



Recent developments in the German Universities of Applied Science

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Teheran, I.R. Iran, July 2017

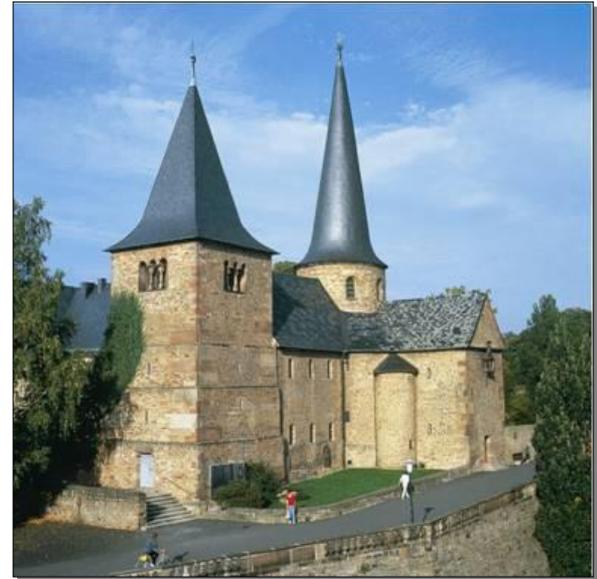
City of Fulda: location in Europe and Germany



Location in the State of Hessen



The city of Fulda



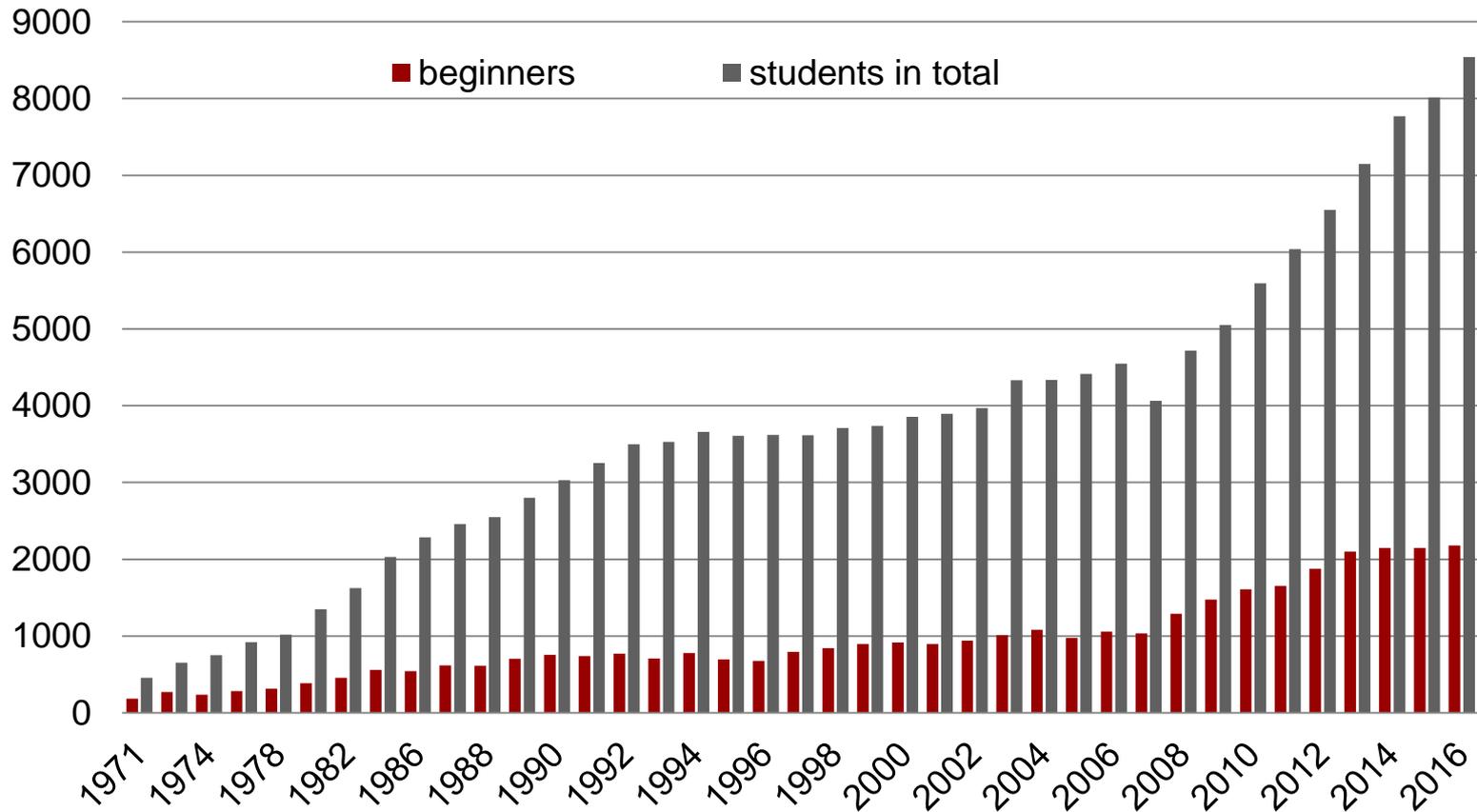
The city of Fulda



Surrounding region



A rapidly growing university



Fulda University of Applied Sciences

Three main research areas:

- Health, Nutrition, Food Technology
- Intercultural Aspects and Social Sustainability
- Computer Science and Engineering

Doctoral (PhD) programmes in:

- Public Health
- Social Work
- Social Sciences, Globalisation, Intercultural Communication, European Studies
- *Coming soon:* Computer Sciences, Logistics

The new campus



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Library



Library



Cafeteria



Green spaces



Recreation area



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Sports facilities



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Universities in Germany

• Total number of Universities	426
• Traditional Universities	106
• Universities of Applied Sciences (UAS)	216
• Art Colleges	52
• State owned universities	240
• Private universities	120
• Universities owned by churches	39

Source: Federal Statistical Office 2017, German Rector's Conference 2017

Development of Universities of Applied Sciences (UAS) in Germany

- **1960's / 1970's:**

- Priority objective of UAS foundation:
higher education for rising number of students, focus on practical application (particularly engineers)
- often specialization on specific disciplines (technology, economy, etc.)
- Focus on teaching

➔ since then continuous and very successful evolution

Development of Universities of Applied Sciences (UAS) in Germany

- **Today:**

- 216 UAS with almost **957.000** students (>1/3 of all students in Germany)
- Legal task: practice-oriented **education**, applied **research** as well as **transfer** of knowledge, ideas and technologies
(Third Mission)
- great importance to the surrounding **regions**
- motors of innovation, particularly for SME's
- assuring **educational equality**
- high **efficiency**, high **adaptability**

Source: German Council of Science and Humanities 2010 und 2016, Federal Statistical Office 2017

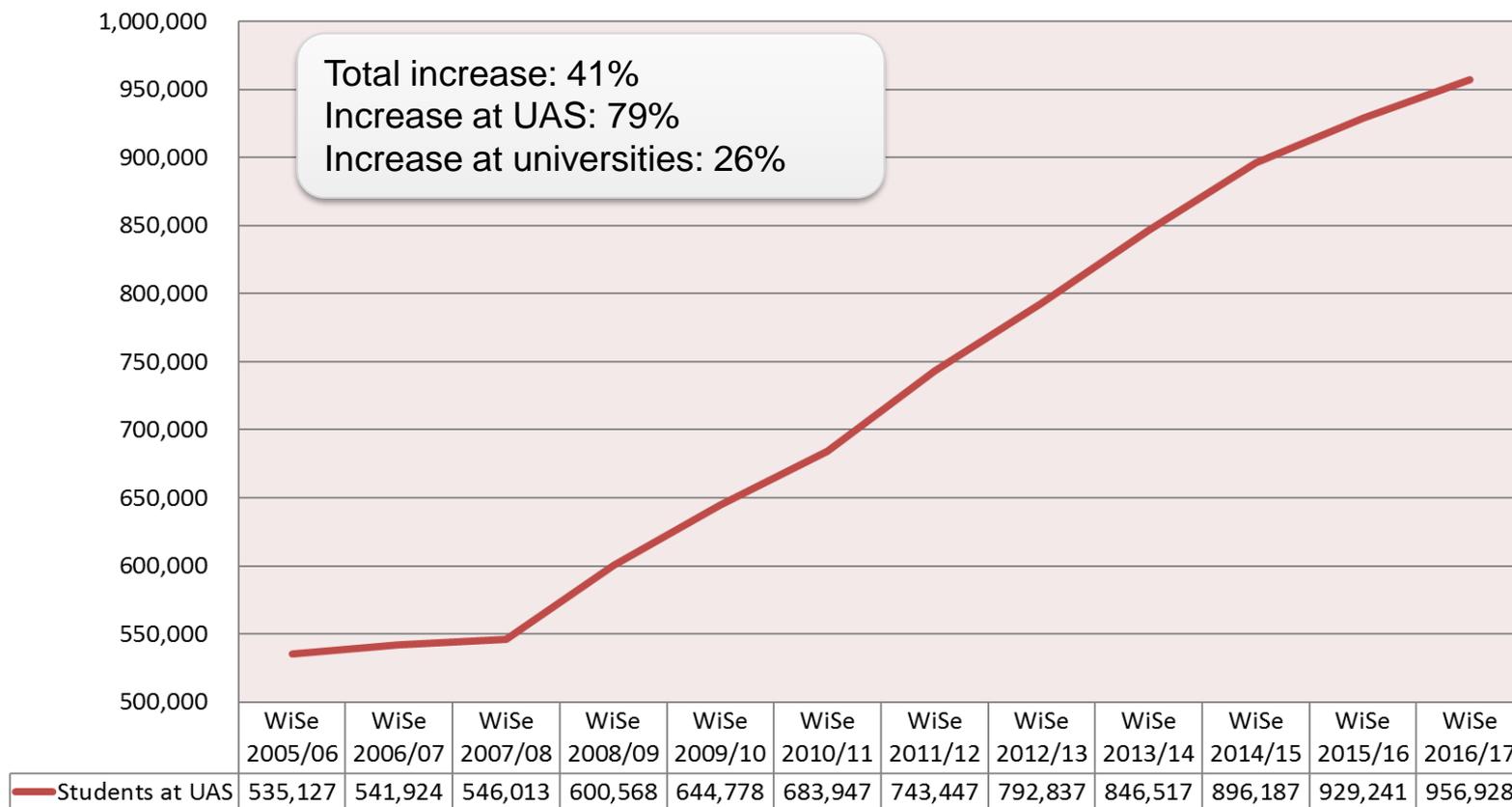
Universities of Applied Sciences (UAS) in Germany

Challenges of the future:

- I. Sustainable funding of teaching
- II. Basic funding of research
- III. Extension of research funding programmes
- IV. Recruitment of professors
- V. Doctoral (PhD) programmes

Challenge I: Sustainable funding of teaching

Trends in number of students at UAS in Germany

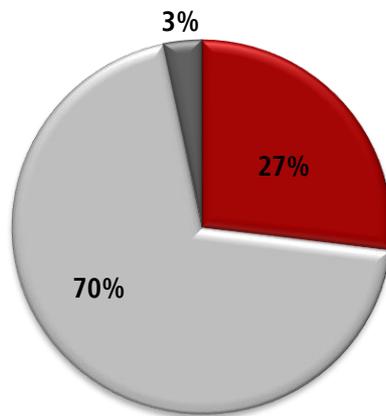


Source: Federal Statistical Office 2017

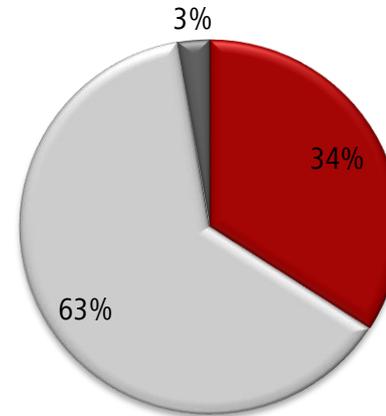
Challenge I: Sustainable funding of teaching

Trends in number of students

Winter semester 2005/06



Winter semester 2016/17



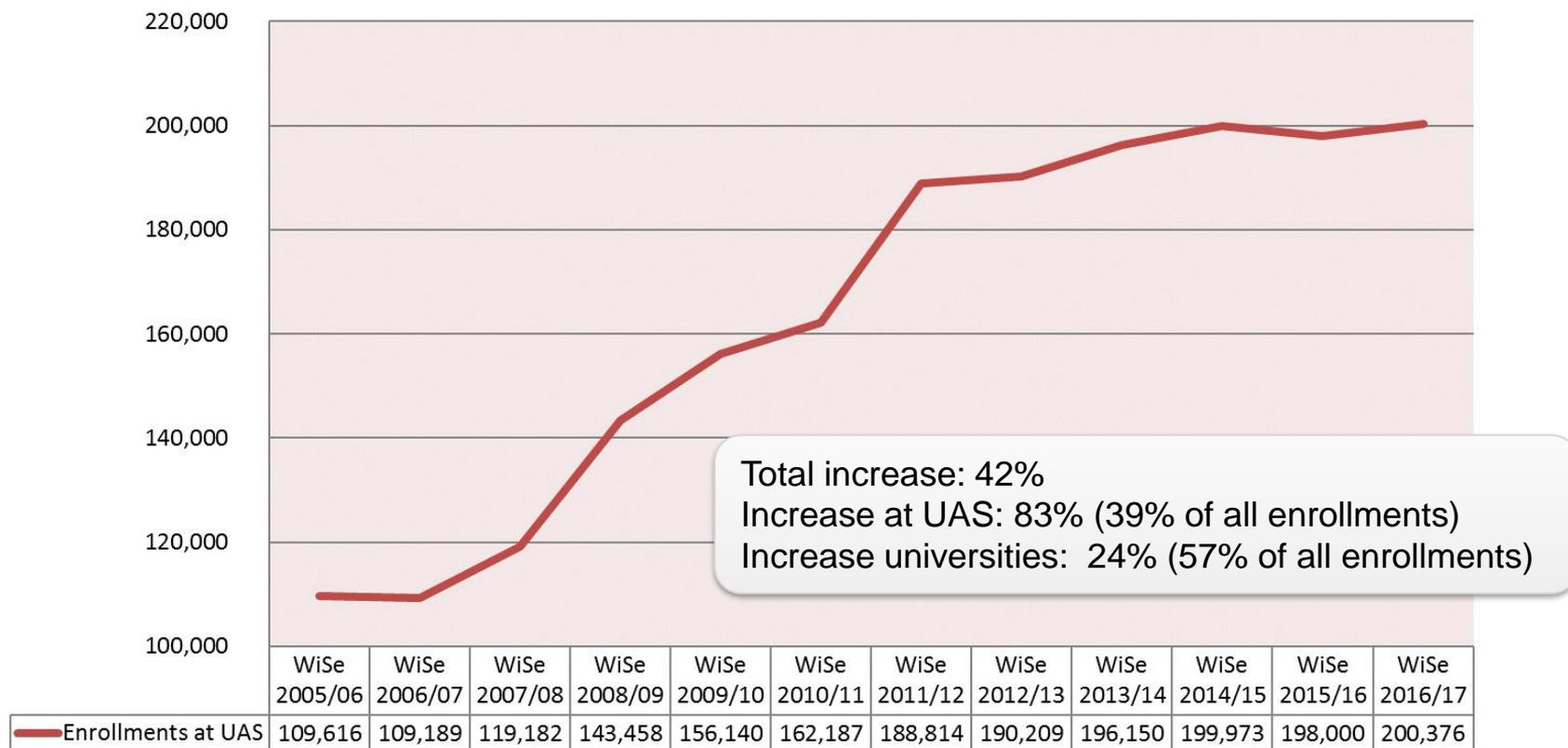
- UAS
- Universities
- Other

Source: Federal Statistical Office 2017



Challenge I: Sustainable funding of teaching

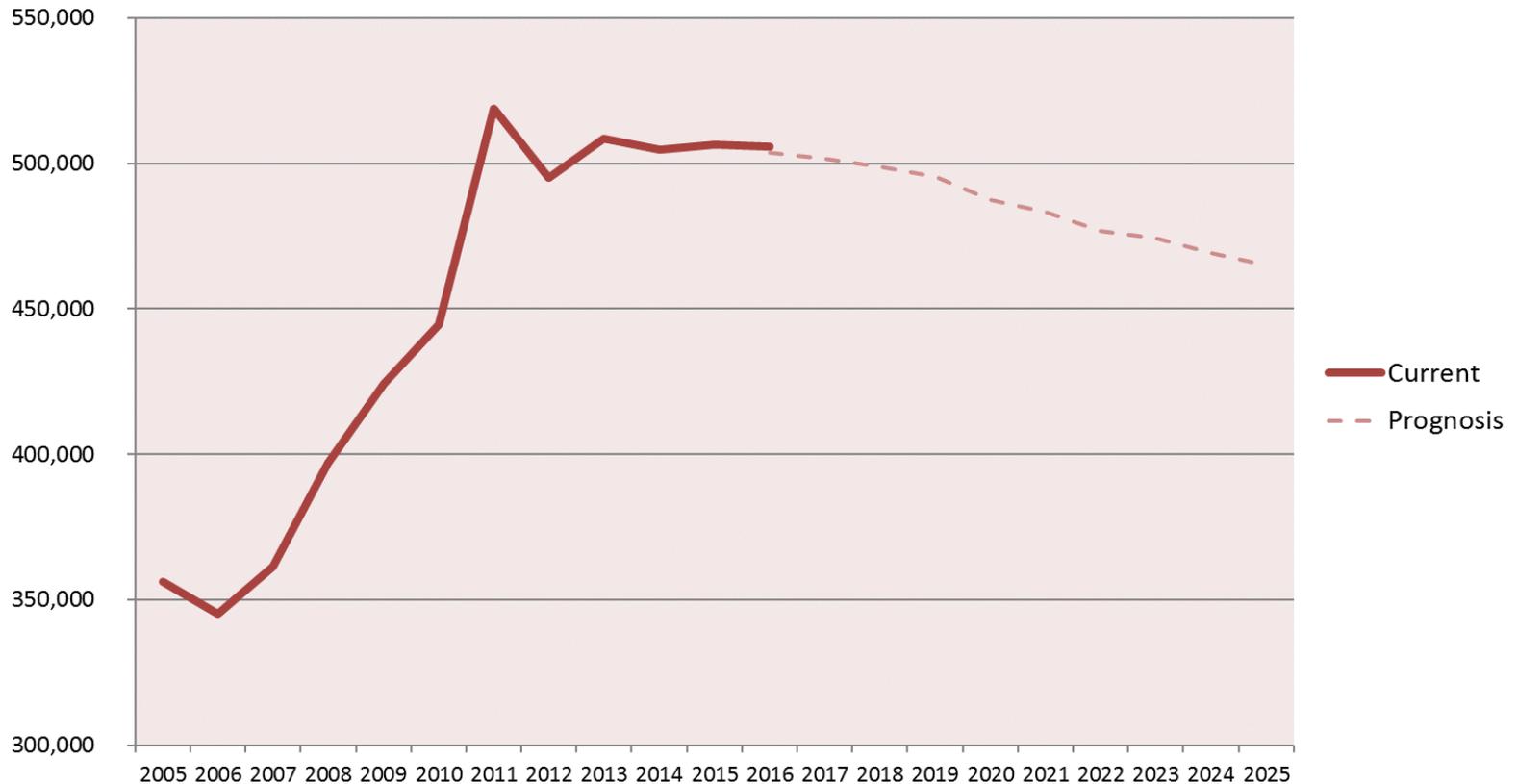
Student enrollment trends at UAS in Germany



Source: Federal Statistical Office 2017

Challenge I: Sustainable funding of teaching

Student enrolment: prognosis



Source: Federal Statistical Office 2017, Conference of the Ministers of Education and Cultural Affairs 2013



Challenge II: Basic funding of research

UAS = motors of innovation and networking

- Securing future and innovative strength
- Applied research in cooperation with SME's and stakeholders in health and social care
- Trendsetting programmes:
in **Engineering Sciences** about 68% and
in **Health Sciences** about 78% of all students at UAS

Source: Federal Statistical Office 2016

Challenge II: Basic funding of research

Initial situation:

No basic funding from states for

- Research (particularly scientific staff)
- Research buildings und large equipment

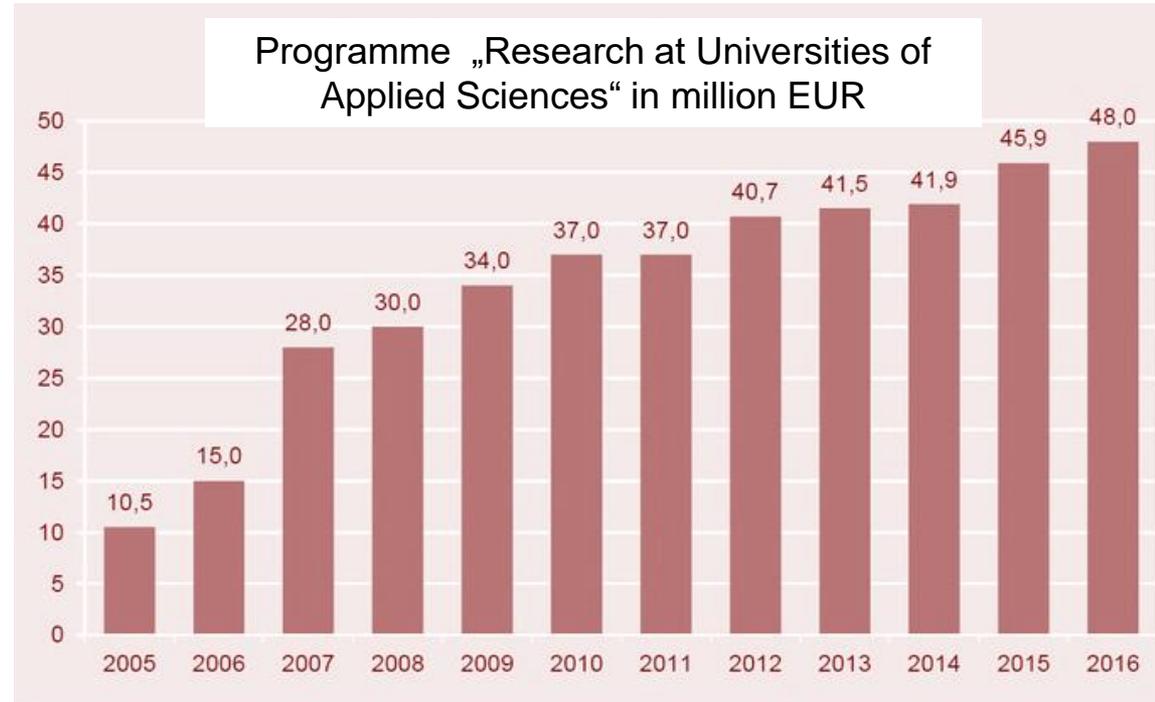
Essential:

- Adequate basic funding of research, specific to UAS
- Opening of federal funding for research at UAS (research buildings and large equipment)
- Flexible regulation of teaching loads

Challenge III: Research funding

**Funding of the Federal
Ministry of Education
and Research 2016:
EUR 48 million**

Particularly for
UAS-specific funding
programmes



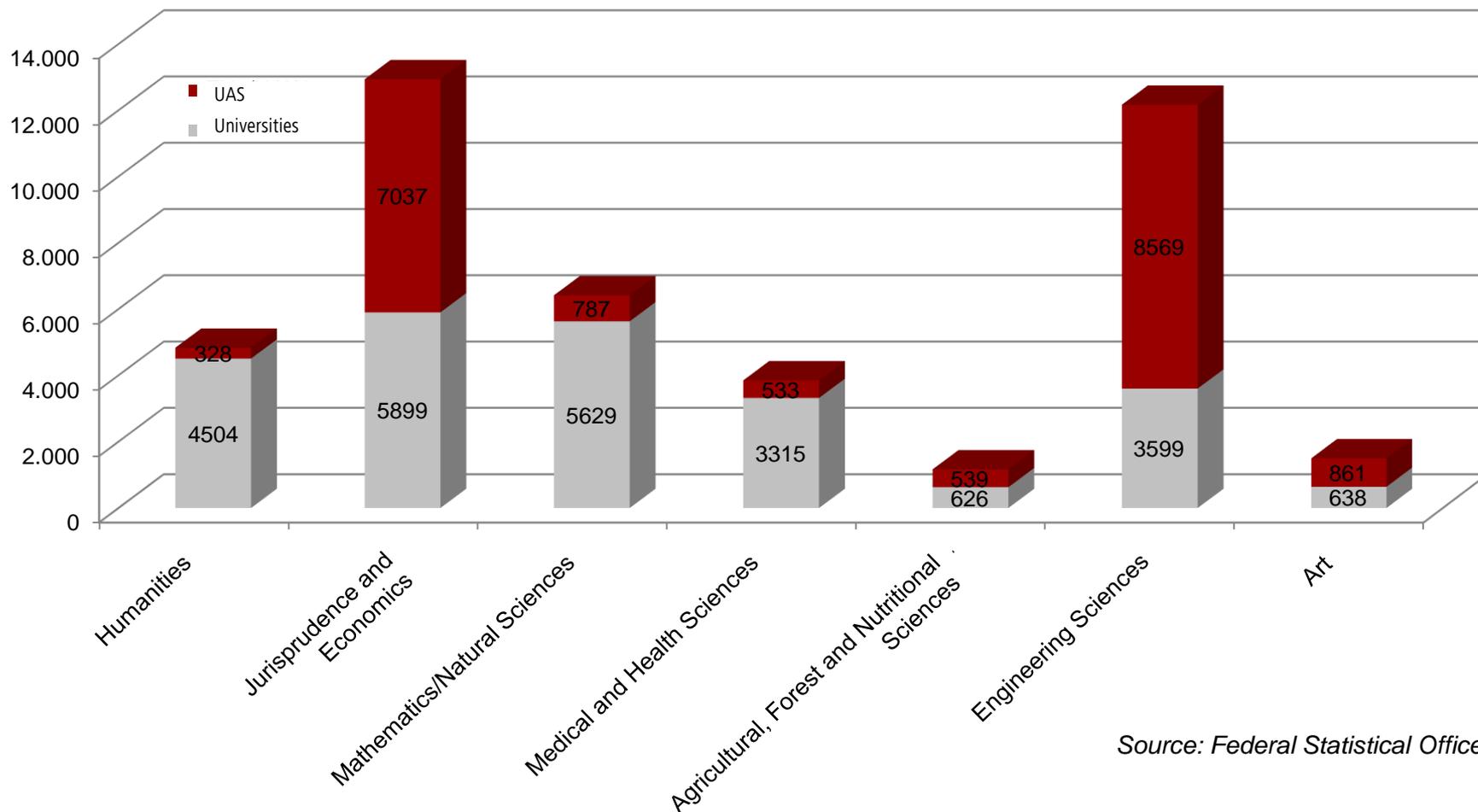
Source: Federal Ministry of Education and Research 2016

Challenge III: Research funding

	Programme	Sum p.a. (million EUR)	
Traditional Universities	Excellence strategy	533	
	Scientific	62.5	
	Innovative University	27.5	
	Federal programmes total	623	
	German Research Foundation	approx. 2,000	
	Total	approx. 2,600	approx. 3,3%
UAS	Research at UAS	48	
	Innovative University	27.5	
	Federal programmes total	75.5	
	German Research Foundation	approx. 10	
	Gesamt	approx. 86	

Source: Federal Ministry of Education and Research 2016, German Research Foundation 2016

Challenge IV: Recruitment of professors



Source: Federal Statistical Office 2015

Challenge IV: Recruitment of professors

Initial situation

high demand of professors

Reasons

- **accumulated needs** due to rising number of students
- until 2020, 20% of all **UAS positions as professors** have to be replaced

Consequences

Considerable recruiting difficulties (e.g. in Economic and Engineering Sciences)

Challenge IV: Recruitment of professors

UAS-specific problems

- no systematic career paths, insufficient awareness
- „**double qualification**“ required both in research as well as in practice/industry
- **Unattractiveness for professors** due to lack of staff and equipment
- Tendency to introduce **academic education** for certain professions (e.g. nursing) → not enough applicants who have obtained a PhD
- not enough applicants in **disciplines which are underrepresented at „traditional“ universities** (e.g. social work, nursing)
- significant **salary losses** (e.g. engineers)

Challenge IV: Recruitment of professors

Urgently required!

⇒ Sustainable programme of the federal government and the state governments to support recruitment of professors

negotiations are ongoing

Challenge V: Doctoral (PhD) programmes

Situation

- successful research requires excellent scientific staff/graduates
- main motivation for an engagement in research projects at universities is individual scientific qualification (doctoral education)

⇒ **legal frame works for UAS have to be improved**

⇒ **conflict between traditional universities and UAS**

Challenge V: Doctoral (PhD) programmes

Option 1: Cooperative PhD programmes

However:

- ✘ Insufficient capacities at traditional universities
- ✘ Sometimes limited willingness to cooperate
- ✘ Some disciplines not represented at universities

Option 2: Independent right to award doctoral degrees in areas of distinct research strength



**Fulda University of Applied Sciences:
first German UAS with independent right to
award doctoral degrees (2016)**

Thank you for your attention!



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