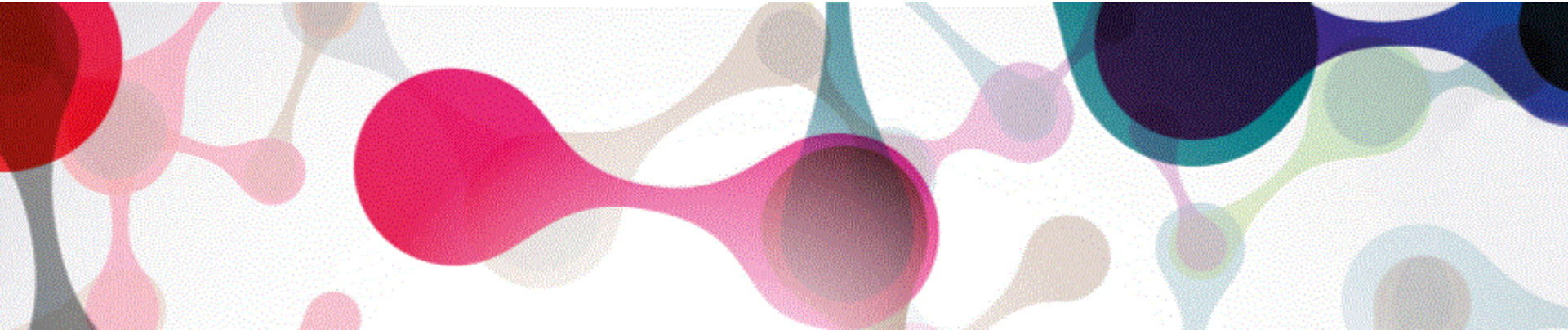

FRAUNHOFER'S COOPERATION WITH UNIVERSITIES OF APPLIED SCIENCES – STATUS QUO AND OPPORTUNITIES



Mathias Rauch
Fraunhofer Brussels, Director

Fraunhofer-Gesellschaft

Europe's largest organisation for applied research

Health and Environment

Mobility and Transportation

Communication and Information

Energy and Resources

Safety and Security

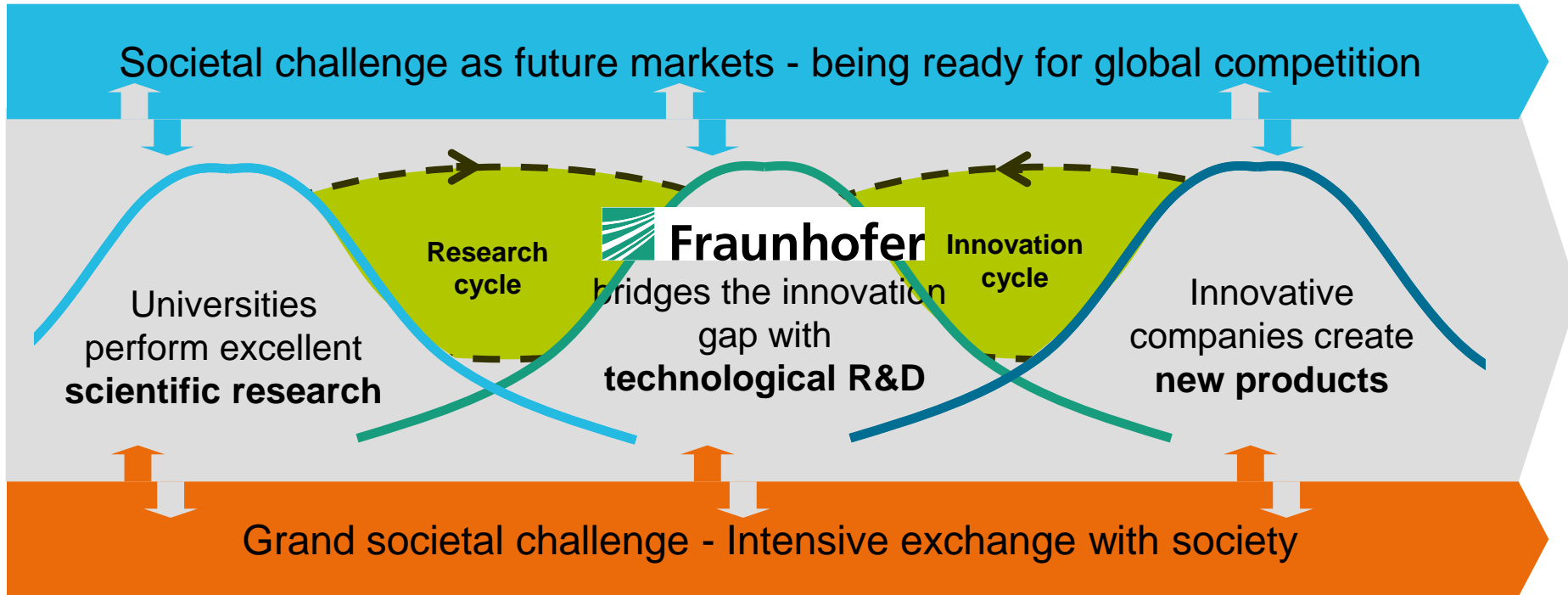
Production and Services



- **67 research institutes**
- More than **24,000 staff**
- **€2 billion** annual research **budget**

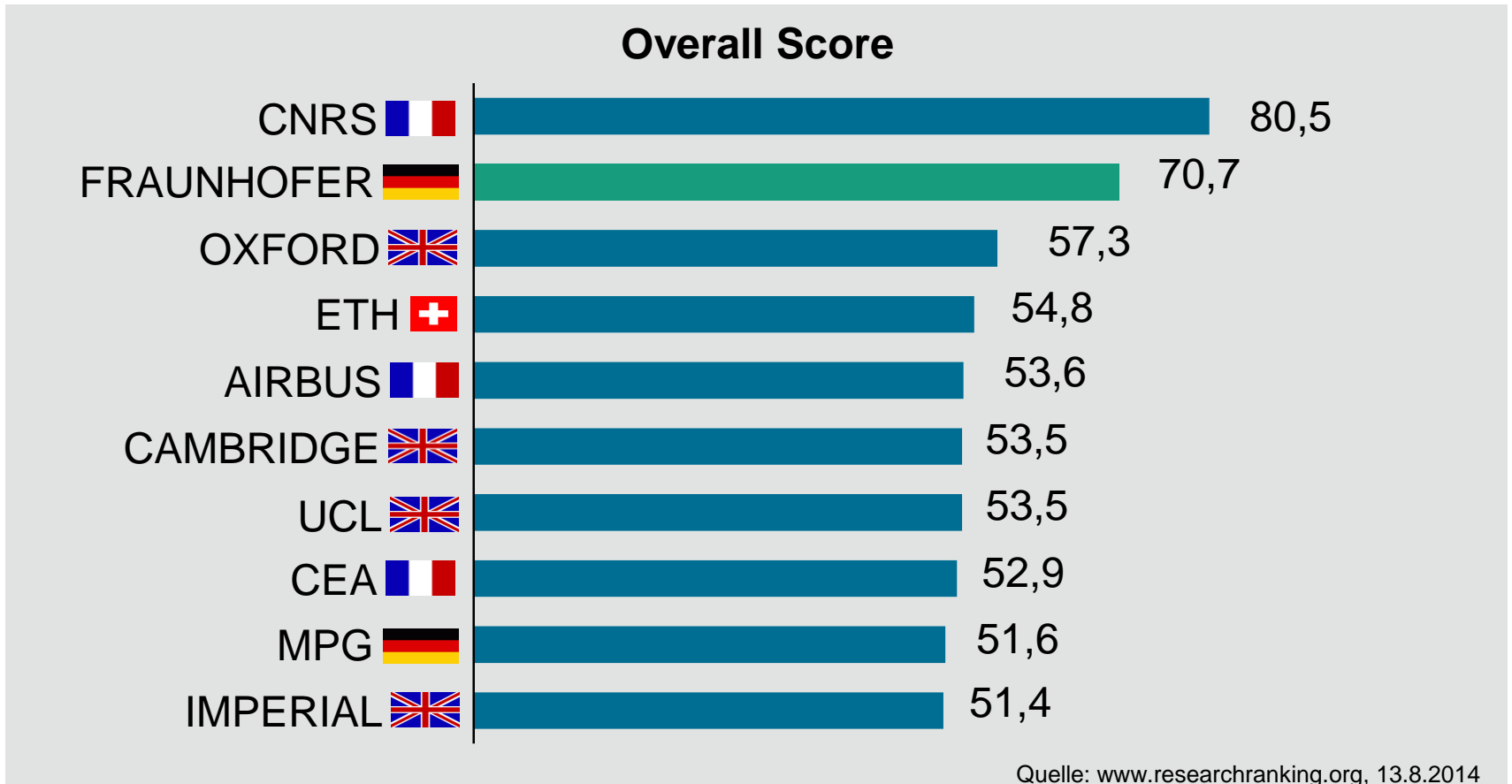
Fraunhofer-Gesellschaft

Connector of the innovation system



Fraunhofer Gesellschaft

A strong partner in the EU framework programme



»Overall Score« is based on::

• Funding and project participation performance • Networking activity and alliances • Diversity of research areas

Cooperating with Universities of Applied sciences

Two new ways to join forces in Germany



Fraunhofer Application Center

- **Establishment of a new Fraunhofer site** at a University of Applied Sciences
- Managing director: Professor at the University of Applied Sciences
- ~ 10 members of staff
- **Pilot phase until 2017**

Cooperation Programme « Fachhochschule »

- **Local cooperation** of Fraunhofer and University of Applied Sciences
- Creation of a **collaborative research group**
- Long term goal: **Strategic alignment of a specific research field**

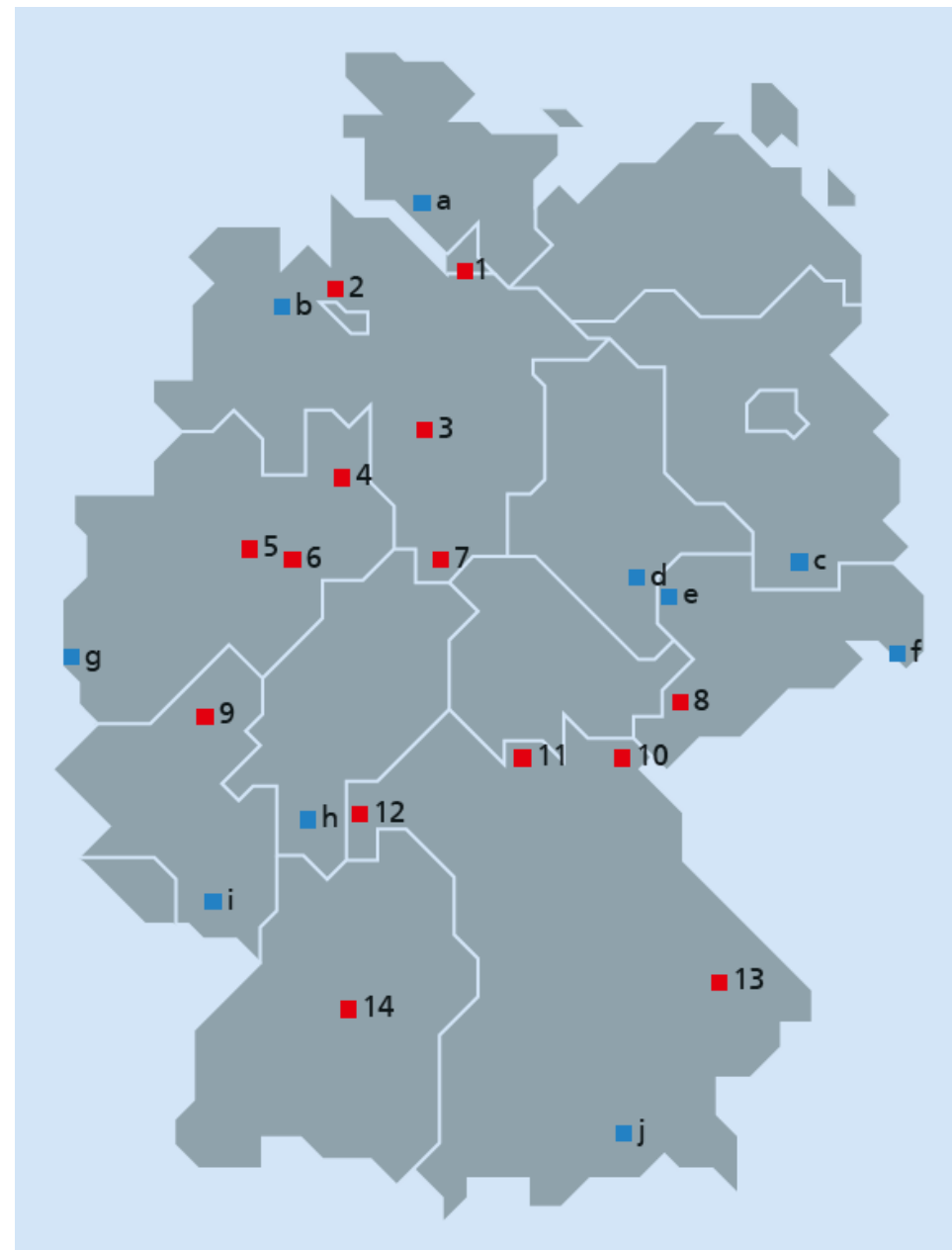
Active partnerships

Fraunhofer Application Center

- 1 Fraunhofer ISIT / HAW Hamburg
- 2 Fraunhofer IWES / HS Bremerhaven
- 3 Fraunhofer WKI / HS Hannover
- 4 Fraunhofer IOSB / HS OWL Lemgo
- 5 Fraunhofer FIT / HS Hamm-Lippstadt
- 6 Fraunhofer IWM / FH Südwestfalen
- 7 Fraunhofer IST / HAWK Göttingen
- 8 Fraunhofer IWS / WH Zwickau
- 9 Fraunhofer FHR / HS Koblenz
- 10 Fraunhofer ISC / HS Hof
- 11 Fraunhofer IIS / HS Coburg
- 12 Fraunhofer ISC / HS Aschaffenburg
- 13 Fraunhofer IIS / HS Deggendorf
- 14 Fraunhofer IAO / HS Esslingen

Cooperation Programme « Fachhochschule »

- a Fraunhofer ISIT / FH Westküste
- b Fraunhofer IDMT / Jade HS Oldenburg
- c Fraunhofer IAP / HS Lausitz (BTU Cottbus)
- d Fraunhofer IWM / HS Anhalt
- e Fraunhofer IZI / HTWK Leipzig
- f Fraunhofer IWU / HS Görlitz
- g Fraunhofer ILT / FH Aachen
- h Fraunhofer LBF / HS Darmstadt
- i Fraunhofer ITWM / FH Kaiserslautern
- j Fraunhofer IBP / HS Rosenheim



Best practice: Fraunhofer Application Center Application Center Industrial Automation INA

Hochschule Ostwestfalen-Lippe
University of Applied Sciences

- Site of the Fraunhofer Institute of Optronics, System Technologies and Image Exploitation - IOSB
 - Established following an **initiative of the local industry**
 - Research focus: operation and high adaptability of **Industrial automation systems**
 - Linked to the “inIT - Institut Industrial IT” of the **Ostwestfalen-Lippe University** of Applied Sciences and to
- Integrated in the cluster „Intelligent technical systems“ for machine engineering and industrial electronics
- Increased access for the local industry to research in industrial ICT: one of the many innovations: **A Smart-Watch to monitor production facilities**



Best practice: Cooperation Programme «Fachhochschule» Hochschule Anhalt




Hochschule Anhalt
Anhalt University of Applied Sciences

- Cooperation of the **Fraunhofer Center for Silicon Photovoltaics CSP** with Anhalt University of Applied Science
 - Complements the cooperation of Fraunhofer IWM and the University Halle-Wittenberg
 - **A Collaborative Research Group** was established in close cooperation the joint project »StrukturSolar« of the University Halle-Wittenberg and the Anhalt University of Applied Sciences
- First results: the **group significant increased the charge carrier life of silicon modules**
- The results are jointly exploited with the local industry



Cooperation of the Fraunhofer Academy

Life-long education and advanced training

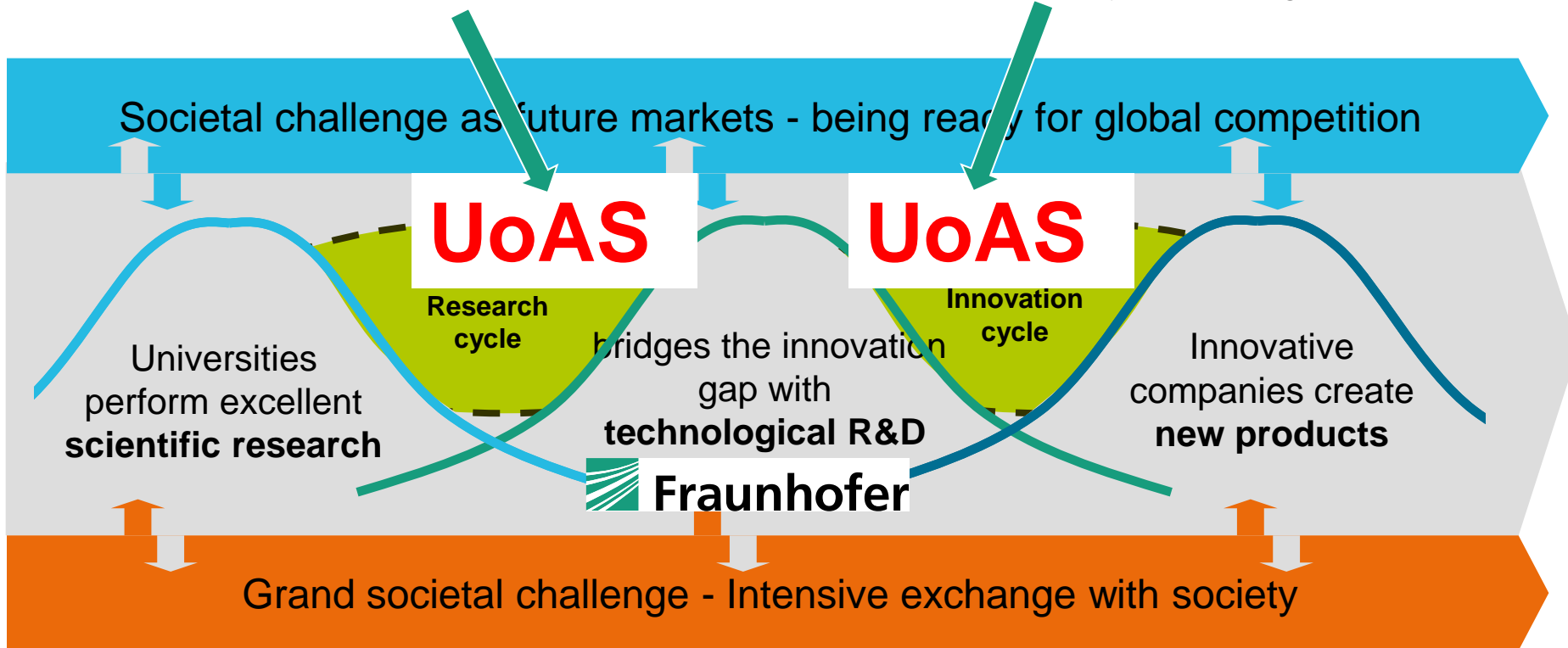
- The Fraunhofer Academy offers a unique opportunity for specialists and managers to benefit of a **direct transfer knowledge** from Fraunhofer research projects into their own company.
- European Distance Learning University in Hamburg (Euro FH)
 - **Part-time Bachelor of Science in Logistics Management** The logo for EURO-FH, featuring a stylized orange and yellow globe icon to the left of the text "EURO-FH" in a bold, black, sans-serif font, with "UNIVERSITY OF APPLIED SCIENCES" in a smaller, black, sans-serif font below it.
 - Fraunhofer Academy and the Fraunhofer Institute for Material Flow and Logistics IML in Dortmund
- Hochschule für Technik und Wirtschaft des Saarlandes
 - **Part-time Master programme „Automotive Production Engineering“**
 - Fraunhofer Academy and Fraunhofer Institute for Nondestructive Testing IZFP
- 2015: First project of the academy on EU level under the **EIT-KIC ICT labs**

Hochschule für
Technik und Wirtschaft
des Saarlandes
University of
Applied Sciences

Universities of Applied Sciences (UoAS)

Supporting the research and the innovation cycle

- Application centres
- Cooperation programme
- Cooperation with the Fraunhofer Academy (knowledge transfer)



EU projects with German Universities of Applied Sciences

Collaboration with Fraunhofer under FP7

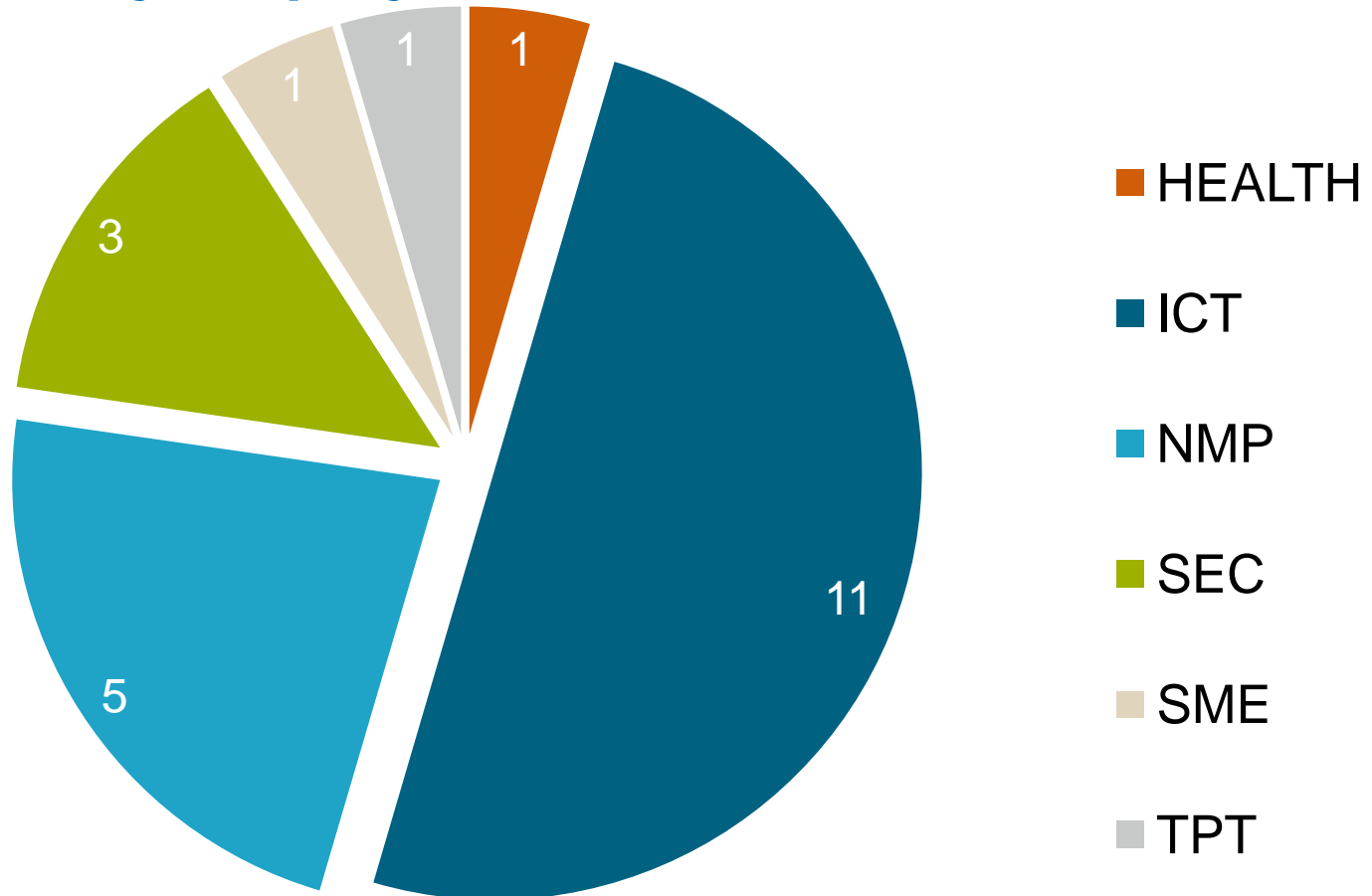


<u>Name</u>	<u>No</u>
Duale Hochschule Baden-Württemberg	1
Fachhochschule der Polizei des Landes Brandenburg	1
Fachhochschule für öffentliche Verwaltung und Rechtspflege in Bayern	1
Fachhochschule Köln	1
Georg-Simon-Ohm-Hochschule für angewandte Wissenschaften - Fachhochschule Nürnberg	1
Hochschule Aalen - Technik und Wirtschaft	1
Hochschule Bonn-Rhein-Sieg, University of Applied Sciences	2
Hochschule Darmstadt	1
Hochschule der Medien Stuttgart	3
Hochschule für angewandte Wissenschaften Fachhochschule Amberg-Weiden	1
Hochschule für Angewandte Wissenschaften Hamburg	1
Hochschule für angewandte Wissenschaften Regensburg	1
Hochschule für Technik Stuttgart	1
Hochschule Karlsruhe - Technik und Wirtschaft	3
Hochschule Mannheim	1
Hochschule Osnabrück	1
Hochschule Ruhr West- University of Applied Sciences	1
Hochschule Wismar - University of Applied Sciences: Technology, Business and Design	1
Total number of partners*	23

- In total **only 22 joint projects** → **>2% of all Fraunhofer FP7 projects**
- In comparison: Just with KU Leuven about 50 projects

EU projects with German Universities of Applied Sciences

Number of joint projects in the FP7 themes



- Total number of projects 22 → **50% of all projects in the area of ICT**

Conclusions on the status quo

There is room for more



- In Germany Fraunhofer **cooperates** with Universities of Applied Sciences on **different levels**
- But the cooperation **remains on a comparatively small scale** -> (Technical) Universities are the core partners
- Cooperation **on EU level is currently very low** and mainly concentrated on ICT

(Technical) universities are Fraunhofer's natural core partners but...



- The **cooperation** with Universities of Applied Sciences **is increasing**
- There is plenty of **room for more...**

Opportunities with Fraunhofer

Join us as a partner



- **More Application Centers and Cooperation Programmes** to come in Germany in the next years
- Join us in Horizon 2020 projects
- Especially with a strong **focus on knowledge transfer** to industry
 - Combine research with education components in the projects
 - Training for pilot line and demonstration projects
- Further **exploit opportunities of the Knowledge Alliances** under Erasmus+ together with the Fraunhofer Academy

Long term opportunities – A proposal

Increase the absorptive capacity of Europe's industry

- On EU level Universities of Applied Sciences could particularly **strengthen their role in supporting knowledge transfer**
 - Through combining research with: part-time education, training and life-long learning programme, competence development of companies, long distance learning.....
 - Join forces with RTOs to bring research results to industry
- Establish the **concept of a „Professional School“** on European level
 - Transfer research results through training directly to industrial specialists and technical managers
 - Possible examples: Training on the qualities of new materials, Possibilities of new IT-tools etc.
 - **To be Integrated in up-coming 2016 EIT-KICs ?**



Thank you for your attention!

How to get in touch?

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