

# **Do enterprises need Universities or do Universities need enterprises?**

by Prof. Dr. Volkmar Brückner, Werl/Germany

# Do enterprises need Universities or do Universities need enterprises?

Outline:

- I. Education and Universities
- II. Enterprises
- III. Interaction between Enterprises and  
Universities

Based on data from Germany (2014-2016),  
Europe and other countries

# Enterprise <-> University

**John F. Kennedy:**

**“There is only one thing in the long run more expensive than education: no education.”**



**Wladimir I. Uljanov (Lenin):**  
**“Learn, learn and keep learn!”**

**Enterprises**

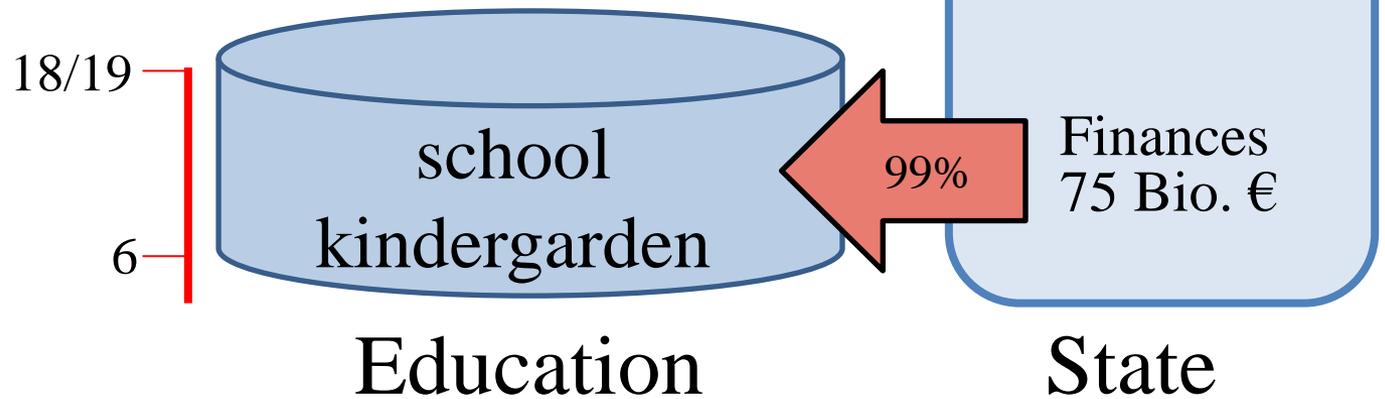
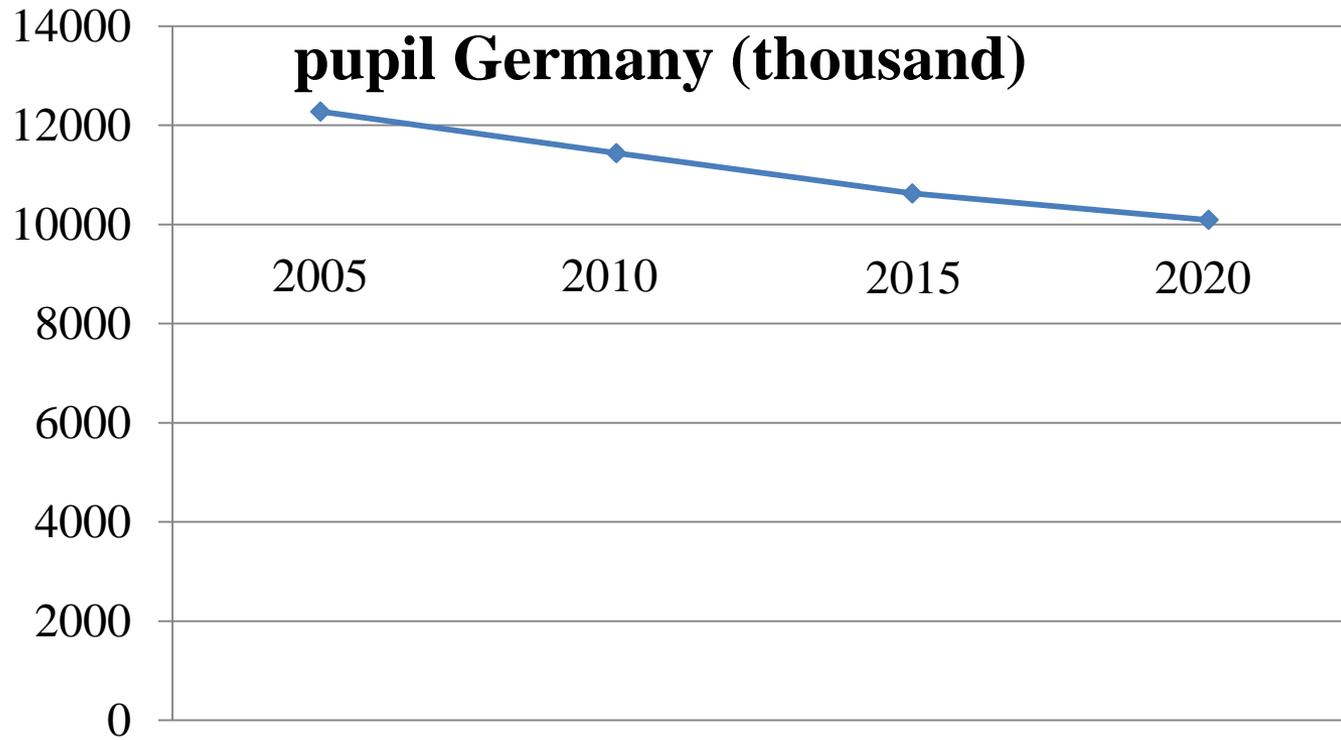
**Education**

**State**

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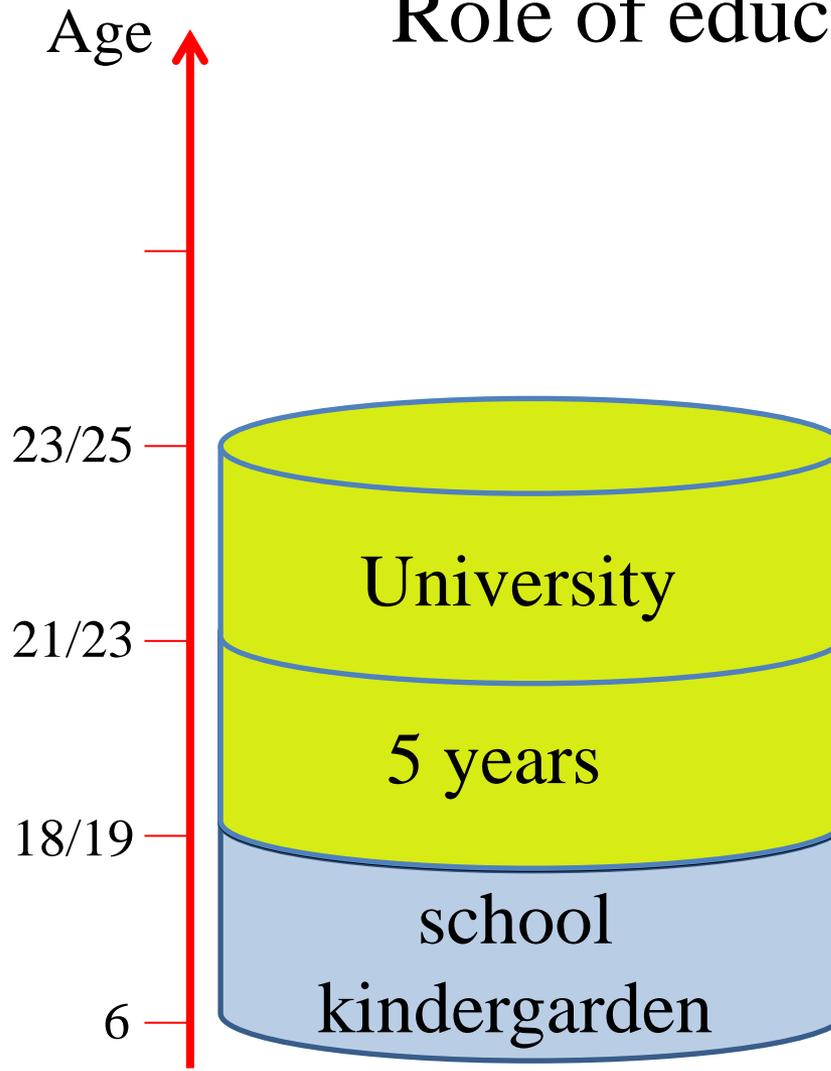
## **I. Education and Universities**

# Enterprise <-> University



# Enterprise <-> University

## Role of education



Enterprises

Education

State

## Humboldt's Model of autonomous Universities (>1809):

- enables students to become autonomous individuals

- enables students to become world citizens

- environment: academic freedom
- education in a broad sense
- not merely to provide professional skills through schooling along a fixed path
- build individual character by choosing their own way
- teaching should be guided by current research
- research independent from ideological, economic, political or religious influences

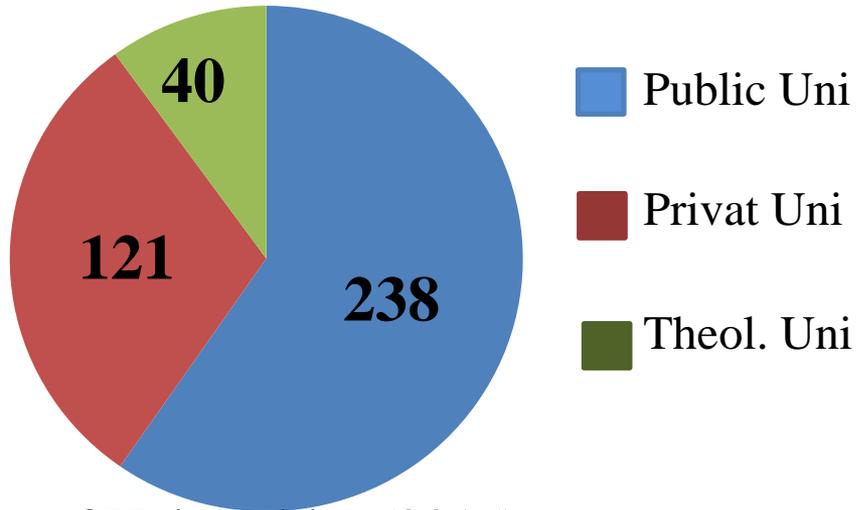
+ **ability to use knowledge for practice**

+ **personality development (soft skills)**

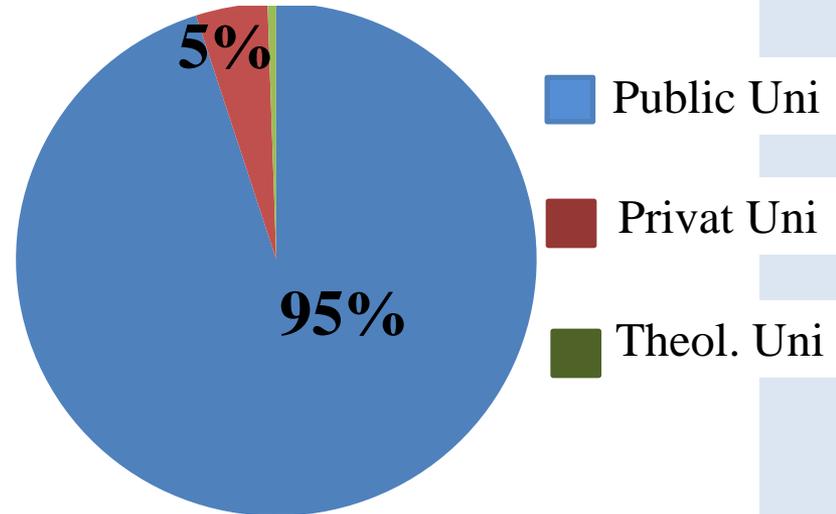
# Enterprise <-> University

## German University system:

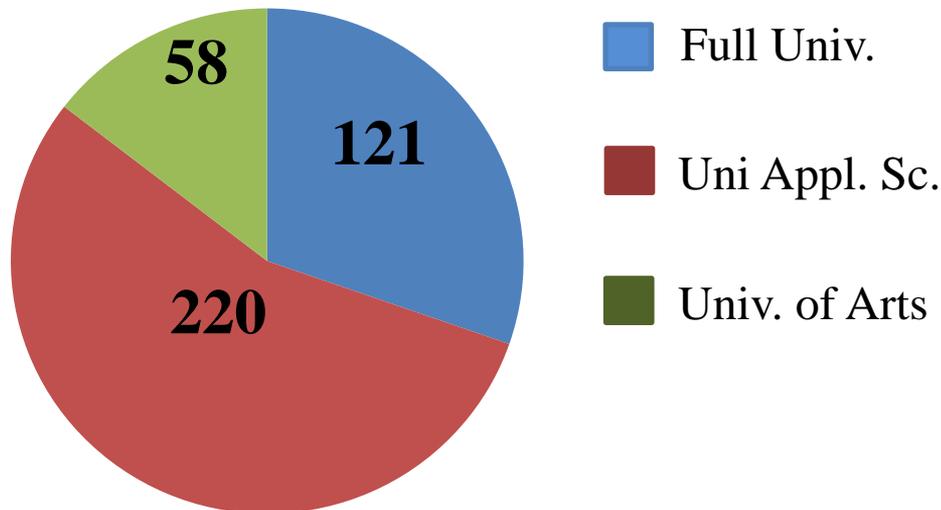
Carrier of 399 Universities (2015):



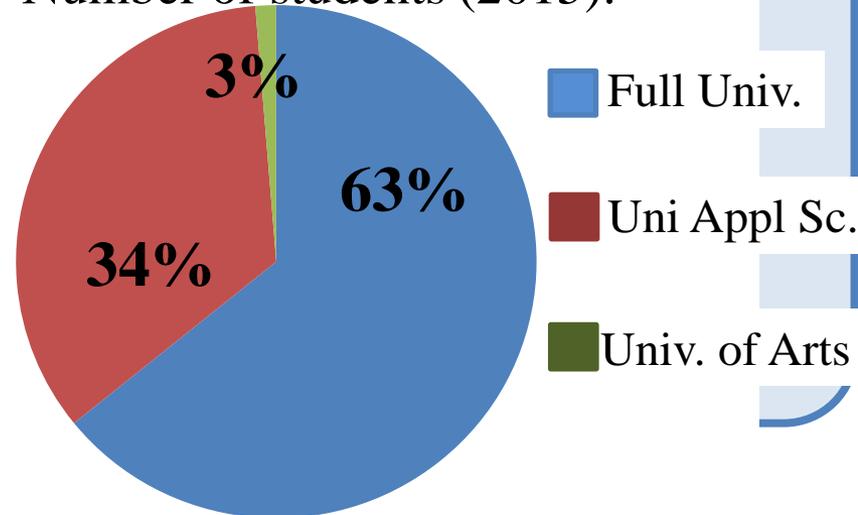
Number of students (2015):



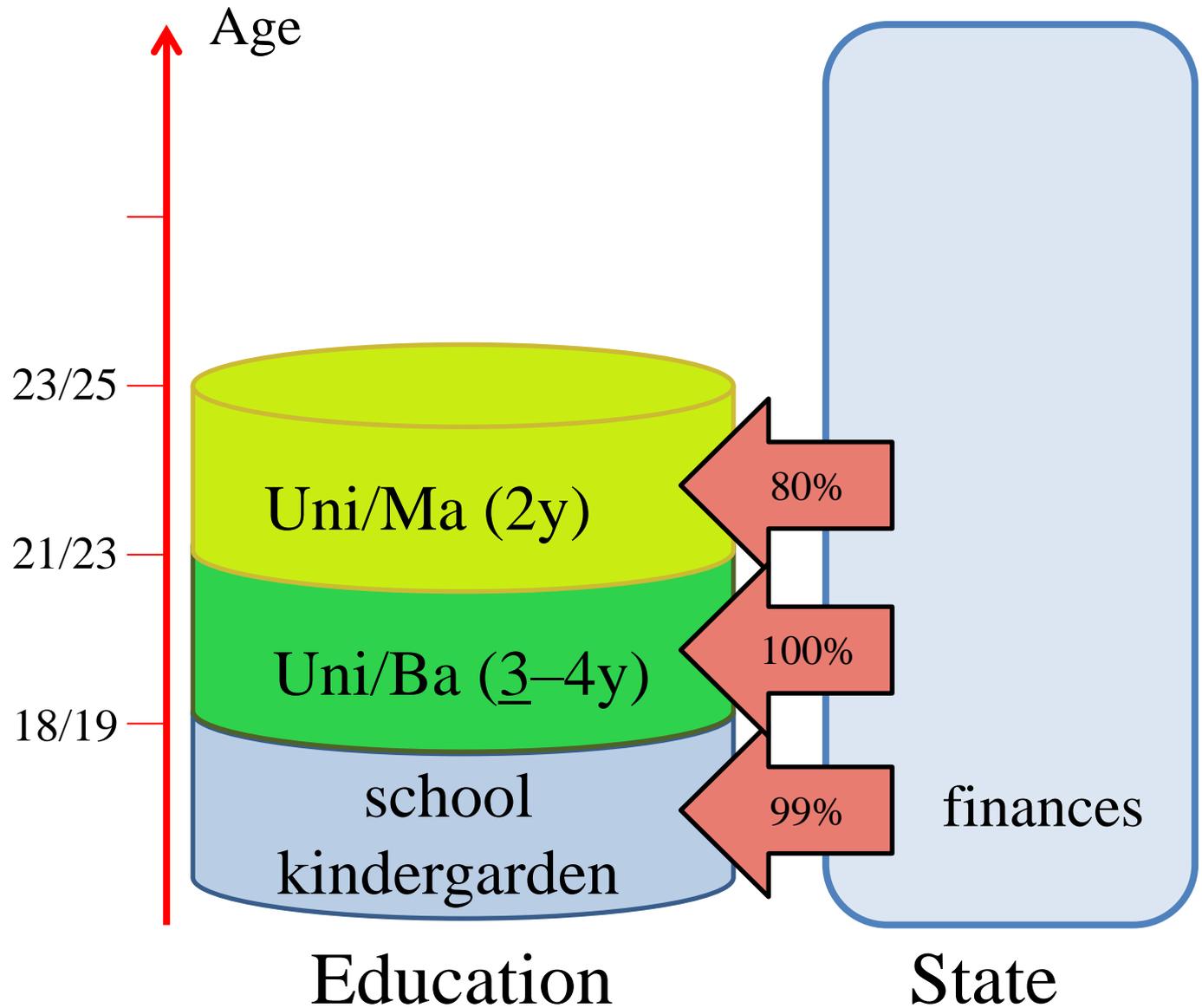
Type of Universities, (2015):



Number of students (2015):

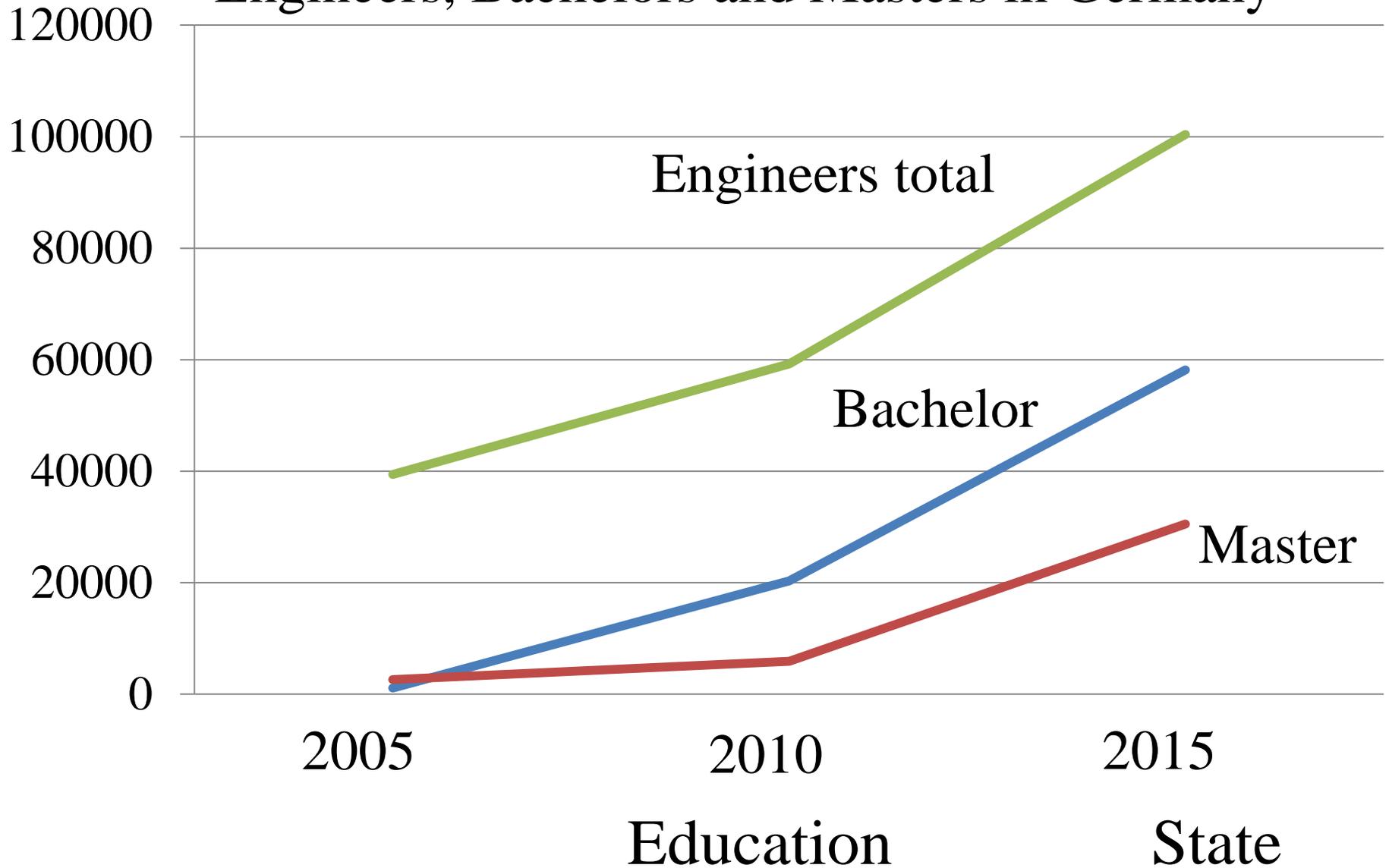


# Enterprise <-> University

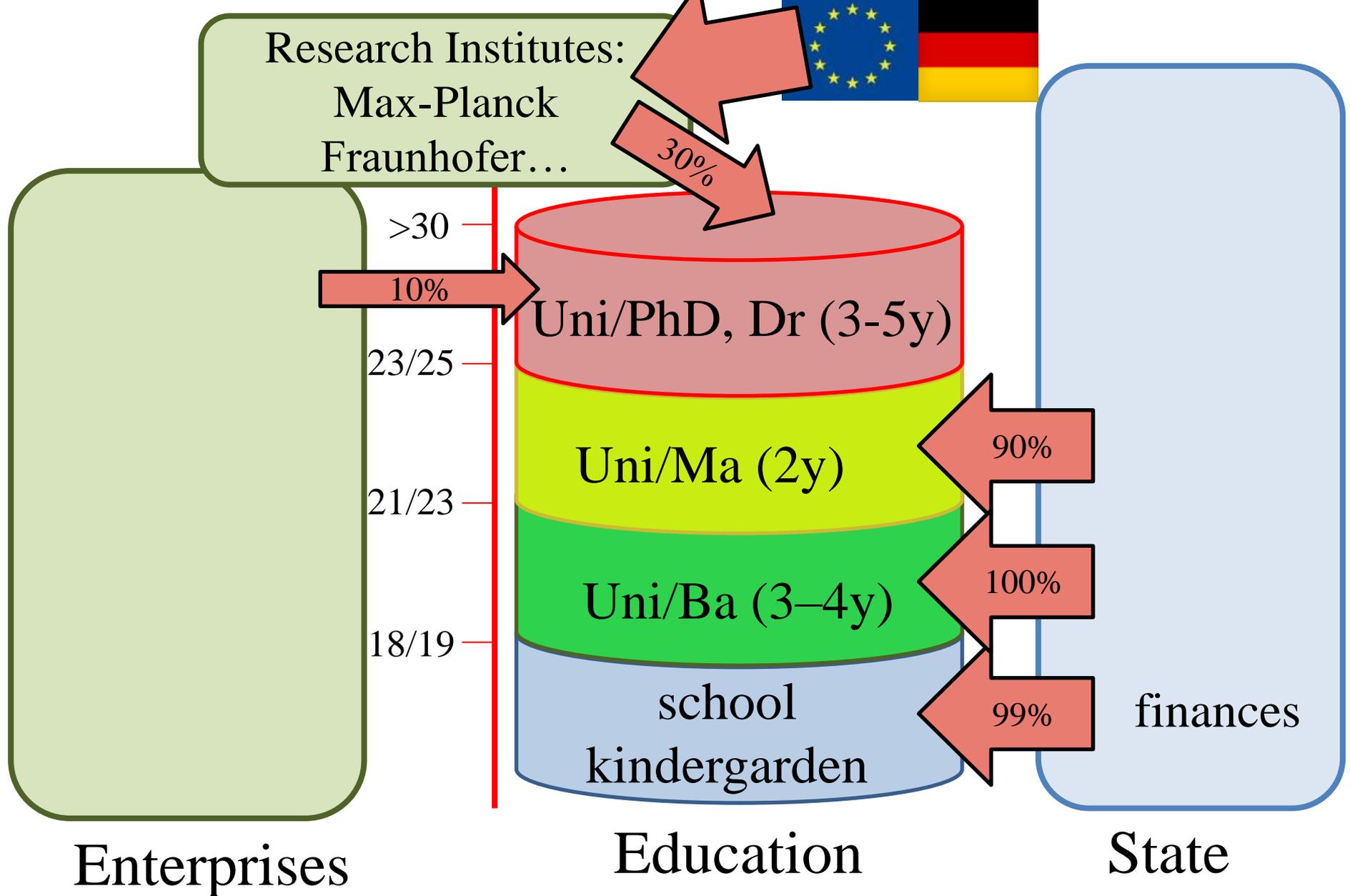


# Enterprise <-> University

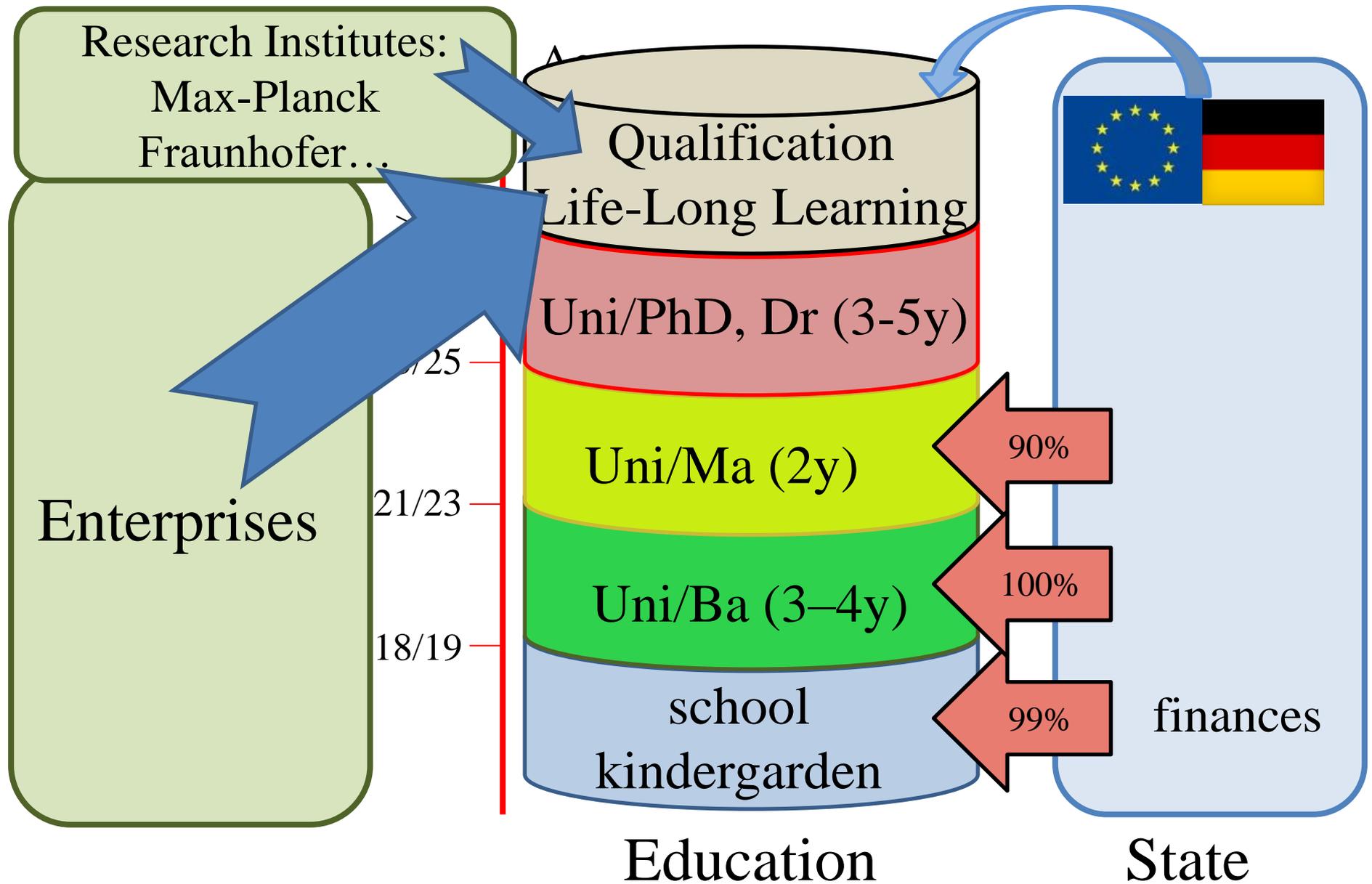
## Engineers, Bachelors and Masters in Germany



# Enterprise <-> University



# Enterprise <-> University

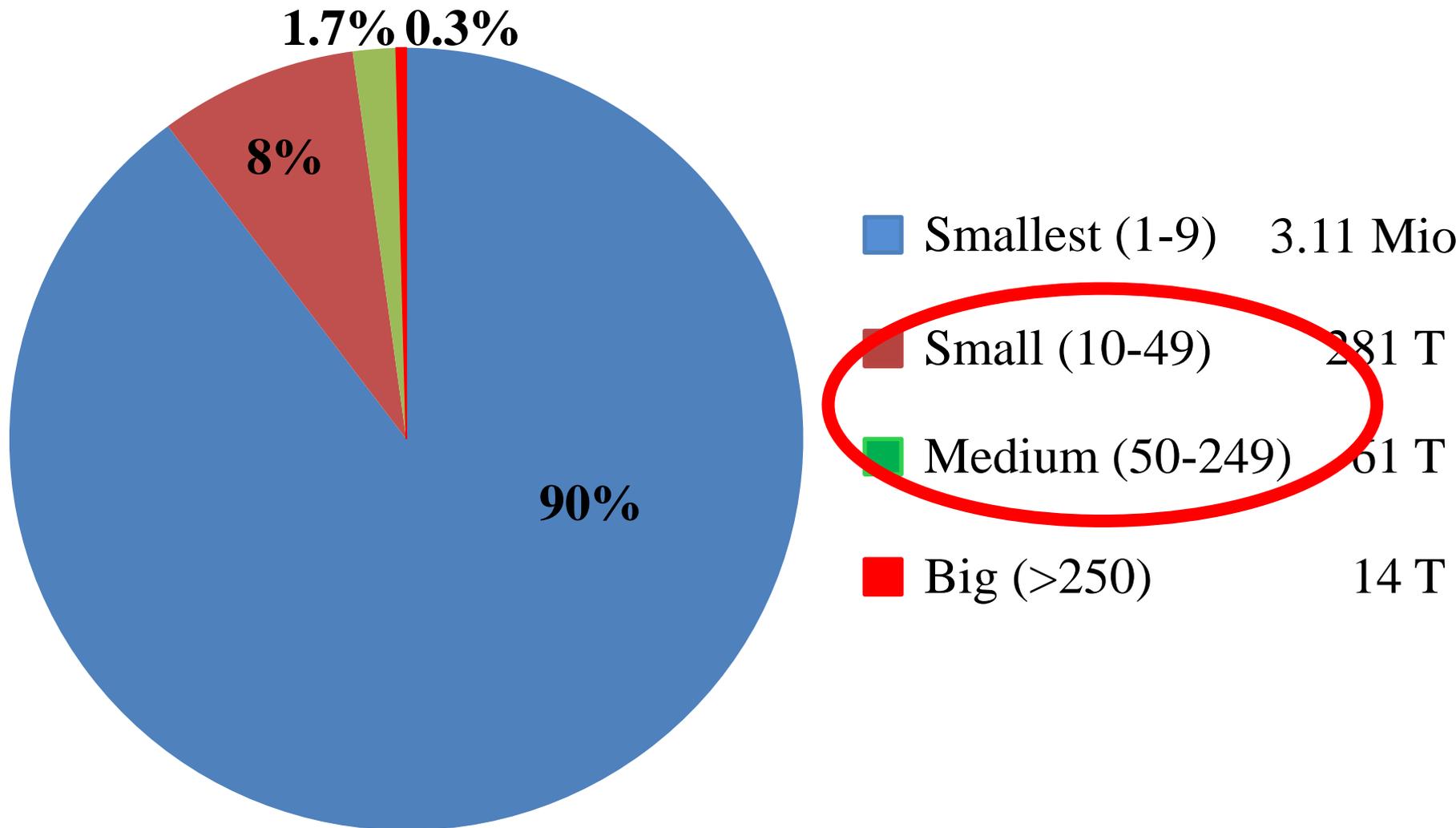


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## **II. Enterprises**

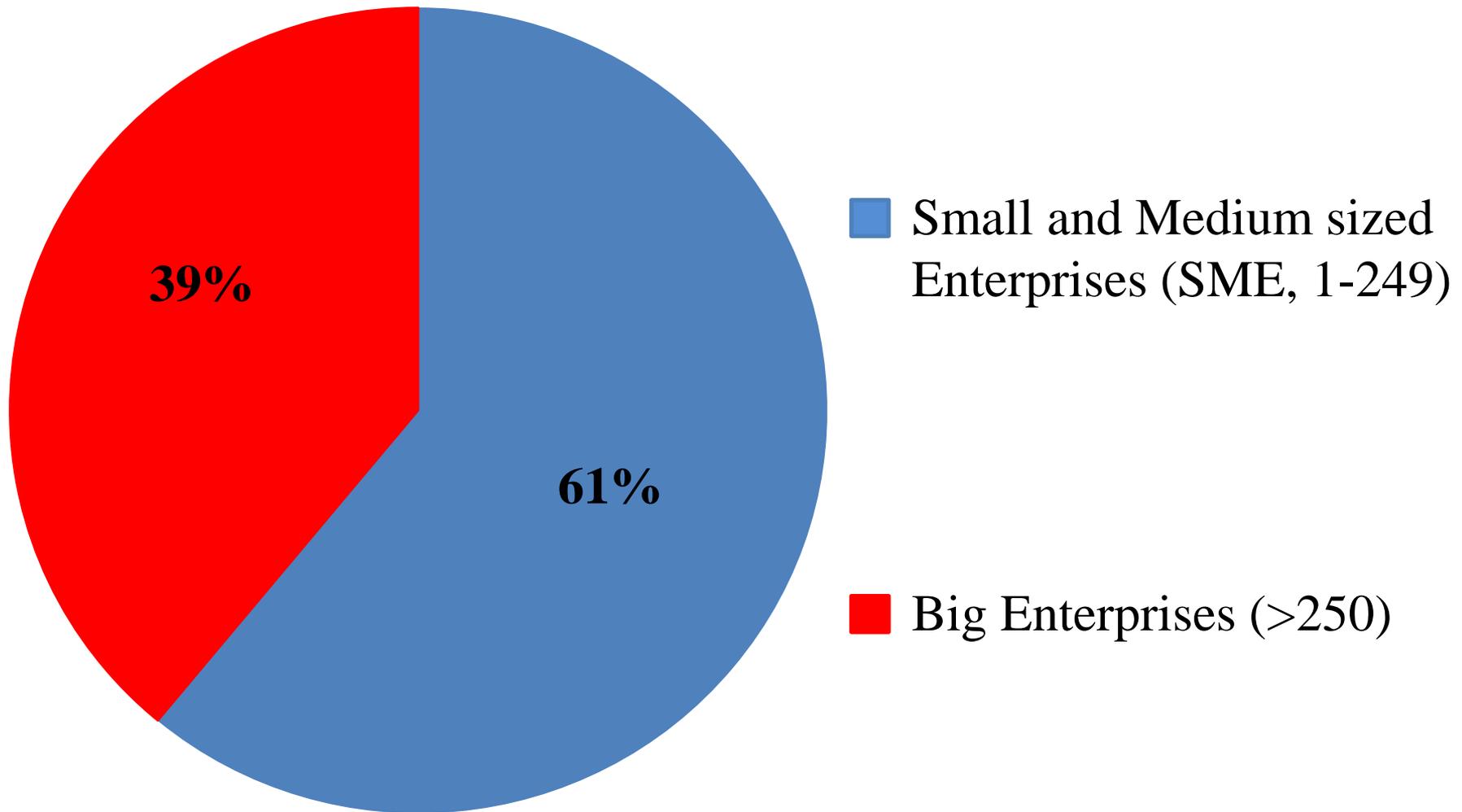
# Enterprise <-> University

## Enterprises in Germany (3.469.039 in 2016)

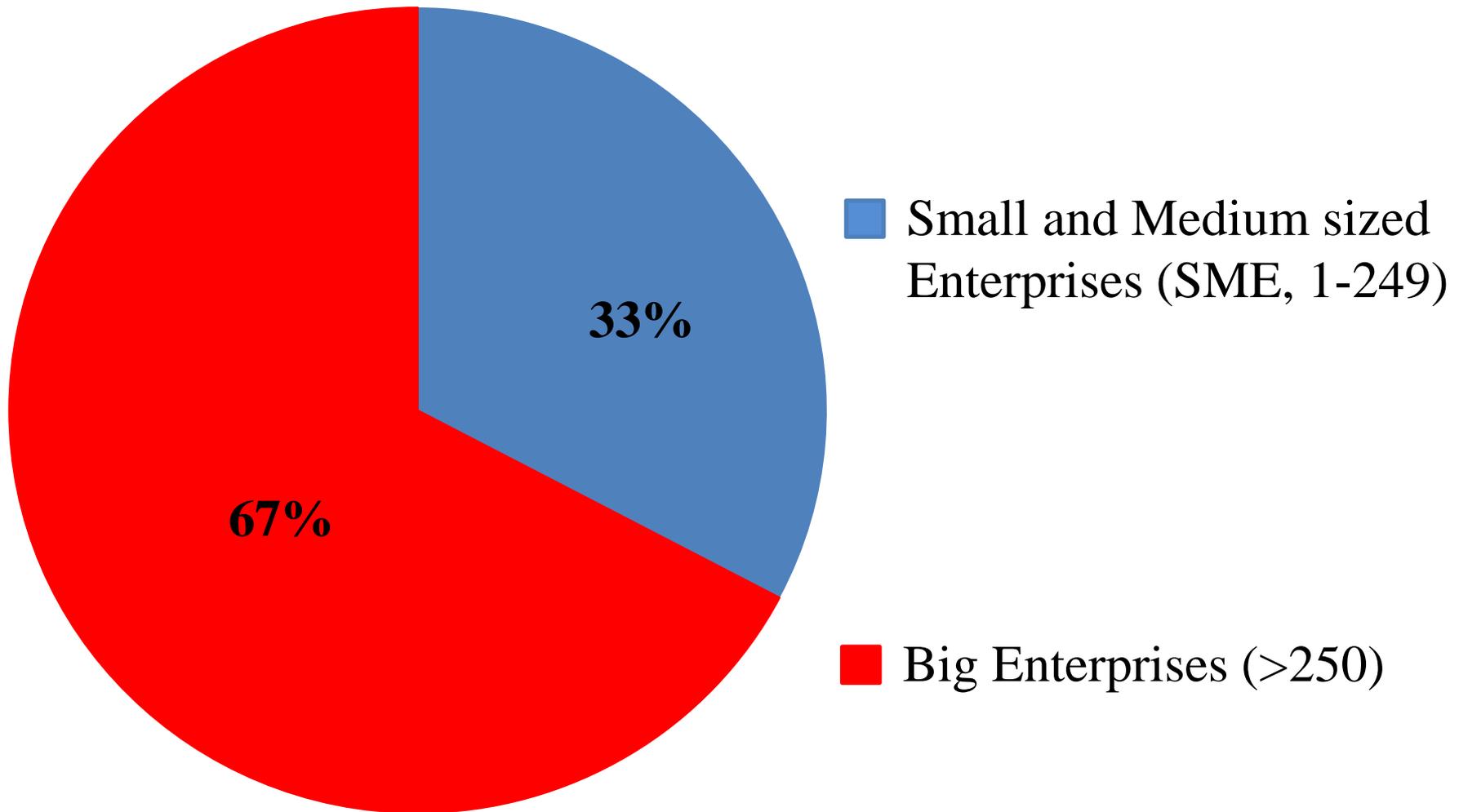


# Enterprise <-> University

## Gross Domestic Product/GDP in Germany (2016)



## Coworkers in Germany (2016)



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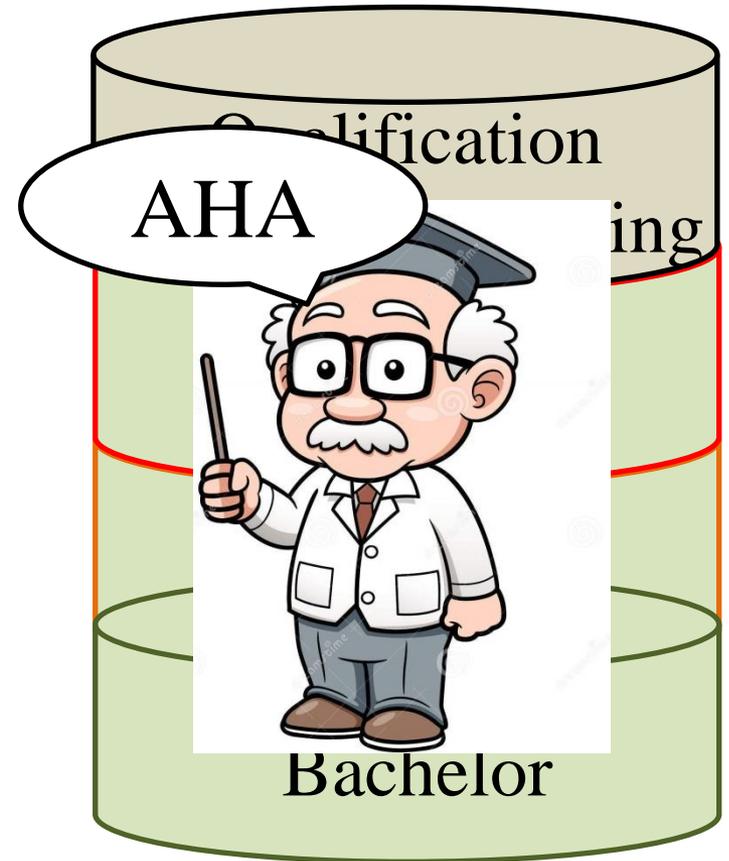
### **III. Interaction between Enterprises and Universities**

*some ideas and intentions*

# Enterprise $\leftrightarrow$ University



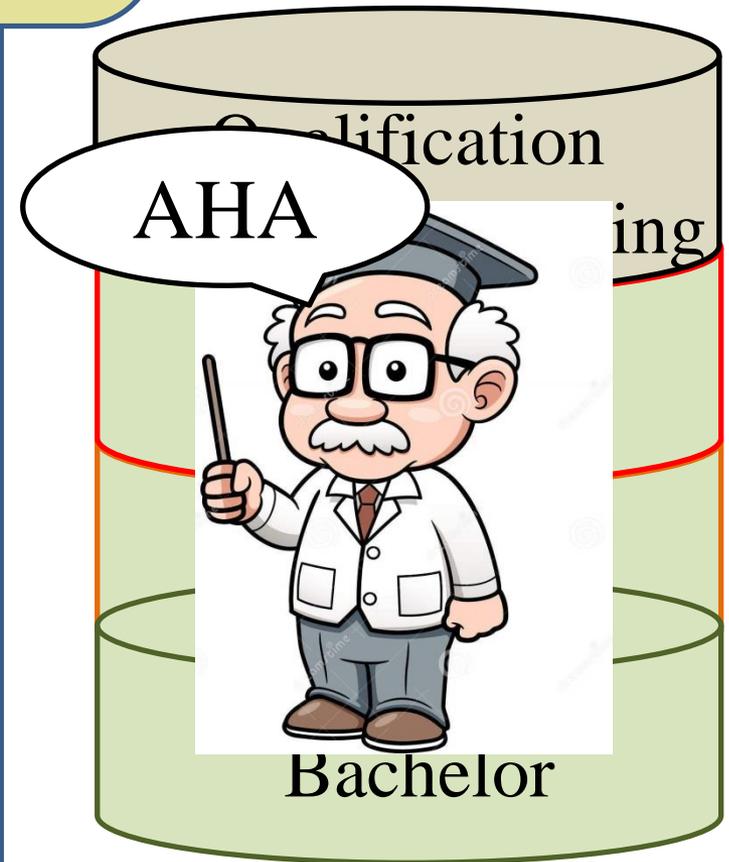
Enterprises



Education

# Enterprise <-> University

- knowledge <sup>+</sup>
- students
- academic contacts
- blended learning <sub>—</sub>
- no flexibility (teaching)
- low salary
- financial possibilities bad
- expensive equipment



Education

# Enterprise <-> University

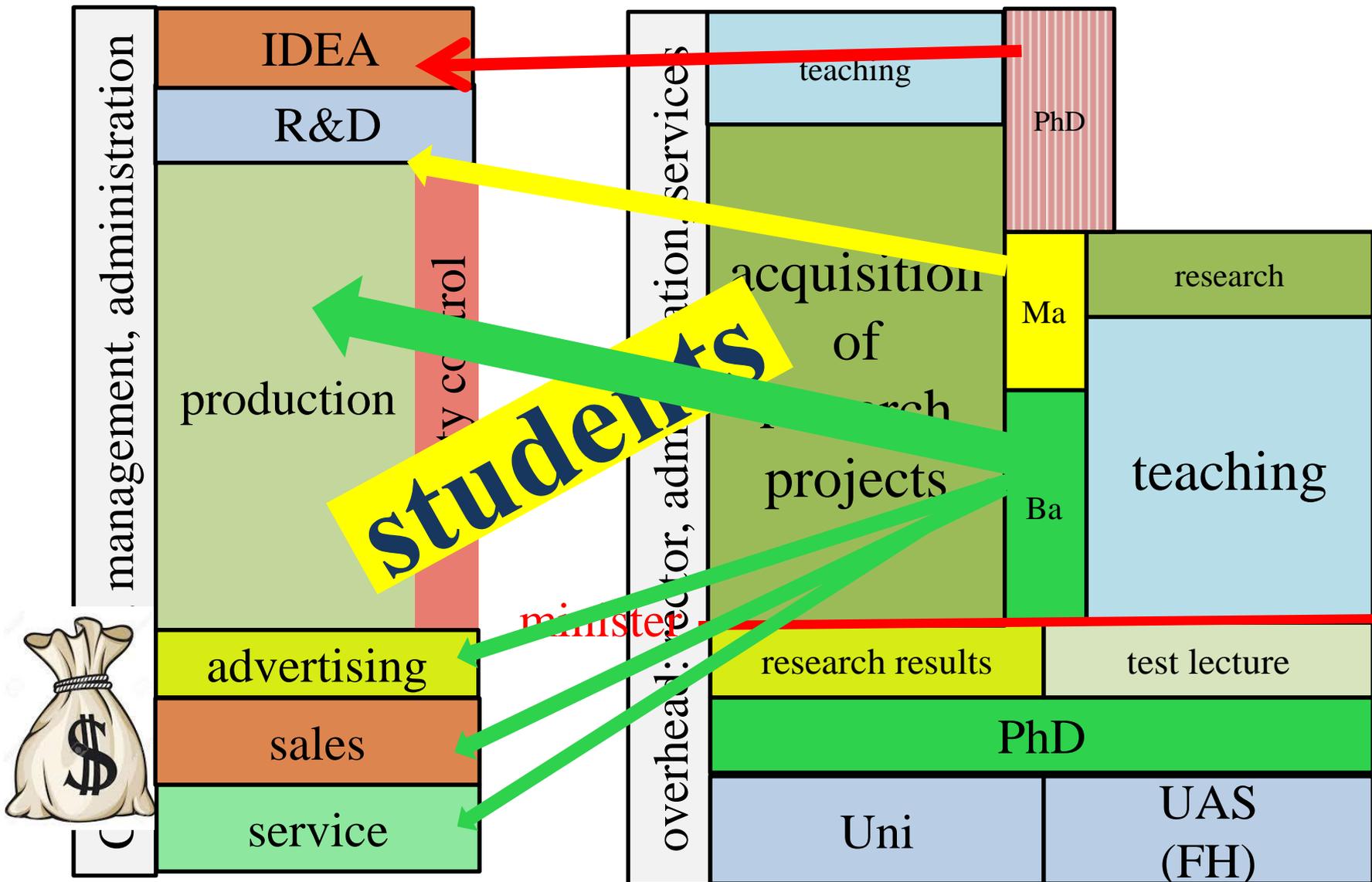
????  
problems



Enterprises

- +
- flexibility
  - „short ways“
  - good financial possibilities
- 
- production first
  - no power for research
  - no time for qualification
  - no time for add. studies
  - lack of qualified people

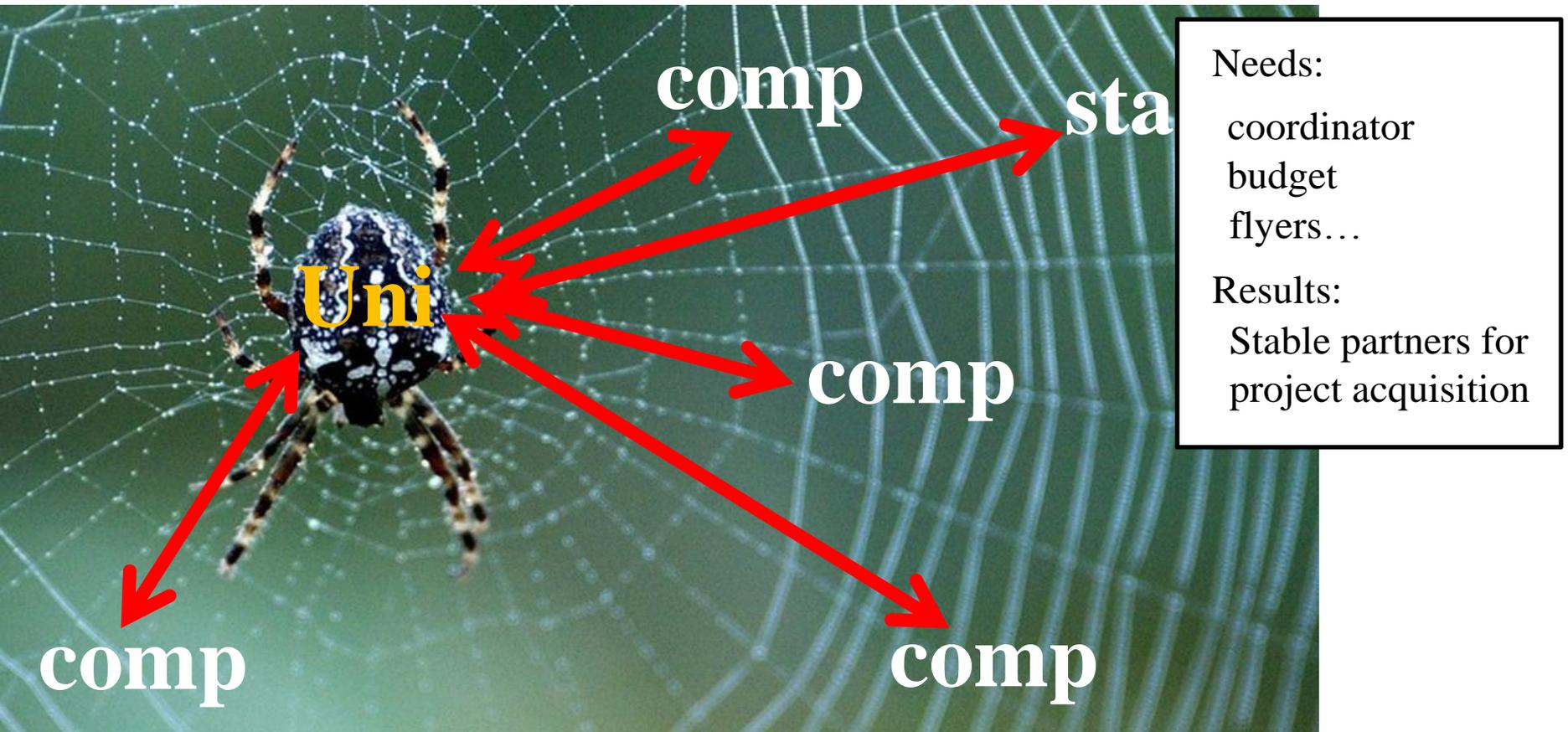
# Enterprise <-> University



# Enterprise <-> University

# students

- Enterprises get diploma holders for free ???
- Work with alumni !!!



# Enterprise <-> University

## professors

## students

- Enterprises get diploma holders for free ???
- Work with alumni !!!
- On-line, on-job offers

Needs:

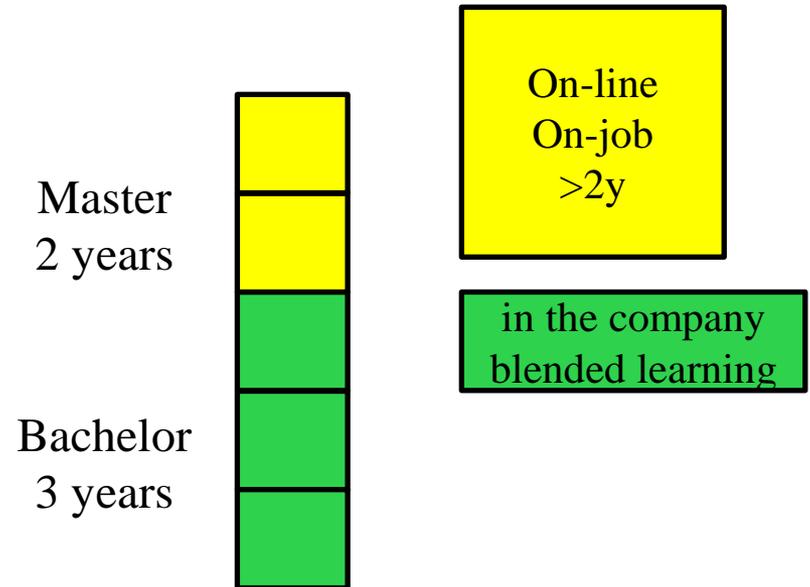
**Investment (electronic materials...)**

- Study plans (prof)
- Study manager (staff)
- Web site (IT engineer)
- Technical help, language (staff)

Results:

**Money**

- (international) Publicity
- additional Income for profs.



**professors**

**students**

- Enterprises get diploma holders for free ???
- Work with alumni !!!
- On-line, on-job offers
- Contacts to coworkers and leaders of enterprises

US model: Uni pays for 10 months,  
2 months money from enterprise

Needs:

Open mind of professors

Time!!

Participation in university life and problems

Offers for participation in workshops, seminars etc.

# professors enterprises

- Enterprises get diploma holders for free ???
- Work with alumni !!!
- On-line, on-job offers
- Contacts to coworkers and leaders of enterprises
- Search for projects, practicals etc.
- Support/sponsoring of students, professors and universities

Enterprise <-> University

Thank you!

Danke!

Large field with many possibilities

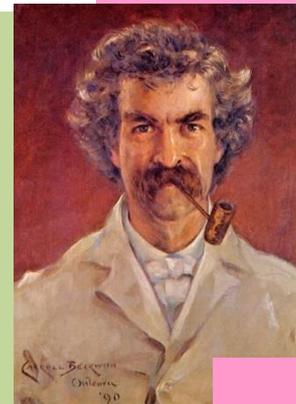
- Corrected title: Enterprises need Universities and Universities need Enterprises

Спасибо!

Forecast:

Gracias!

**Mark Twain:**  
“It is hard to make predictions, especially about the future.”



Merci!