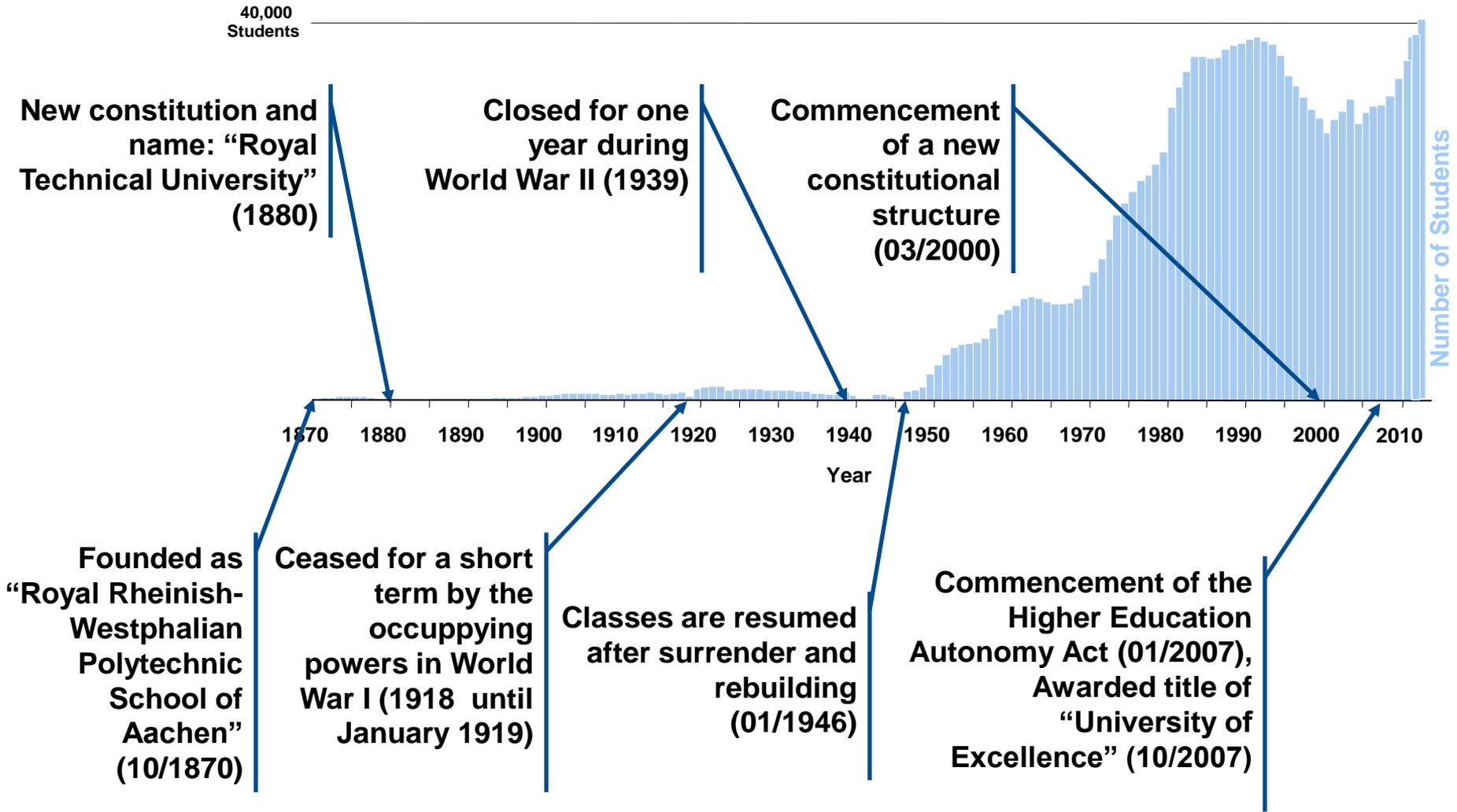




# Future Studies at RWTH Aachen University

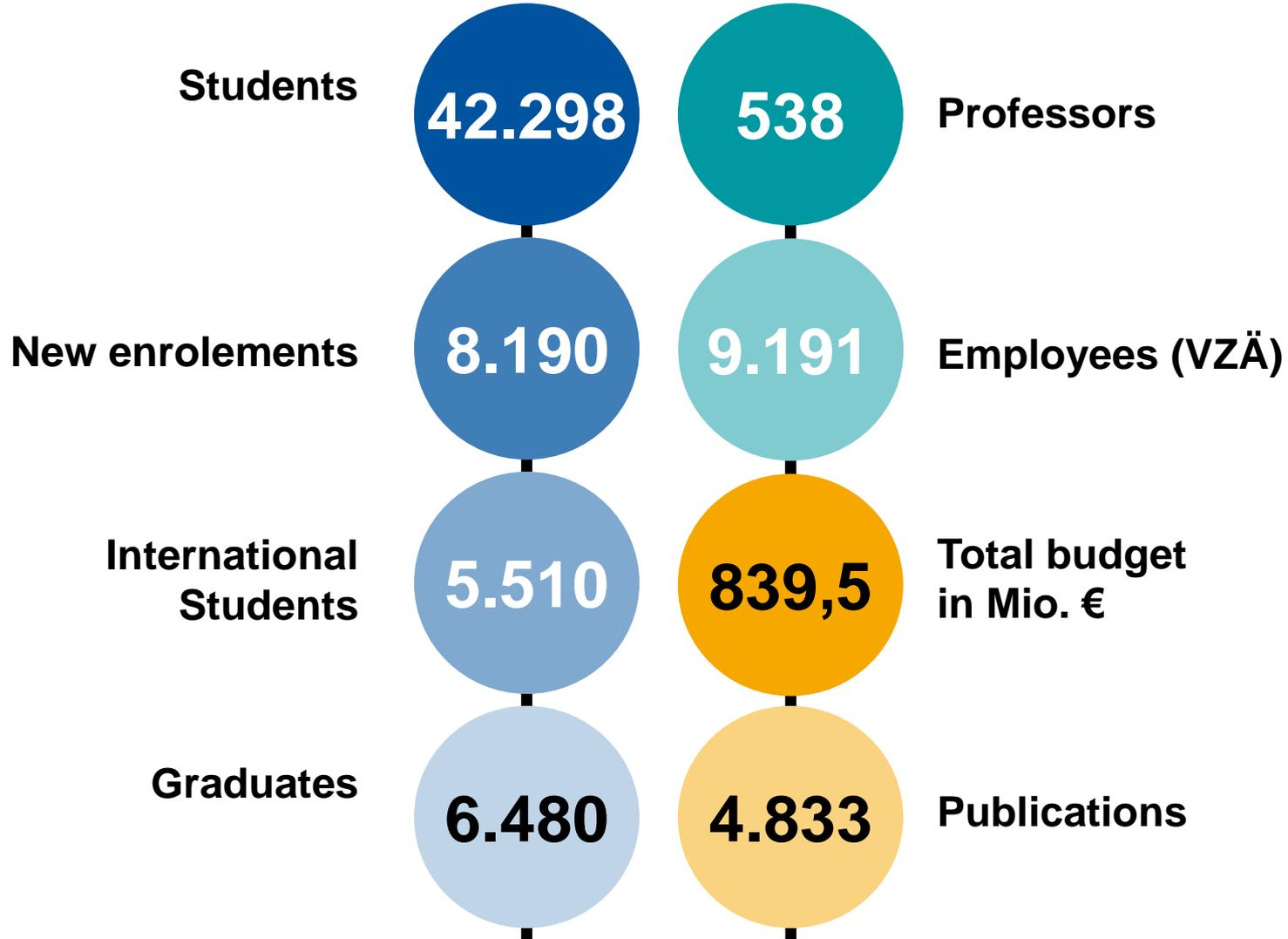
Univ.-Prof. Dr.-Ing. Ernst Schmachtenberg  
Rector

# History of RWTH Aachen University



# RWTH Aachen University: The Big Picture in Figures

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## Students by Discipline winter term 14/15

42.298

13.483

32% female students

28.815

68% male students

Engineering

57 %

Natural  
Sciences

23 %

Humanities,  
Social Sciences and  
Economics

13 %

Medicine

7 %

## Source of Grants and Funding

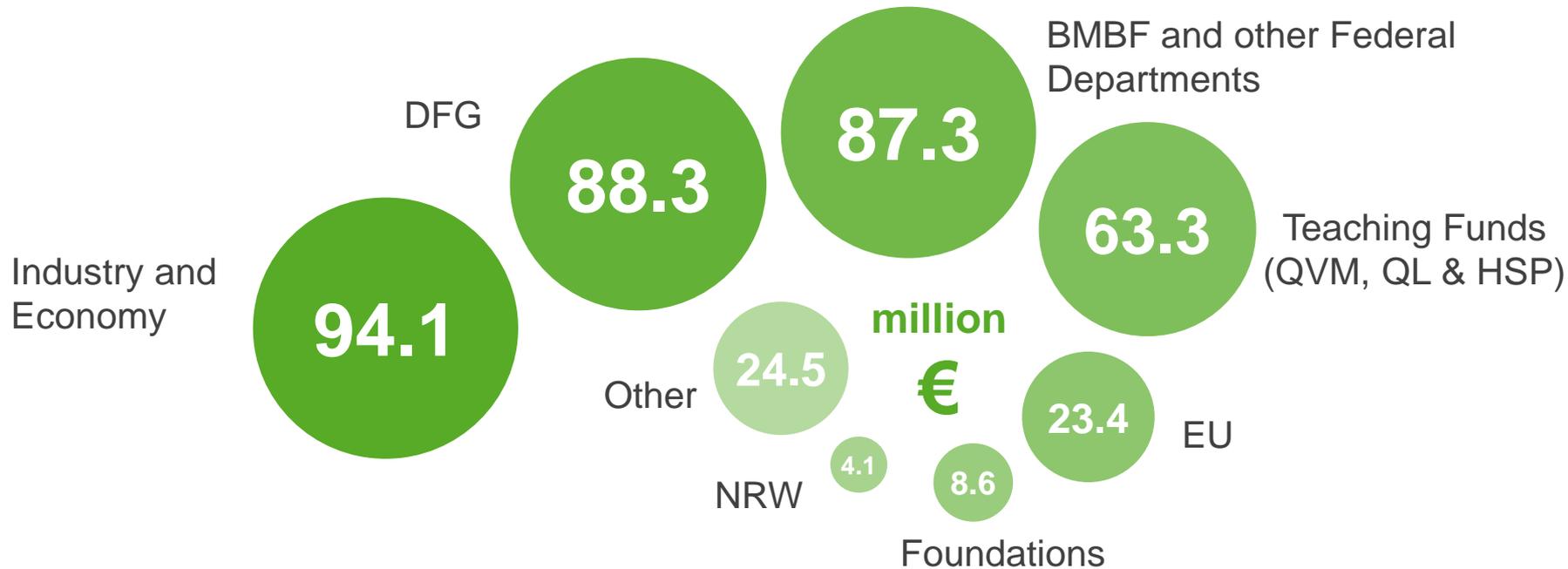
**839.5**  
**million €**

**445.9 million €**

Grants from the  
State of NRW

**393.6 million €**

Project Funds



## “Foundation Professorships” in Germany

- External sponsorship of promising but underdeveloped research areas, in cooperation with a university
- Here: futures studies, with particular emphasis on science, technology and society

## VDI Professorship of Futures Studies

- April 2010 – January 2014
- Univ.-Prof. Dr. rer. pol. Daniel Barben
- School of Humanities and Social Sciences
- Member of the Institute of Political Sciences

## VDI founded and sponsored

- to create science-based methodologies for interdisciplinary future studies
- to obtain better scenarios of possible technical, social, economic and political developments in the near and far future
- to reach increased acceptance in society, politics and economy for necessary developments in the future by communicating opportunities and risks

## Why Futures Studies?

- Emerging interdisciplinary academic field, with a significant interest in grand challenges
- Mostly non-academic field, dominated by demand for policy advice and business consultancy
- Variety of disciplinary accounts of time and the future, in part rather implicit and not synthesized

## **Some major problems futures studies are confronted with**

Epistemic: How to investigate a reality that has not empirically materialized yet?

Practical: How to respond to demands for superior knowledge about future challenges?

Social: How to deal with conflicting assessments of the possibility, probability, and desirability of future developments?

## **Some basic questions concerning futures studies**

- What do you/we want to know?
- What are you/we able to know?
- How do you/we/others approach the future in terms of
  - Predicting and anticipating;
  - Preparing for and planning;
  - Creating and shaping the future?

### **Successful acquisition of a large scale research project dealing with the German energy transition (Energiewende)**

The FEN (Centre for Flexible Electricity Networks) researches on the transformation of electrical infrastructure away from a top down power distribution network to a distributed network (smart grid) with a high share of volatile renewable generation.

The chair of future studies researches on the topic: “How will commercial and societal aspects influence the process of introducing new technologies”.

# Unrealised expectations

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## Prediction of future scenarios were not satisfying

Especially the expectation of the engineers of the German association of engineers (VDI) to predict the impact of new technologies could not be satisfied.

Conclusion: Shaping the future of technologies has to be done by engineering scientists!

Examples with big potential

- “Industrie 4.0”
- Sustainable mobility
- Digitalization

We are convinced: The change of the world is speeding up!

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Thank you for your attention!