

# The Research Mission of UAS in Europe – Trends, Models and Practices

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# Agenda

Situation of research at European UAS

Potential developments and roles of UAS

Research management and policies for UAS

The role of European UAS in research is still a rather small one.

	BE	CZ	FIN	GER	IRL	NL	N	CH
Year created	1970	1998	1992	1971	1967	1986	1994	1995
% of R&D expenditure	3%	-	6,5%	4,1%	4,8%	2,3%	7,2%	9,5%
% funding from core budget	20%	-	25%	45%	0%	19%	79%	62%
% first-year students	63%	25%	60%	32%	30%	67%	45%	47%

Source: Lepori/Kyvik, The Research Mission of UAS (2010)

There are many restrictions for the research mission of UAS.

- § High teaching loads (Germany 18 hours per week, Austria 16-17, Switzerland 80% of the working hours)
- § No publicly funded master programmes offered (NL)
- § Only professors, no other academic staff from core budget (D, CH, A)
- § Ph.D.-programs only in cooperation with universities (D, CH, A)

But everywhere the role of research is increasing.

In all countries mentioned there is an explicit legal research mission of UAS

External research funding is strongly increasing (Germany: 2009-10 18%, 2010-11 16%, 2011-12 10%) – in GER, NL, BE increase pushed by public funding

Debates about rights to award Ph.D.s, resources and framework conditions for research (e.g. flexibilisation of workloads) are taking place

**And what about research performance of UAS?**

To analyse institutional performance we could take the U-Multirank research-related indicators.

## Research

	Institutional ranking	Field-based ranking
• External research income (per fte academic staff)	1	1
• Doctorate productivity		1
• Total research publication output (per fte academic staff)	1	1
• Art related output	1	
• Field-normalised citation rate	1	1
• Highly cited research publications	1	1
• Interdisciplinary research publications	1	1
• Research orientation of teaching (student survey)		1
• Number of post-doc positions	1	

To analyse institutional performance we could take the U-Multirank research-related indicators.

## Knowledge Transfer

	Institutional ranking	Field-based ranking
• Income from private sources (service contracts, consultancies, licenses, royalties, trials, etc.)	1	1
• Joint research publications with industry	1	1
• Patents (per fte academic staff)	1	1
• Co-patents with industry (per fte academic staff)	1	1
• Number of spin-offs (average over three year period)	1	
• Patent citations to research publications	1	1

To analyse institutional performance we could take the U-Multirank research-related indicators.

## International Orientation

	Institutional ranking	Field-based ranking
• International joint research publications	1	1
• International research grants	1	1

## Teaching and Learning – Student Satisfaction Indicators

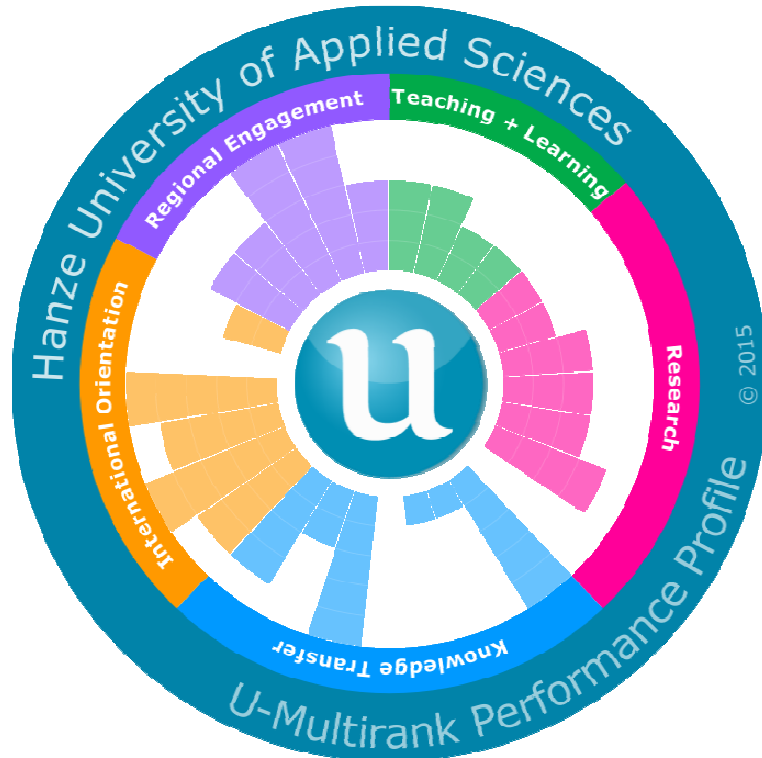
• Research orientation of teaching /programme		1
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## Regional Engagement

• Regional joint research publications	1	1
• Income from regional sources	1	1



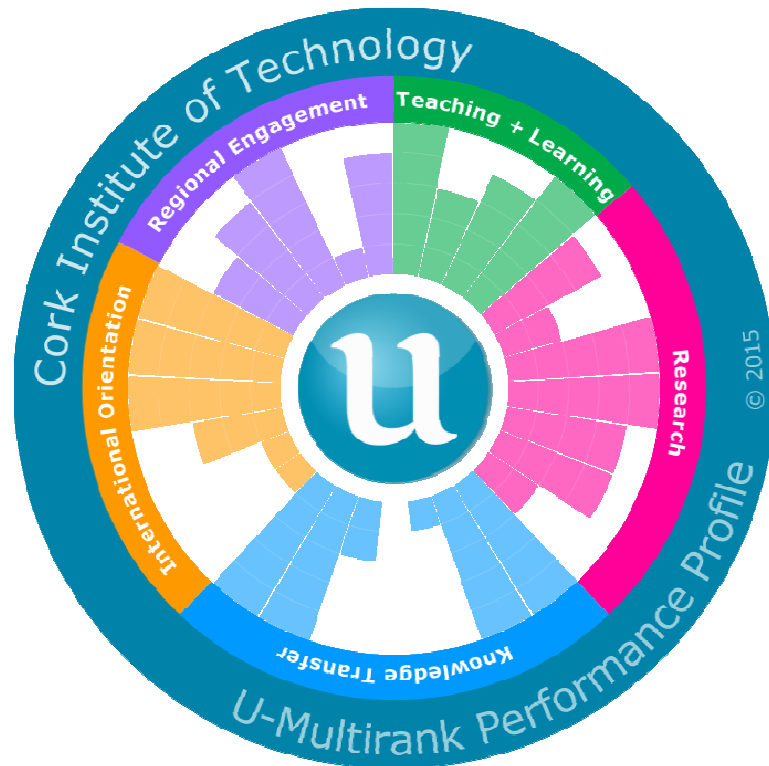
On the institutional level we find quite diverse research profiles of UAS.



Research performance is around average (best: interdisciplinary publications), high income from industry and spin-offs but low patenting. Regional joint publications and income top, international publications low.

Entrepreneurial atmosphere, strong regional orientation but with international mobility, interdisciplinary und innovation-oriented but without own patenting policy, no strong focus on teaching efficiency.

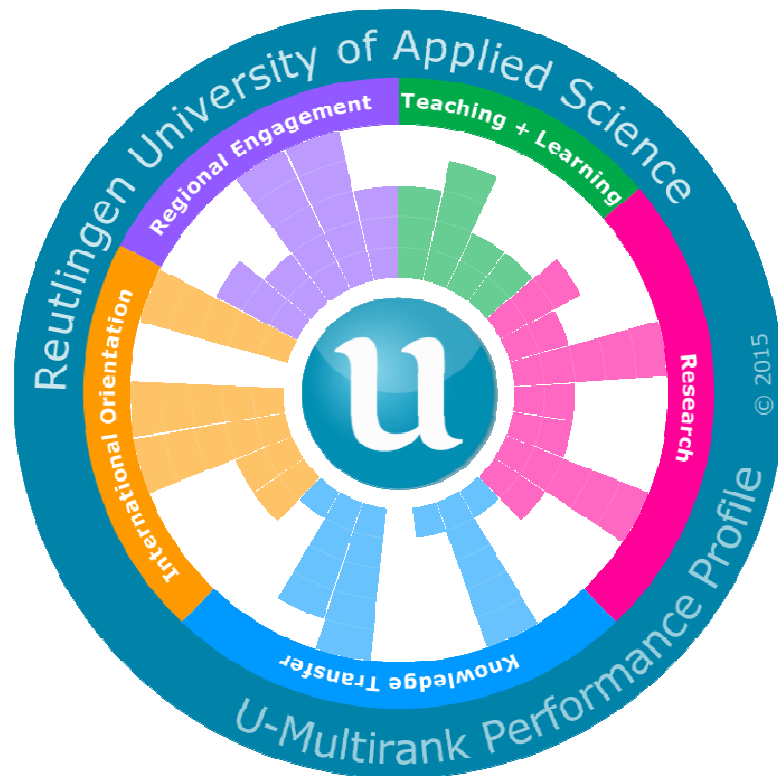
On the institutional level we find quite diverse research profiles of UAS.



Strong research performance (also classical indicators such as citation rate), very high income from industry and many publications with enterprises, but no patents and very few spin-offs. Internationalisation is put into practice especially in publications and doctorate degrees.

Strong research orientation with strong connections to industry, high income from private sources, strong international orientation (attractive for young researchers), also engagement in basic research.

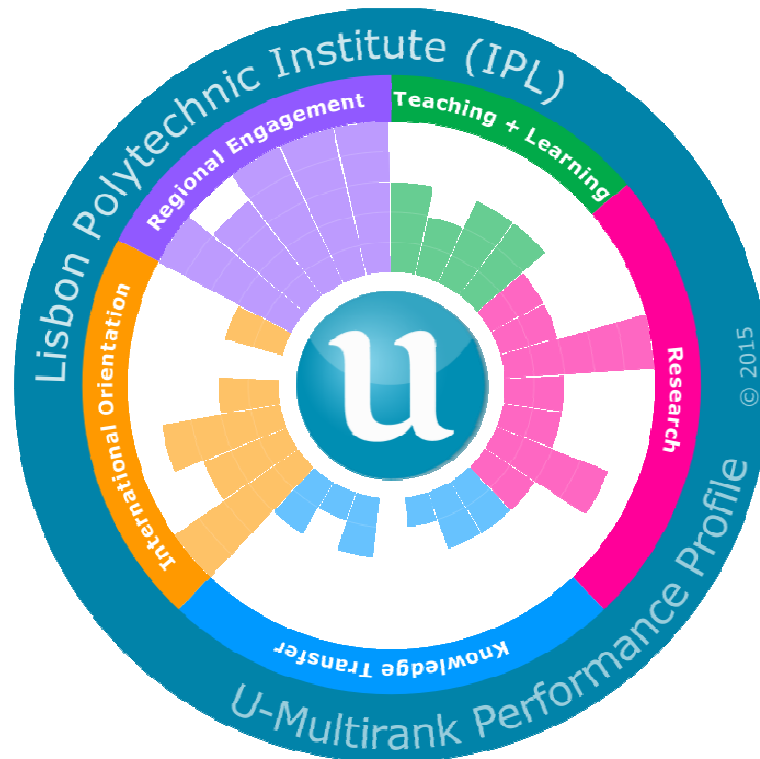
On the institutional level we find quite diverse research profiles of UAS.



Very specific research profile: art related output and interdisciplinary publications. Highest score on international co-publications! Student mobility, international staff show high international orientation too. Knowledge transfer is put into practice with publications with industries, spin-offs and publications cited in patents.

Strong international orientation combined with strength in knowledge transfer and particular research profile.

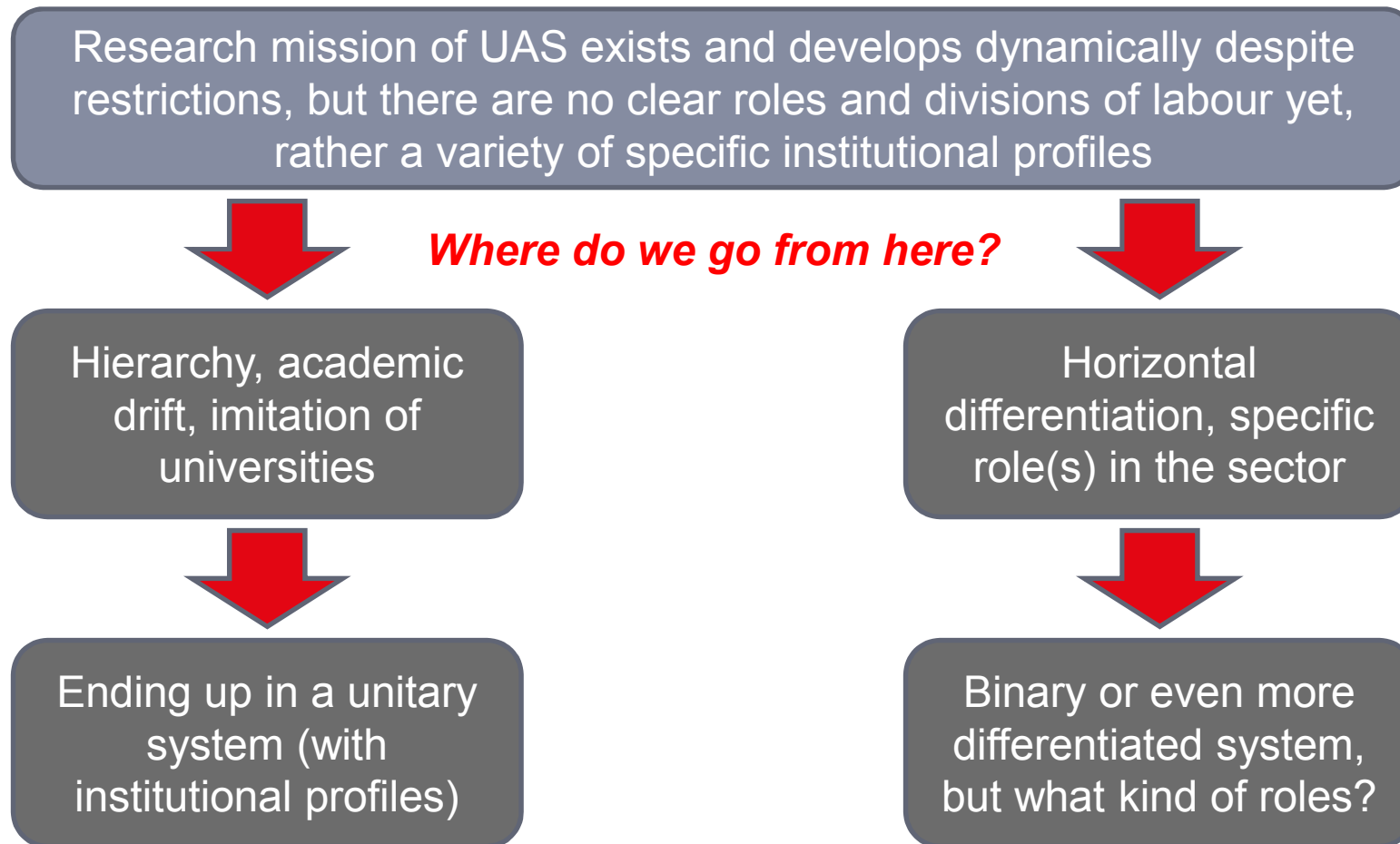
On the institutional level we find quite diverse research profiles of UAS.



Very strong regional engagement, while performance in research and knowledge transfer is only at average. Knowledge transfer with industry is not a core area of this UAS. With exception of foreign language programs, internalization is not really pronounced.

Strongly regionally embedded UAS with a few peaks in other areas of performance (e.g. internationalisation at home).

All this results in a general trend with two potential further developments.



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Most observers see academic drift and unitary systems as a danger.

Institutional monoculture

Costly reputation race for world-class, whereas other functions of HEIs are neglected

Frustration of “2nd class” institutions instead of being proud of their own specific profile

We need world-class systems instead of single world-class institutions. We need a combination of horizontal and vertical differentiation

# For differentiated systems we need a typology of (research) roles for UAS.

## Promotion of discipline

Discipline with orientation on practical problems in the focus (Germany: 1/3 of external research funding goes to engineering, also strong in Ireland and Switzerland), different models for teacher training

## Academisation of discipline

Promotion of new disciplines which are being academised, examples are health care, midwifery or early childhood education (differences between countries)

## Quality of professional education

Research as means to the end of better education, some research involvement as precondition for good teaching, better practice in occupations in education/health/social care (N)



# For differentiated systems we need a typology of (research) roles for UAS.

## Applied research

Special research modes (solving a practical/professional problem, optimization of technical or social processes, evaluation of solutions already realised, consulting, etc.)

## SME connection

Cooperation and strategic alliances with SME (without own research units), solutions for their practical problems (example Germany: new alliance of SME-oriented UAS)

## Advanced Training

Qualification of personnel in all stages, integration with working activity, knowledge transfer

For differentiated systems we need a typology of (research) roles for UAS.

**Regional  
mission**

Specific role in regional development and outreach, regional networks with companies, public authorities and social actors, knowledge transfer in the region

**Social  
engagement**

Partnership with public and private sectors, research aims at understanding the needs of society, strengthen democratic values and civic responsibility

Great variety of rationales to do research at UAS!

Picking one of these roles as standard for a binary system doesn't work.

All these roles are plausible and relevant (and could be mixed, but institutions still need a focus).

The time of a totally clear role of UAS in a binary system is over, autonomy and decentral creativity should not be restricted.

Government could steer into specific role directions (by rules and by funding programmes), but leave autonomy for profiling (incl. university-UAS hybrids), systems are becoming more complex than just binary.

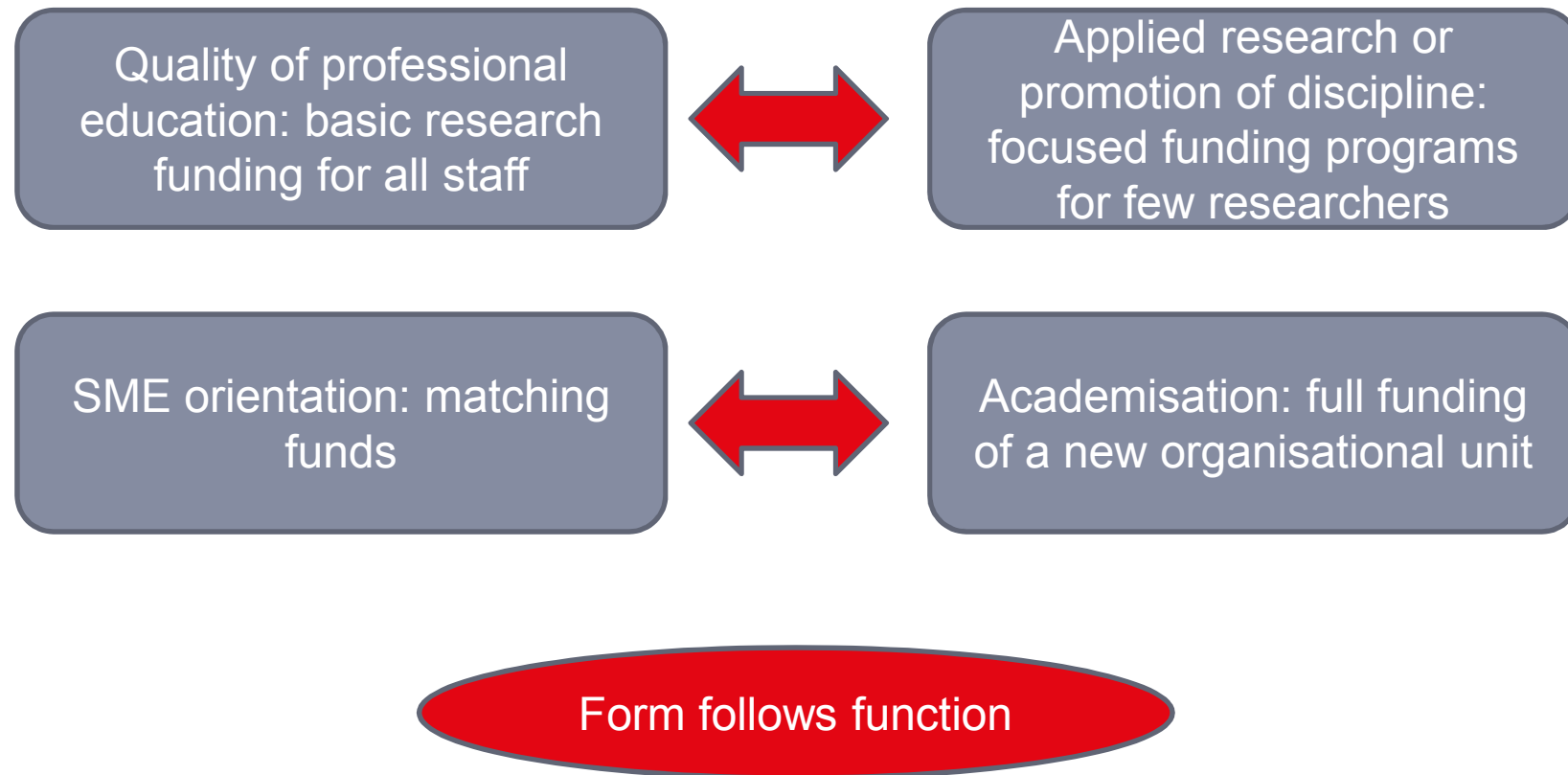
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# Research management and policies depend on the intended role.



European UAS offer a variety of good practices in research policy/management.

Cooperative, Ph.D. awarding research schools (Germany)

*Allow new legal constructions*

- Professors of university and UAS become members of joint research schools, school awards Ph.D. (with logos from all partners)
  - Completely equal roles and rights of all partners
    - Clear criteria for membership

European UAS offer a variety of good practices in research policy/management.

Governmental funding programs  
(Germany)

*Targeted public funding programs (examples)*

- BMBF-Funding Program „Research at UAS“: From 10,5 Mill. € 2005 to 45,9 Mill. € 2015
  - Research Professors in Lower Saxony
- FHprofUnt: Funding of joint projects with enterprises
- Silqua-FH: Focus of UAS-research on social innovation for life quality in seniority
- FHInvest: Funding of strategically relevant equipment an UAS

European UAS offer a variety of good practices in research policy/management.

Knowledge vouchers (Netherlands)

*Funding of cooperation HEI - SME*

- Governmental knowledge vouchers handed out to SME
  - Buy research services from HEIs
  - Small sum of money, but effective incentive



European UAS offer a variety of good practices in research policy/management.

Applied research clusters (German UAS)

*Institutional research policy*

- No general funding of research, internal competitive mechanisms
- Relate competition to target agreements (including criteria, for example regional impact or inter-faculty cooperation)
- Only allow master programmes related to research clusters
- Create collaborative formats beyond faculty borders

European UAS offer a variety of good practices in research policy/management.

Regional transfer (experiences 8 countries)

*Interactions with the region*

- Contract research and consultancy
- Alignment of curricula with regional demand
- Student internships and thesis work, service learning
  - Staff mobility
  - Supporting graduate entrepreneurs
- Including regional representatives in UAS governance

(interaction teaching and research is more than just contracts with industry)

European UAS offer a variety of good practices in research policy/management.

Postdoc career paths (UAS Münster,  
Germany)

*New post-doc position (applied research career path)*

- New positions for the junior staff, a part of them with tenure track
- Cooperation with enterprises in the qualification of teaching personnel

European UAS offer a variety of good practices in research policy/management.

## HRK research map (Germany)

### *Information system about research topics*

- Established by German Rectors Conference
- Identification and description of research focus of UAS
  - Only few key research priorities (up to 3 per HEI)
- Minimum criteria (no. of researchers, research income, patents, publications), evaluated by committee
- <http://www.forschungslandkarte.de/en/institutional-research-priorities-at-universities-of-applied-sciences.html>



These examples (and many more) could be used, Europe needs exchange.

Make use of experiences, more international benchmarking (including U-Multirank!)

Institutional and governmental practices should of course reflect role models

***My final thoughts....***

Evaluation of situation

Awareness of academic drift

Political role priorities

Legal framework + funding

Institut. role priorities

management + policy tools

Transparency (U-Multi-Rank)

Thanks for your attention!

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