

# HRK

Research in  
Germany



Land of Ideas

## International Research Collaboration

KCUE – HRK Higher Education Policy Seminar 2006

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## Topics

- Research Funding in Germany
- A Diversifying Research Landscape
- The European Dimension
- International Collaboration in Research

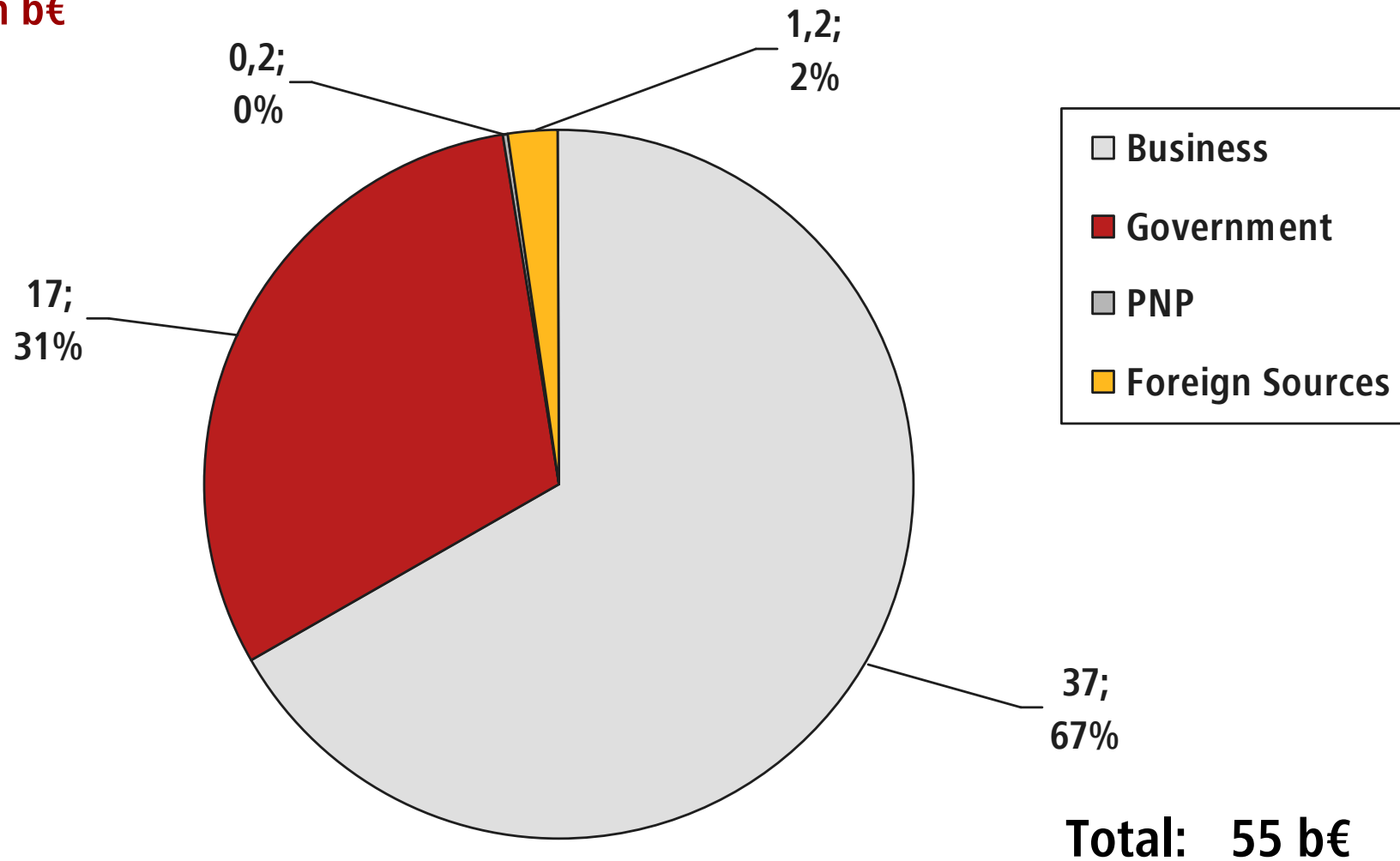
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## Research Funding in Germany

# Research Funding in Germany

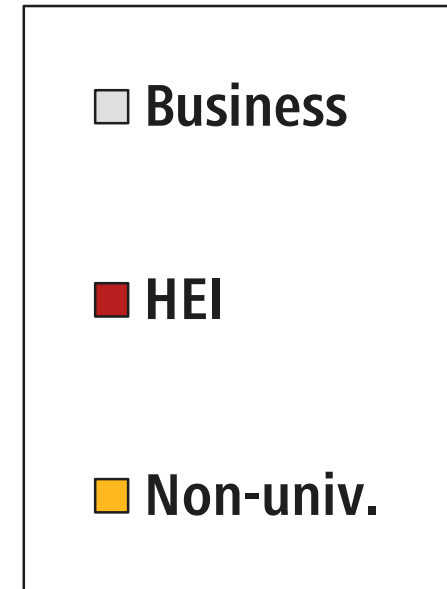
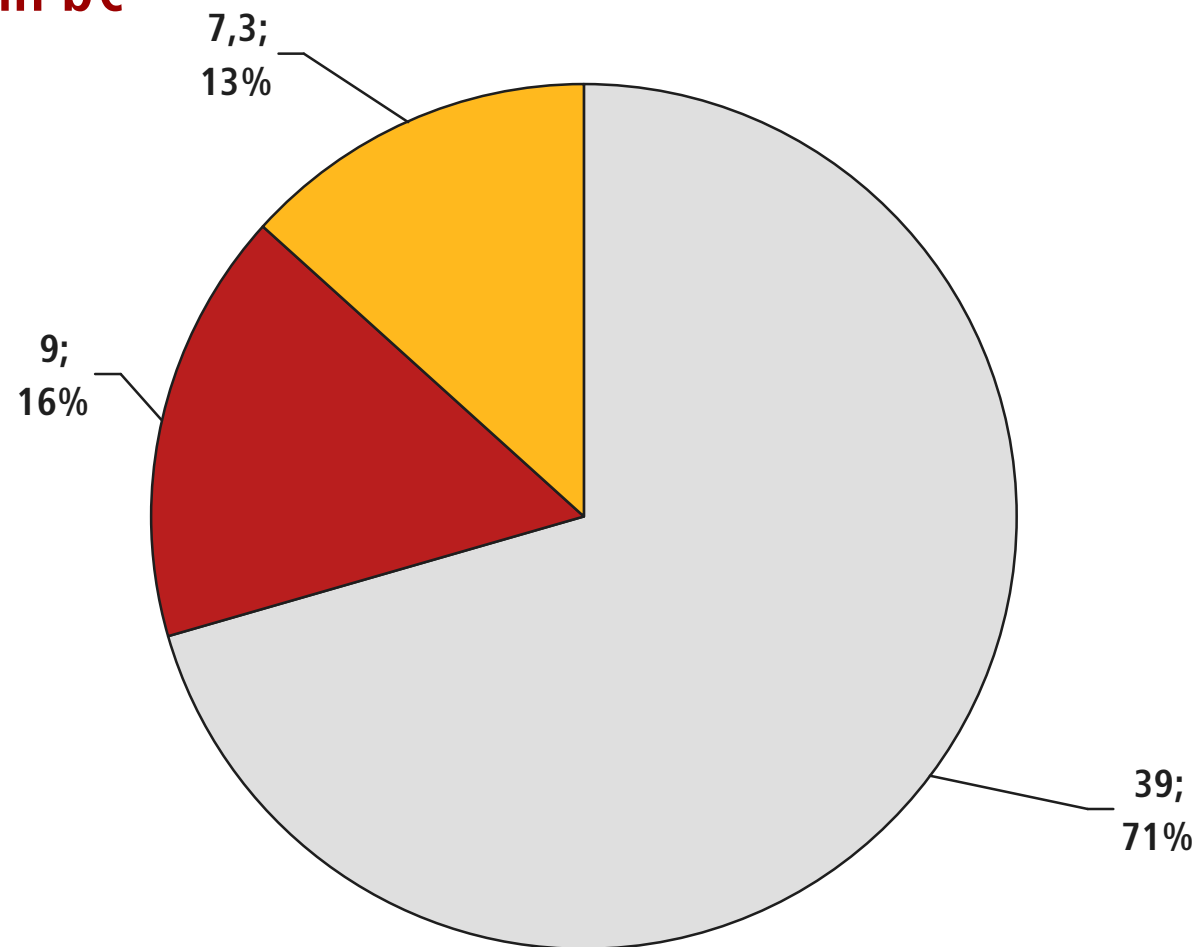
## Gross Domestic Expenditure on R&D in 2004

in b€



# Research Funding in Germany

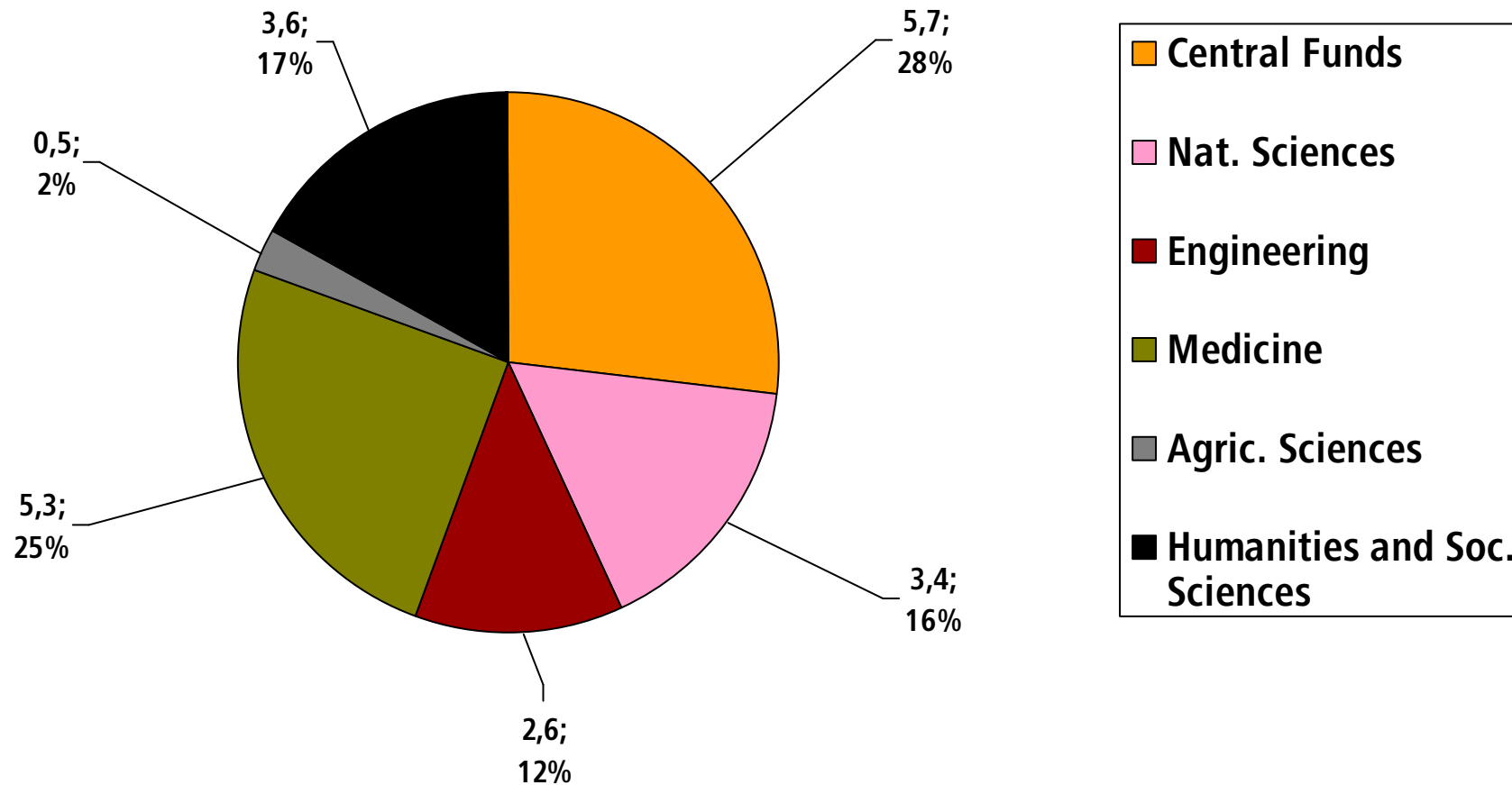
## R&D by Performing Sectors in 2004 in b€



**Total: 55 b€**

# Research Funding in Germany

## HEI Expenditure for Research & Study 2003 21 b€



# Research Funding in Germany

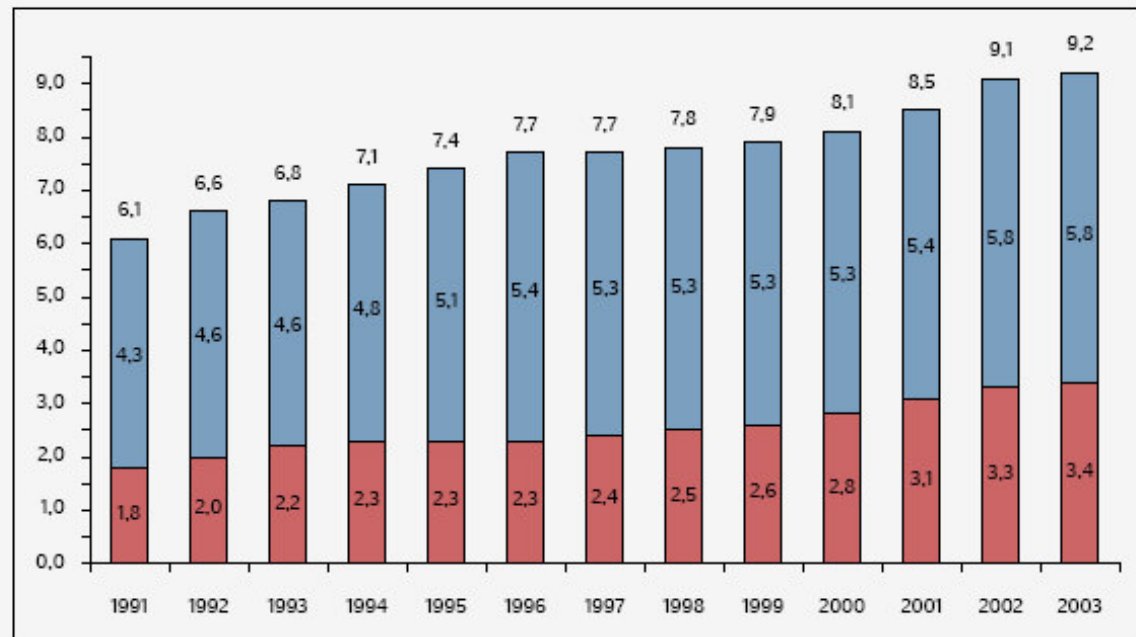
## HEI Expenditure on Research and Development Research (in b€)

Total expenditure  
€ 9b in 2003

incl. € 3.4b third-  
party funding

Abb. 20b.1 Forschungs- und Entwicklungsausgaben der Hochschulen

- Mrd. € -



FuE-Ausgaben ohne Drittmittel      Drittmittel

Quelle: Statistisches Bundesamt, Bundesministerium für Bildung und Forschung

Fußnoten s. Tabelle 20b

[Inhaltsverzeichnis](#)  
[Tabelle 20b](#)

## Current Developments in Research Funding

- Increasing shift from basic institutional funding to project funding
- Third-party funds made up **39%** of universities' research budgets (**3.5 b€**) and **16.9%** of the overall university budgets in 2004
- Medical sciences and engineering are leading
- Influence on state funding: increasingly also distributed on the basis of performance indicators



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## A Diversifying Research Landscape

# A Diversifying Higher Education Landscape

- Increasing competition between higher education institutions in Germany → Universities aim to define a distinct profile in research and teaching
- Discussion on the mission of higher education in general and of different types of higher education institutions in particular
- Introduction of science-based rankings and quality assurance procedures

## DFG Research Ranking

- Measuring the strength of universities in the field of DFG-related research projects (i.e. 'basic research').

Fourth evaluation cycle (2006):

- Strong correlation between the volume of DFG approvals and the total of third-party funding at a university
- The „top 20“ universities account for approx. 56% of the total DFG volume of funding approvals for universities

## The Excellence Initiative

- Launched in June 2005
- Total of 1.9 b€ in additional funding between 2006 and 2011
- Aims to promote top-level research and to improve the quality of German universities and research institutions in general
- Three lines of funding:
  - Graduate schools to promote young researchers
  - Excellence clusters to promote world-class research
  - Plans for advancing top-level university research

# The Excellence Initiative

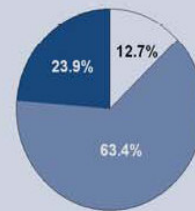
Decision on first round of funding announced on 13 October 2006:

22 universities will be funded with € 1.7 million per year

- 18 graduate schools
- 17 excellence clusters
- 3 future concepts

## 2006 Excellence Initiative Funding Decisions

Awards by funding line

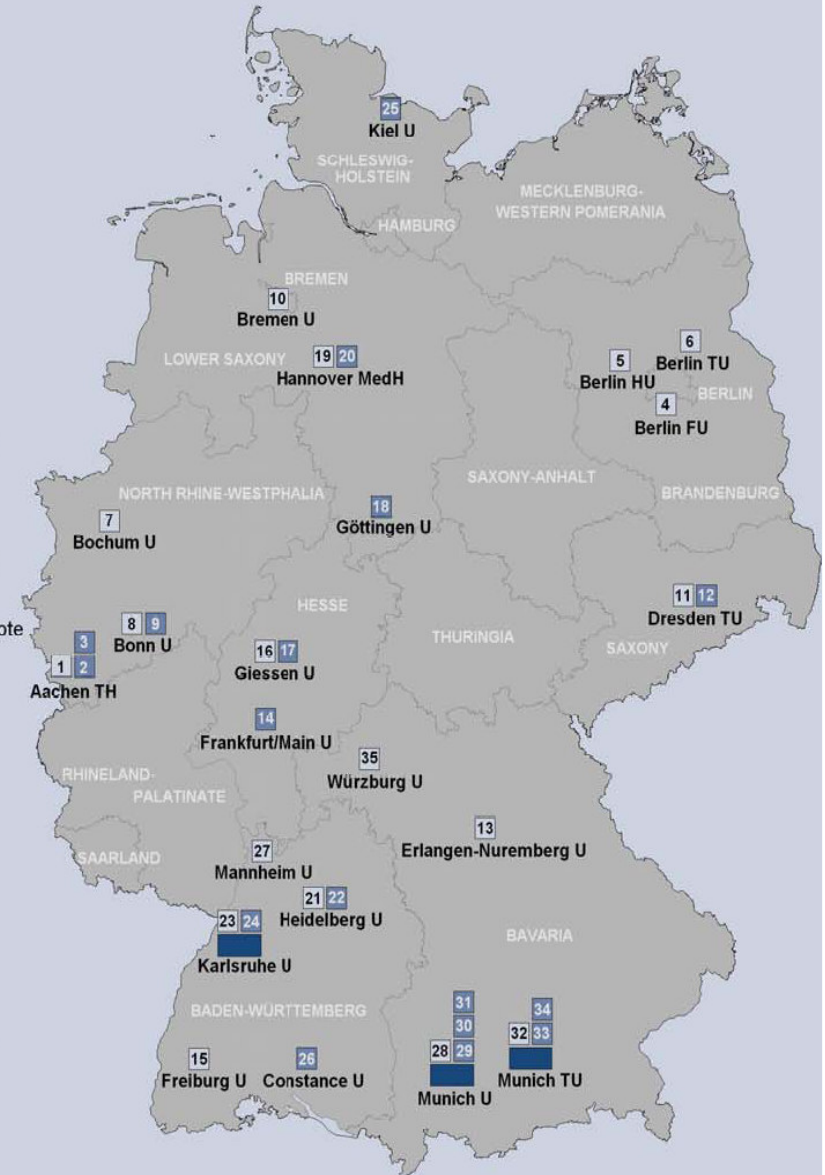


Based on:  
€ 873.4 million  
over five years

- ◁ Graduate schools to promote young researchers
- ▤ Clusters of excellence to promote world-class research
- ▴ Institutional strategies to promote top-level university research



FU = Free University  
HU = Humboldt University  
TH/TU = University of Technology  
U = University  
MedH = Medical School



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## The European Dimension

## The Lisbon Goals

Challenges of competition, globalization, and the knowledge-driven economy

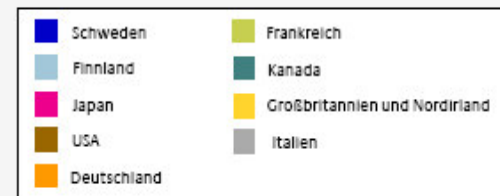
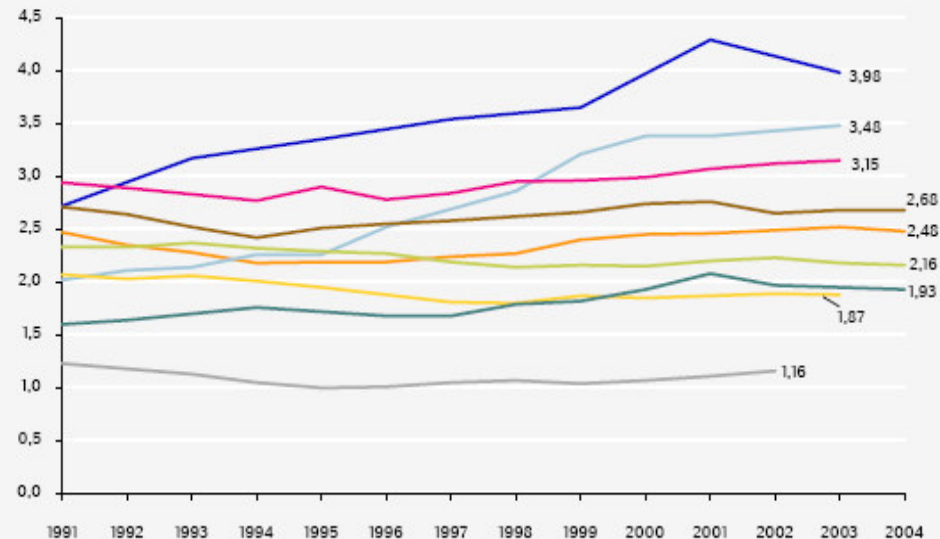
→ Strategic target for Europe “to become the most competitive and dynamic knowledge-based economy in the world” by 2010

# Where do we stand?

International  
Comparison of R&D  
Spending

(Gross Expenditure  
on R&D (GERD) as a  
% of GDP)

Abb. 25.1 Anteil der Bruttoinlandsausgaben für Forschung und Entwicklung (BAFE) am Bruttoinlandsprodukt (BIP) im Internationalen Vergleich 1991 bis 2004



Quelle: OECD (Main Science and Technology Indicators 2005[2]) und Berechnungen des Bundesministeriums für Bildung und Forschung

Fußnoten s. Tabelle 25  
Daten für Deutschland aktualisiert

[Inhaltsverzeichnis](#)

[Tabelle 25](#)



## EU Initiatives and the Bologna Process

- European Mobility Schemes (Socrates/Erasmus, Erasmus Mundus)
- Creation of a European Higher Education Area (EHEA) and a European Research Area (ERA)
- Establishment of the European Research Council
- 6th and 7th EU Framework Programme
- Discussion on European Institute of Technology (EIT) as a “virtual center of excellence”

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## International Collaboration in Research

## Trend towards Structured Forms of Cooperation

- Increasing mobility of students and researchers
- Shift from traditional to more structured forms of international collaboration
- Increase in the establishment of offshore campuses and bi- or multinational higher education institutions
- Increasing international collaboration in research and technology transfer

## New Forms of Doctoral Training at German Universities

- From the teacher/apprentice model towards graduate schools
- Various models:
  - numerous Graduate Schools at individual universities
  - 228 DFG Research Training Groups
  - 43 International Max Planck Research Schools
  - 38 Helmholtz – University Young Investigators Groups



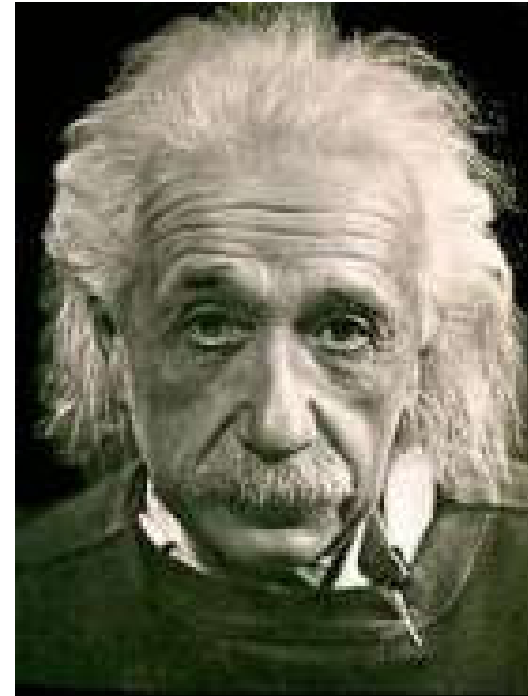
## Promoting International Research Collaboration

- **Promoting** “Research in Germany”
- Support the international dimension of research collaboration through **strategic partnerships** and **international research projects**
- Support lecturer and **researcher mobility** (Ph.D., Post-Docs, Senior Researchers)
- Increase number of **Graduate Schools** with European and **worldwide partners**
- Increase number of **binational PhD programmes**: Cotutelle as a successful model of cooperation

## Scientific Progress through International Collaboration

**„If we knew what it was we were doing, it would not be called research, would it? „**

Albert Einstein



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**Vielen Dank für Ihre  
Aufmerksamkeit!**

**Kamsa Hamnida!**