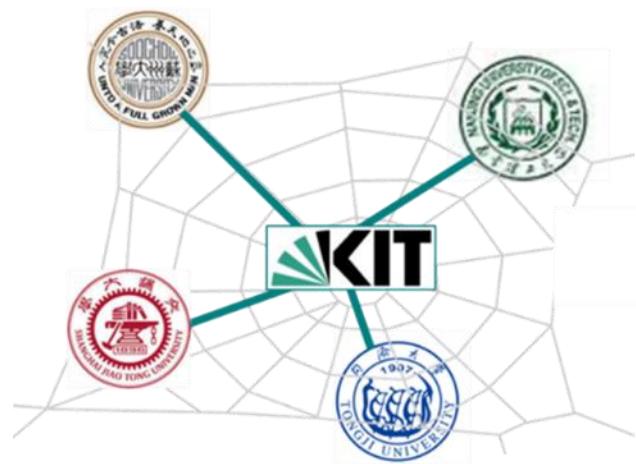
- Establishing and Enhancing of a Innovation Network
- Intensifying active Partnerships
- Involving Start-ups and Entrepreneurs along the Strategic Axes
Shanghai – Suzhou – Nanjing
- Sustainable Continuation after initial DAAD Funding Phase

Sustainability of Strategic Partnerships

Within KIT



With Partners



Research

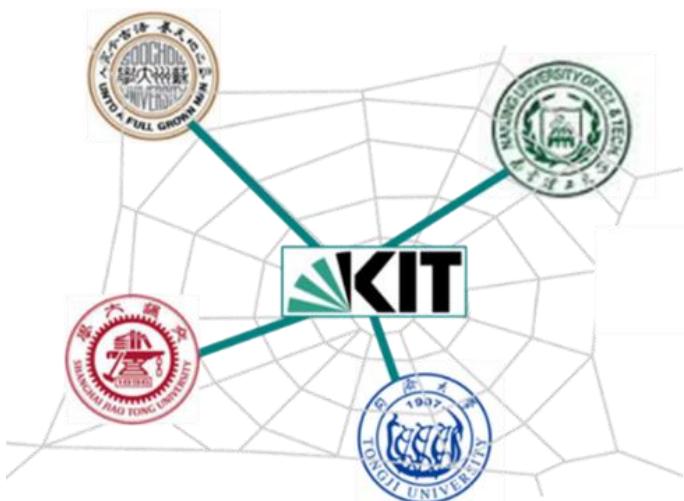


Teaching



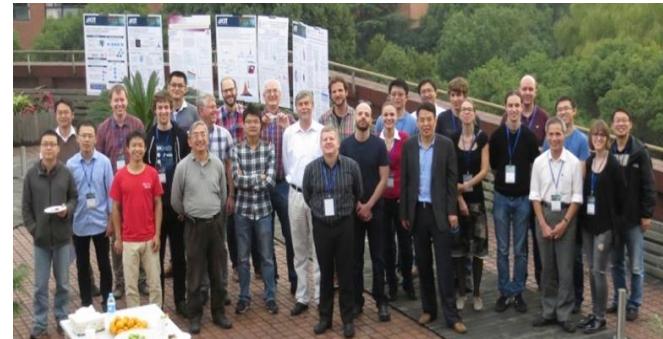
Innovation

Sustainability of Strategic Partnerships



- Kick-off Meeting May
- Partners' Fair May
- Match-making activities
- Close and steady contact with professors
- Close Cooperation with KIT PR Department
 - regular newsletters, reports in KIT publications and on KIT website
- Regular Milestone Workshops
- Joint alumni seminars
- Joint research workshops
- Joint conferences
- Joint infrastructures

Sustainability of Strategic Partnerships



***The best way to cope with the challenges
of the future is to shape it actively and
jointly.***

***„If you want to go fast, go alone. If you want to
go far, go together.“***

[Africa]



Thank you very much for your attention! 非常感谢！