TECHNISCHE UNIVERSITÄT WIEN
Vienna | Austria

Assessment of Research Focal Areas at TU Wien

o.Univ.Prof. Dipl.-Ing. Dr.techn. Sabine Seidler
Rector, TU Wien, Austria

Facts & Figures (2015)

Finances	
ca. 216 Mio. €	global budget
ca. 84 Mio. €	third party funds
Staff (Heads)	
3.675	scientific staff
thereof 143	professors
1.134	non-scientific staff
4.809	total staff
Students	
29.141	
thereof 32 %	foreigners
thereof 28 %	women
Graduations (Term 2014/15)	
2.768	first and second degrees, Bologna System
thereof	1.384 BSc, 1.011 MSc, 113 Diploma Engineer, 260 PhD

Research Focal Areas

1. Computational Science and Engineering
2. Quantum Physics and Quantum Technologies
3. Materials and Matter
4. Information and Communication Technology
5. Energy and Environment

The TUW Research Matrix

Materials and Matter	Research Focal Areas	Additional Fields of Research
Surfaces and Interfaces	Topics	
Materials Characterization	– Analytical methods (trace analysis, nuclear techniques, non-destructive testing…) – Scattering techniques – Tomography in 2D and 3D – New methods and instruments for analysis – Characterization at atomic resolution	
Bulk Metallic Phases		
Non-metallic Materials	Research Fields	
Composites		
Biomaterials		
Special and Engineering Materials		
Structure-Property-Relationship		

The TUW Research Matrix

Computational Science and Engineering	Quantum Physics and Quantum Technologies	Materials and Matter	Information and Communication Technology	Energy and Environment	Additional Fields of Research
Computational Materials Science	Photonics	Surfaces and Interfaces	Computational Intelligence	Energy Active Buildings, Settlements and Spatial Infrastructures	Development and Advancement of the Architectural Arts
Computational Fluid Dynamics	Quantum Metrology	Materials Characterization	Computer Engineering	Sustainable and Low Emission Mobility	The European City - between Self-Organization and Controllability
Computational System Design	Quantum Modeling and Simulation	Bulk Metallic Phases	Cognitive and Adaptive Automation and Robotics	Climate Neutral, Renewable and Conventional Energy Supply Systems	Fundamental Mathematics Research
Mathematical and Algorithmic Foundations	Nano-electronics	Non-metallic Materials	Distributed and Parallel Systems	Environmental Monitoring and Climate Adaptation	Mathematical Methods in Economics
Computer Science Foundations	Design and Engineering of Quantum Systems	Composites	Media Informatics and Visual Computing	Efficient Utilisation of Natural Ressources	
Modeling and Simulation	Quantum Many-body Systems	Biomaterials	Business Informatics	Sustainable Tech-nologies, Products and Production	
Risk Based Design		Special and Engineering Materials	Telecommunication		
		Structure-Property-Relationship	Sensor Systems		

Research Focal Areas – Assessment (1/2)

Objectives

- Internal Evaluation (SWOT)
  - Identification of fields of excellence
  - Identification of structural deficits
- Development of research strategy and funding measures

Data Acquisition

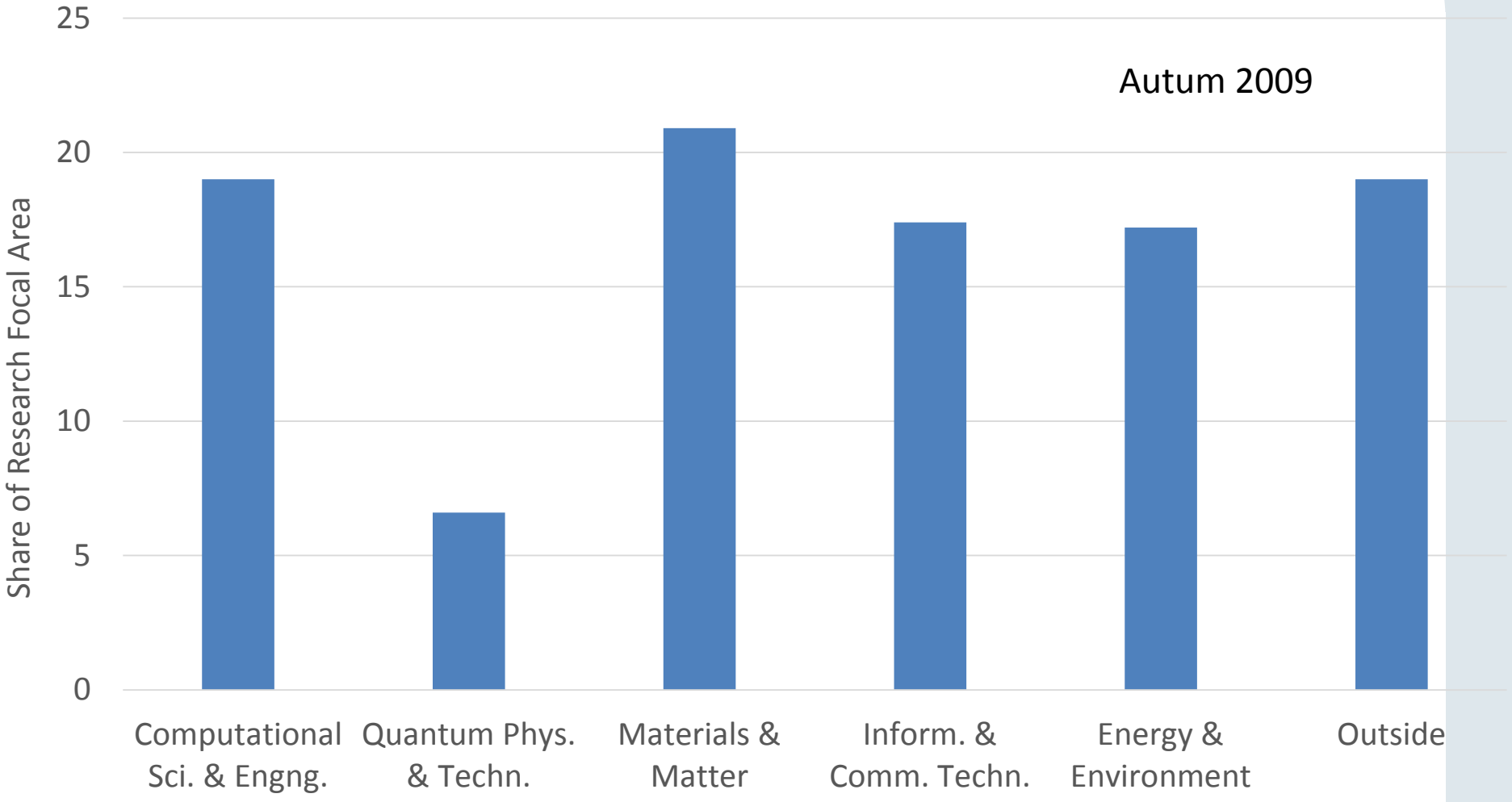
- 1. Step: Self-evaluation for gathering the initial situation
- 2.Step: Data acquisition as a „mirror“ of self-evaluation
  - Project data base
  - Publication data base
  - TISS (TU inf. and service system: courses, staff & institute profiles, proj. ..)
- 3. Step: Measuring

Research Focal Areas – Assessment (2/2)

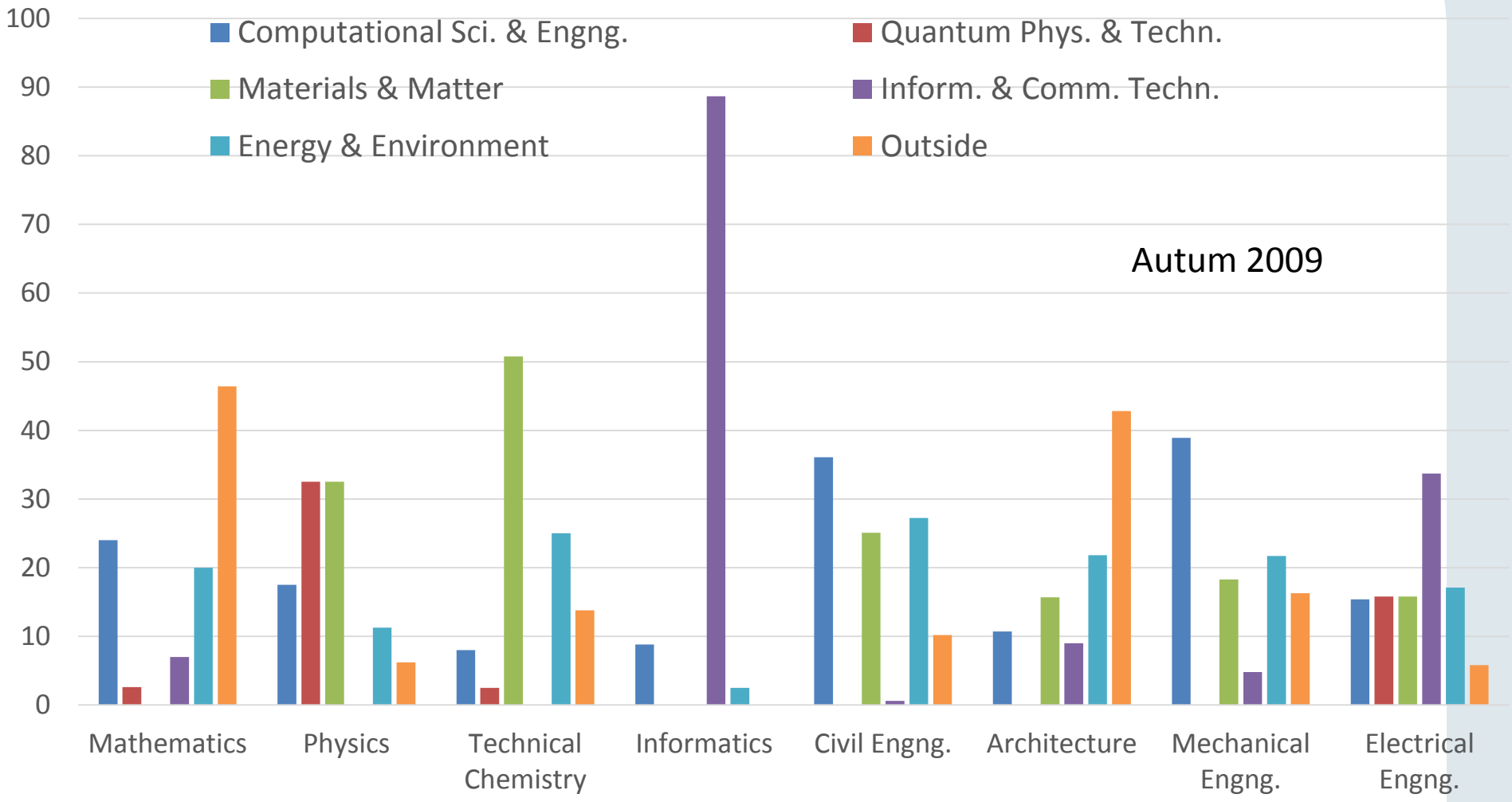
Realization:

- Input/output evaluation
  - Input: employees, budget, rooms
  - Output: Publications, conferences, dissertations, external funding, research and company cooperation
  - Faculty based weighting of these variables, e.g. consideration of theoretical or experimental orientation of research topics
- Assessment of Research Performance

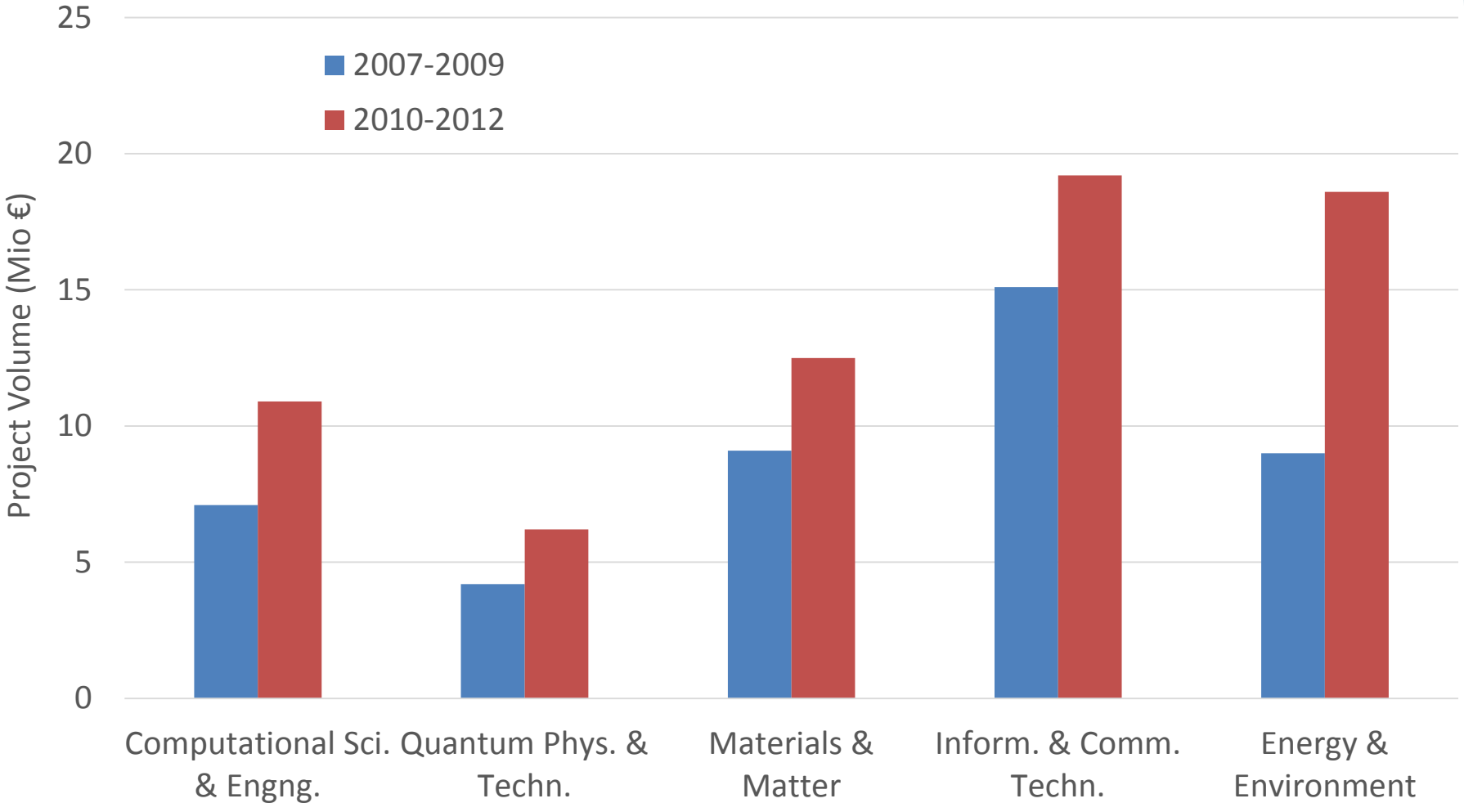
Results Step 1: Self-Evaluation – Overview



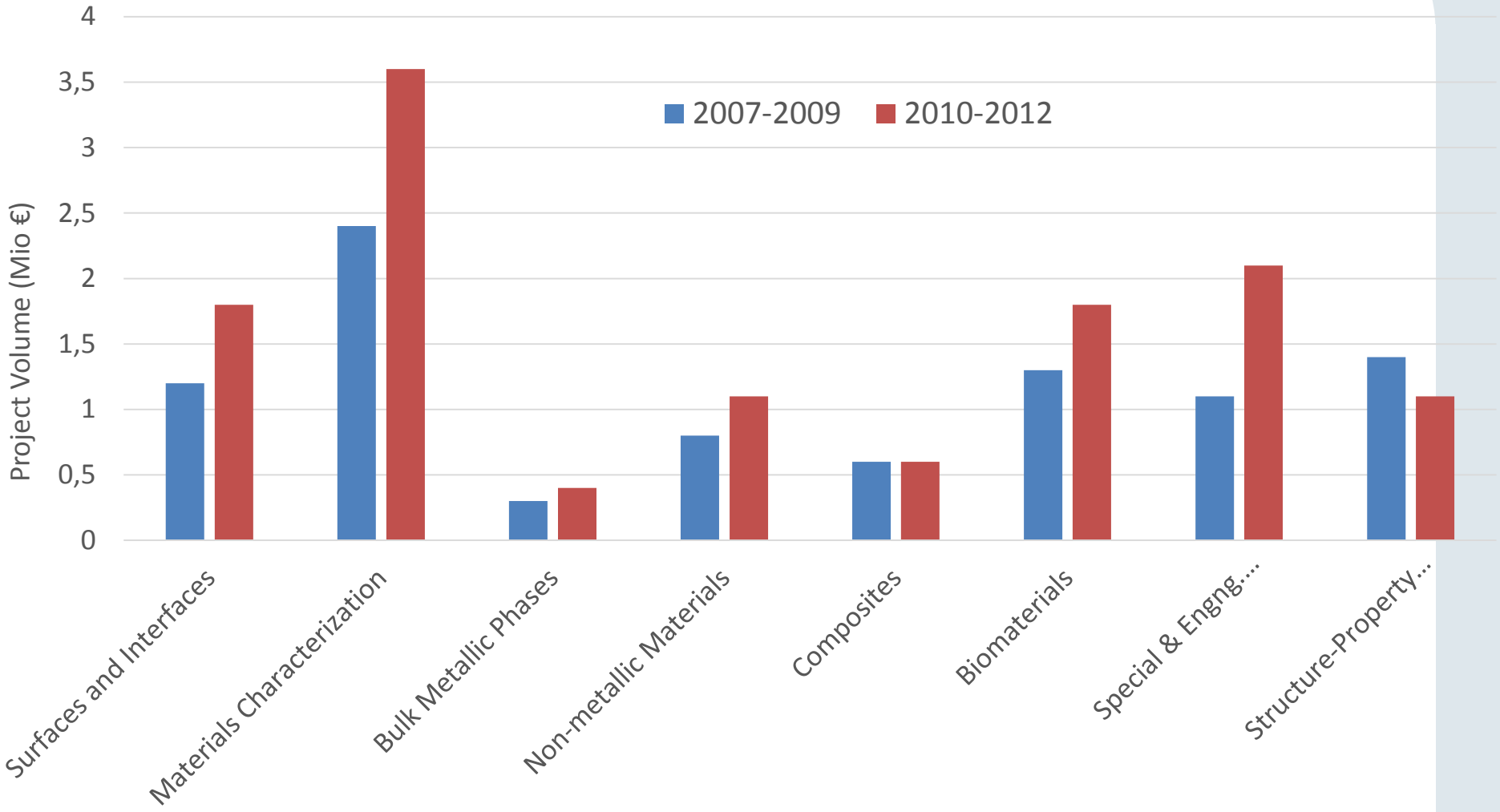
Results Step 1: Self-Evaluation – Distribution



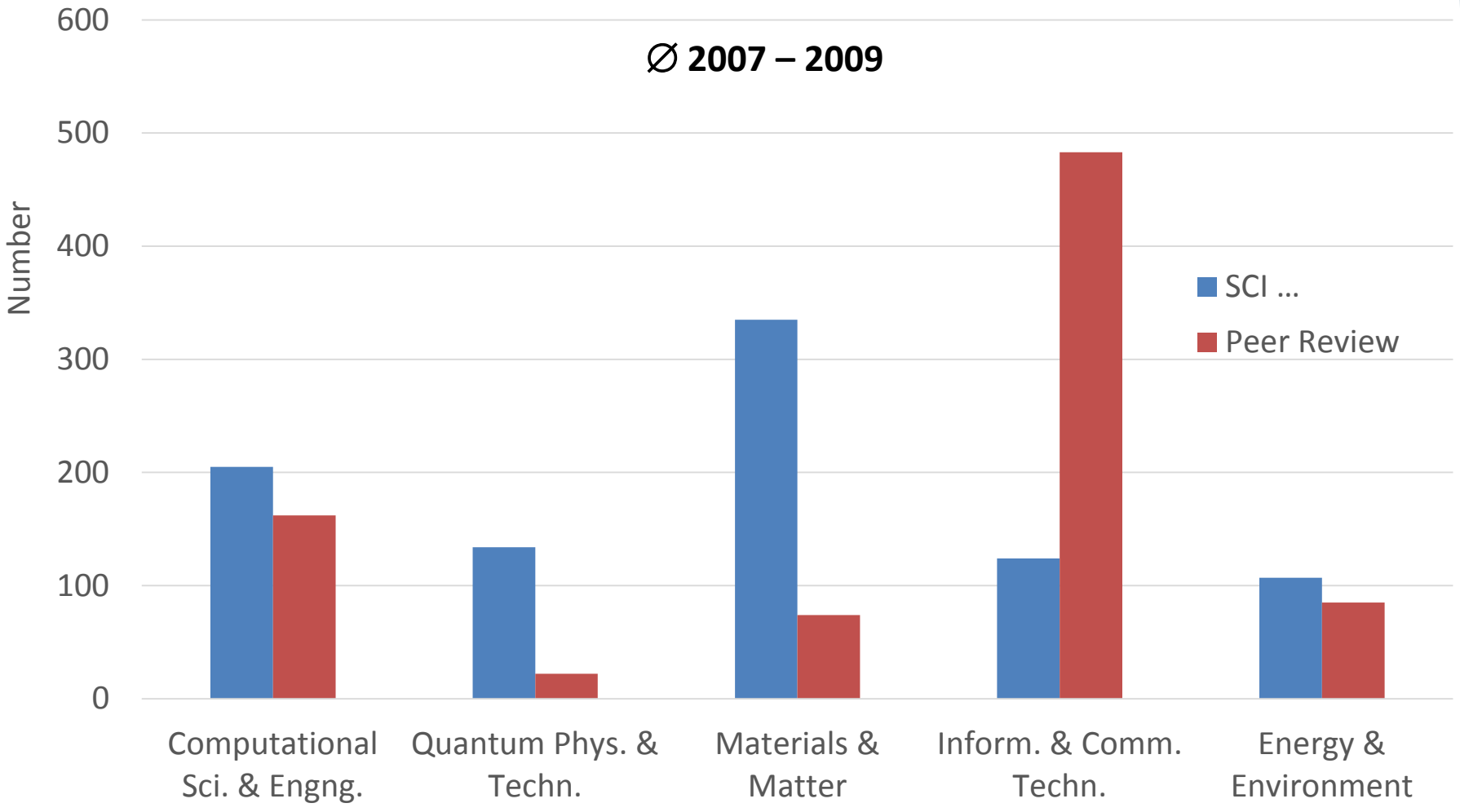
Step 2: Output – Project Volume (Mio €)



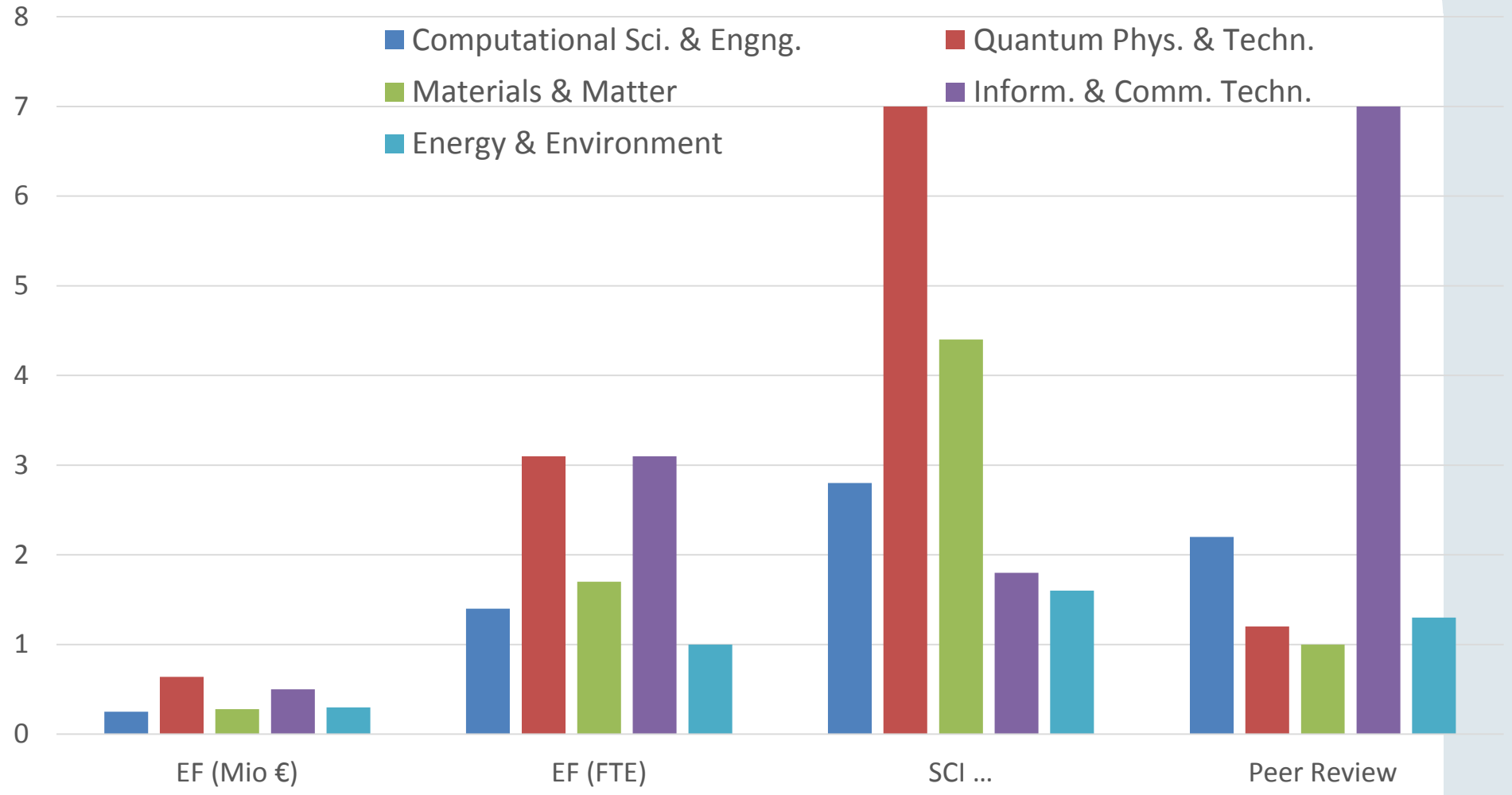
Materials and Matter – Research Fields, Project Volume (Mio €)



Output – Publications



Output/Input (Head Prof. & Ass. Prof.) – Overview (∅ 2007-2009)



TECHNISCHE UNIVERSITÄT WIEN
Vienna | Austria

Thank You for Your Attention!!!!