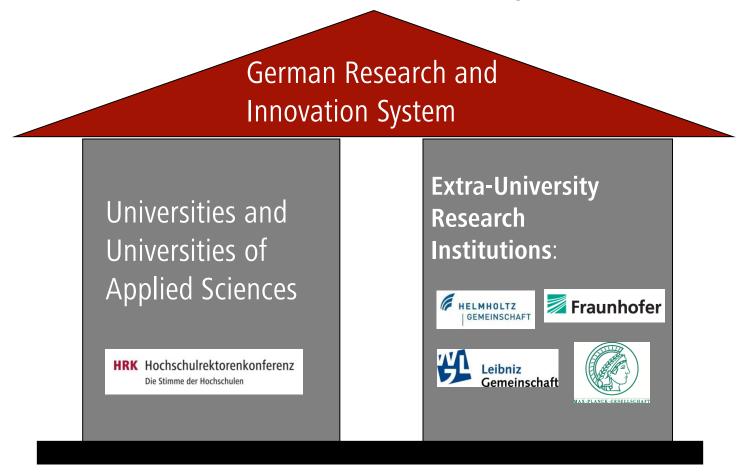


## The German Research and Innovation System

# University Research and Extra-University Research as the Pillars of the German Research System



#### The German Higher Education System

## 393 Universities in Germany



110 Universities

226 Universities of Applied Sciences

57 Colleges of Art and Music





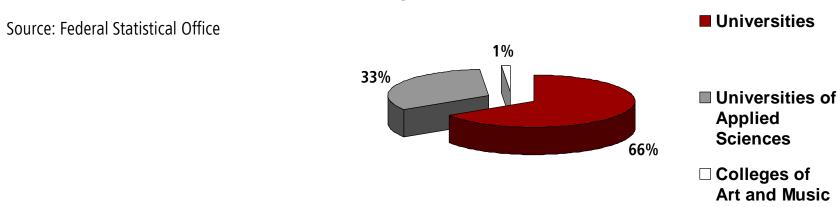
## The German Higher Education System

#### **Students and Staff**

2.5 milion students

thereof 490,000 new university entrants (= 54.7% of first-year students among the same age population), thereof 252,000 international students (= 11,3 % of student population)

- 27,000 completed doctorates
- 619,000 academic staff in total, thereof 337,000 academic, research and artistic staff (including 43,000 full professors)

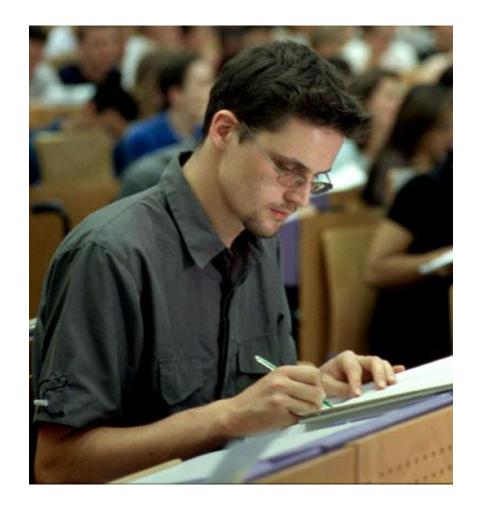


#### **The German Rectors' Conference**

## **Member Institutions**

The **German Rectors' Conference** is the voluntary association of state and state-recognized universities and other higher education institutions in Germany.

The HRK currently has **268** member institutions which account for 96 per cent of matriculated students in Germany.



#### The German Rectors' Conference

#### **Mission**

The HRK is the political and public **voice of the universities** and provides a forum for the process of forming joint policies and practices.

- Agenda setting and advocacy at national and international level
- Service provision for member institutions



## The German Higher Education and Research System

## **Government Expenditure on Education and R&D**

 Expenditure on higher education ("tertiary sector" acc. to OECD)

**1.3** % of GDP (2009)

in comparison: 1.6 % OECD average

Expenditure on research and development

**2.82** % of GDP (2009)

in comparison: 2.4 % OECD weighted

average



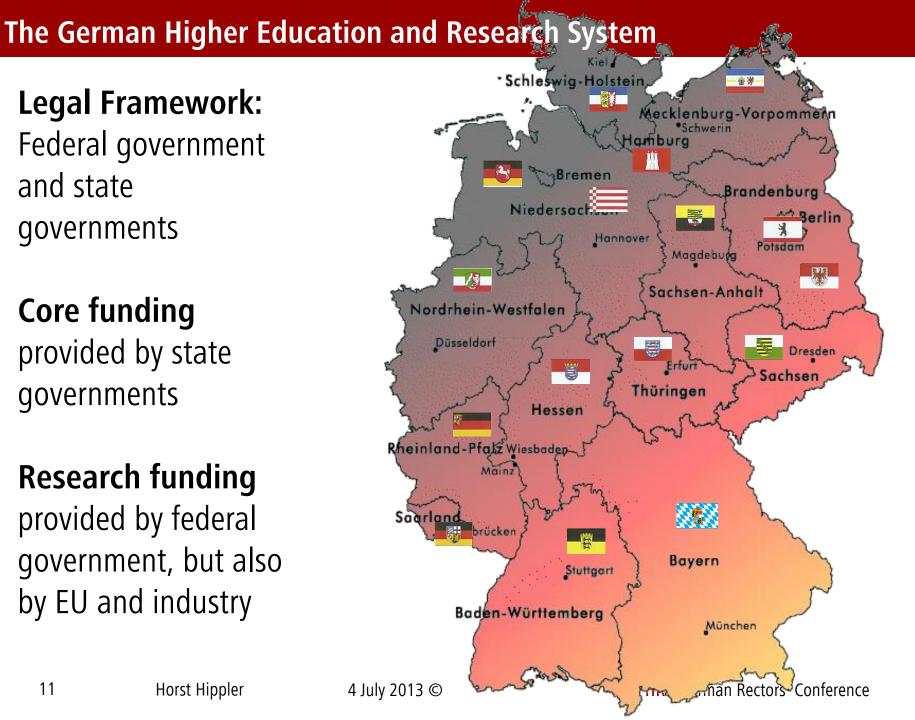
Source: OECD, Education at a Glance and Main Science and Technology Indicators

## **Legal Framework:**

Federal government and state governments

**Core funding** provided by state governments

Research funding provided by federal government, but also by EU and industry



## The German Higher Education and Research System

## **Challenges**

- Increasing demand for higher education: With the Higher Education Pact 2020 Federal and state governments are investing additional funds in the expansion of study opportunities. However, according to HRK estimate the funds will not be sufficient.
- Insufficient core funding: Core funding has in real terms hardly increased since the 1990s, third-party funding has more than doubled. Third-party funds cannot compensate for lack in core funding
- HRK calls for a change to the Basic Law allowing the Federal Government to extend basic financing for universities directly and on a long-term basis as some federal states are unable to meet their obligations.

## The German Research and Innovation System

# Universities as the Core of the Research and Innovation System

- Universities are at the heart of our research systems, supporting excellence in individuals and in structures.
- Universities in Germany spend more than € 12.7 billion yearly on R&D, 1.4 billion of which are from industry.



## The German Higher Education and Research System

## **University Profiles are Changing**

There is increasing pressure on German universities

- to specify their mission and sharpen their profile as result of competition for "brains" and funds
  - → horizontal diversity
- to enhance their academic performance and reputation as a result of performancebased funding, rankings, etc.
  - → vertical diversity





## **Teaching and Learning**

# **Ongoing Reform Process in Teaching and Learning**

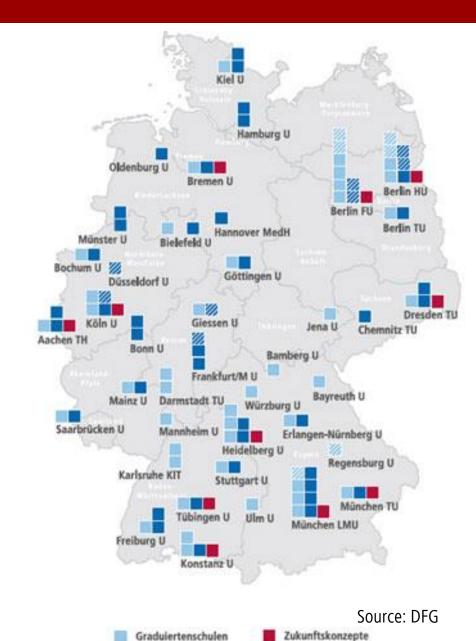
- Debate about the quality of teaching, often linked to debate about the Bologna reform
- Governmental funding programme "Quality Pact for Teaching" (based on HRK's recommendations)
- Recently, focus on teacher education
- Discussion on the future of "Bildung" and personality development





## The Excellence Initiative

- Aims to promote top-level research at German universities
- 44 participating universities
- Roughly € 4.6 billion (2006 - 2017)
- Three lines of funding:
  - Graduate schools to promote young researchers
  - Excellence clusters to promote world-class research
  - Plans for advancing top-level university research



Exzellenzcluster

Ko-Sprecherschaften

## **HRK Research Map**

- 329 key research priorities of German universities in a standardised format as an interactive database
- Universities inform a broad international audience about their research priorities in laymen's terms
- Up to eight research priorities per university (with at least 25 professorships)
- Research map for universities of applied sciences to follow



www.researchmap.de

#### **Good Scientific Practice at Universities**

- Recommendation of the HRK General Meeting in May 2013
- Emphasizing the responsibility of universities whilst also considering the needs and traditions of academic subjects
- Core elements:
  - Establishment of an Ombudsman system at universities
  - Assuring quality in promoting early career researchers
  - fair handling of intellectual property and scientific data
  - performance evaluations and the quality of assessments

## **Towards a European Research Area**

Created in 2009 as consequence of the Lisbon Treaty

#### Goal:

- A European "internal market" for research, where researchers, technology and knowledge can freely circulate
- Enhanced research cooperation with other world regions
- Enhanced cooperation between universities and industry

#### Rationale:

"Partnership approach": growing integration of national research policies (national and EU level)

→ Horizon 2020 (2014-2020)

## **Future Development of the Research System**

- Recommendations of German Science Council exp. for July 2013
- HRK demands:
  - Enhanced cooperation between federal and state
    governments (currently prohibited by law)
  - Follow-up financing for the excellence initiative (lines "graduate schools" and "excellence clusters" only)
  - Full costing for third-party research funding
  - Step-up of the higher education pact 2020
  - Development of funding and organisational mechanisms that
    balance the different actors within the system



#### The Internationalisation of German Universities

# **Increasing student mobility**

- Germany has become a "global player" in transnational education.
- The number of international students has risen to 252,000 in 2011 (11.3% of all students). The largest cohorts come from China, the Russian Federation, Bulgaria, Poland and Austria.
- At the same time, the number of mobile German students has risen to 115,000 in 2009. The most popular destinations are Austria, the Netherlands, the UK, Switzerland, the US, France and China.

#### The Internationalisation of German Universities

# Increasingly strategic approach

- The German universities perceive of themselves as transnational actors within a developing world higher education system.
- They maintain 20,000 partnerships with universities worldwide. Currently 295 cooperative linkages exist with universities in South Korea.
- Most German universities have developed or are currently in the process of formulating an institutional internationalisation strategy.
- Political support for internationalisation is high, especially at the federal level (policy support and financial incentives).

# HRK

감사합니다 Vielen Dank!

