



Using Various Missions for Positioning

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Abstract

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Higher Education Institutions (HEIs) need a variety of individual visions and missions for an attractive positioning in a changing society. For an individual HEI, it is necessary to focus on specific performance profiles within the missions of teaching, research, and Third Mission. With the latter, realms such as technology transfer, lifelong learning and science communication, can be used as such performance areas. In the talk, possible performance areas will be outlined, and it will be explained how an individual HEI can use different performance areas for positioning. The findings are based on qualitative and quantitative surveys among rectors and professors from German Universities of Applied Sciences (UAS).

Presentation

Using Various Missions for Positioning

1. Background

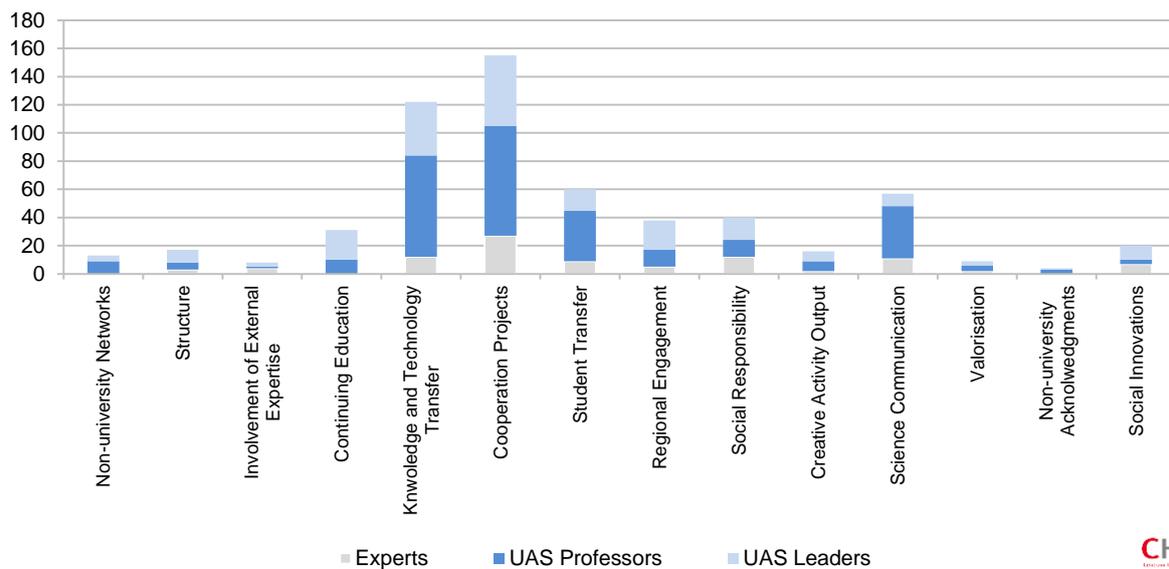
In Germany, more than 400 Higher Education Institutions (HEIs) are part of the higher education system, and the competition for external research funds, outstanding staff and students is increasing. Moreover, needs and requirements from society and economy have been in a constant flow of change. Globalisation, demographic changes and the need for academically trained professionals are some of the dynamics the scientific system has been facing. Not every single HEI is able to cover every demand from society and economy. HEIs, especially smaller ones, have to focus on selected missions. Obvious differences in internal structures and external environments of HEIs lead to different institutional profiles. These challenges also stimulate the readiness to invest in a new HEI strategy, a new mission statement or a new vision of how universities should be positioned within the scientific community as well as in society. In this sense, visions, missions and values are necessary for HEIs to face this challenge. Within different missions, such as research, teaching and Third Mission, universities can develop their own profiles. Otherwise, they have no chance to become visible and competitive in a more and more complex academic market.

The necessity for specific profiles is especially important in countries with a large number of HEI such as Germany. In Germany, only 30.5 % of its 423 HEI are research universities. The rest are universities of applied sciences (UAS) or specialised institutions like colleges of fine arts (Federal Statistical Office, 2014). Since the number of UAS is extremely high, only a profile based on specific visions and missions makes it possible to be visible as an attractive partner for business cooperation or as the best research institution for a specific topic. It is fair to say that while research universities mainly focus on research performance, UAS can choose from a wider portfolio. This is due to the history of UAS. UAS have been founded, primarily in the late 1960s and early 1970s, as teaching institutions with a focus on the work-oriented education of young academics (Kulicke & Stahlecker, 2004). From 1985 onwards, they were also given a mandate to do research (Kulicke & Stahlecker, 2004). Ever since they cover the two core missions of HEI, teaching and research. In addition, activities such as lifelong learning, technology transfer and science communication have also become more important in recent years. These activities can be summarized as “Third Mission” of HEIs (E3M-Project, 2012; Görason, Maharajh, & Schmoch, 2009; Laredo, 2007; Benneworth & Zomer, 2011). The German UAS are especially suited for this Third Mission (Roessler, Duong, & Hachmeister, 2015). This is due to a variety of reasons. First of all, they are focused on applied research. Secondly, one of the entrance qualifications needed for a professorship at an UAS is job experience outside academia for at least three years. This leads to professors who are well connected to society and business networks. In addition to this, most of UAS professors have earned a doctoral degree in academia. Professors thus have a feeling for the needs of society and economy and are also socialised in academia.

2. Research Methods

At first, 40 qualitative interviews with UAS rectors, UAS professors and experts from the areas of research and Third Mission have been conducted. The method qualitative content analysis (Mayring, 2010) was used to draw a picture of the research and Third Mission situation at German UAS. The qualitative Interviews were necessary to work out performance areas in which UAS professors and UAS leaders are already active in. In addition to teaching and research, elements of Third Mission were mentioned. Interviewees realised within their interviews that they already have a lot of experience in areas next to teaching and research. In this sense, one professor said: “I think the term [Third Mission] is wonderful because by giving it a name, it gives a quality to the work I am already doing.”

The following graph is based on all statements of experts, UAS professors and UAS leaders that were interviewed in the context of our research project.



The graph illustrates that dimensions with a close link to research were mentioned in particular such as cooperation projects, knowledge and technology transfer, student transfer, and science communication. In this regard it did not matter if the interviewee was an expert, a UAS professor or a UAS leader. Yet some other dimensions of Third Mission seem to be relevant only for specific interest groups. The involvement of external expertise and continuing education, for example, were primarily mentioned by UAS leaders while outside university acknowledgment and outside university networks were seen as important by UAS professors.

Based on these interviews, different performance areas (or facets of research and Third Mission) were defined.

In a second step, a quantitative survey among UAS professors and UAS rectors was conducted to get a comprehensive insight into the current situation of visions and missions of UAS and to answer the following questions in detail:

- Which visions do the German UAS have for their type of HEI?
- Which missions do they already accomplish?
- What are future activity realms of German UAS?
- Which obstacles do exist at the moment regarding a more intensive profile on research or Third Mission?
- How can the development of concrete profiles in research or Third Mission be supported?

The survey among UAS professors was conducted in three ways: In autumn 2014, in the context of the CHE Higher Education Ranking, computer and nursing science professors were asked to participate in an additional opinion survey (82 UAS professors answered the survey). A call in the member journal ("Die Neue Hochschule") of the Hochschullehrerbund, the professional association of UAS professors, was published. UAS leaders were asked to forward the survey to their professors. 534 UAS professors participated in this way. At all, the answers of 409 UAS professors could be used for the analysis.

The survey among UAS leaders was conducted in early 2015. At all, 84 answers from different UAS could be included in our analysis, which makes 42.2 % of all UAS in Germany. The total number of UAS that could have been included in our analysis is 199, since civil service colleges or other specialised

UAS were excluded. The sample is representative in terms of the size, sponsorship and geographical distribution of UAS.¹

3. Results

3.1 Possible Profiles of UAS

Possible profiles of UAS could be divided into different categories:

- Research profiles
- Teaching profiles (incl. lifelong learning)
- Third Mission profiles

In our project, teaching is not part of the analysis. Instead, the focus lies on research and Third Mission profiles. One of the results is that particularly Third Mission profiles should be divided into subcategories since Third Mission is a large mission and some UAS can, for example, specialise on knowledge and technology transfer while others might be more active in continuing education. Moreover, there are several overlappings between research and Third Mission.

For our analysis, we identified the following facets belonging to research, research/Third Mission, or just Third Mission:

Research Profile:	Academic networks
	Academic research projects
	Up-and-coming academics
	Academic publications
	Academic acknowledgments
Research/Third Mission Profile:	Research projects with business enterprises
	Research projects with civil society
	Student engagement
	Knowledge and technology transfer
	Involvement of external expertise
	Valorisation
	Unpublished research reports
	Creative activity output
	Innovations for business enterprises
Third Mission Profile:	Non-university networks
	Continuing education
	Social responsibility
	Regional engagement
	Science communication
	Non-university cooperation
	Non-university acknowledgments
	Income from continuing education

¹ Representativity was tested with Pearson's chi-square test.

On the basis of these distinctions, possible profiles of a UAS could be identified. These can be divided into eight main categories:

Profile	Definition
High-level Full Performer	A HEI that covers all facets in two out of three missions and that covers most facets in the other mission (at all: 80 % of all facets)
High-level Broad Scope Performer	A HEI that covers all facets in at least one mission and that covers most facets in another mission (at least 4 dimensions in research, at least 7 dimensions each in research/Third Mission and Third Mission)
Broad Scope Performer	At least 80 % in research/Third Mission, a maximum of 70 % in research and 70 % in Third Mission OR 100 % in research/Third Mission, less than 100 % in the other missions OR At least 80 % in research and Third Mission
Mixed Performer	The same degree of activity in all missions
Third Mission Performer	A focus on pure Third Mission activities
Research Performer	A focus on pure research activities
Non-research Performer	Almost no activities in the research realm
Other/Non-focused Performer	No focused activities, a general low degree of activity in each mission

According to these groups, out of 79 UAS

- 17.7 % were High-Level Full-Performers,
- 8.9 % were High-Level Broad Scope Performers,
- 10.1 % were Broad Scope Performers,
- 10.1 % were Mixed Performers,
- 8.9 % were Third Mission Performers,
- 19.0 % were Research Performers,
- 6.3 % were Non-Research Performers, and
- 19 % were Non-Focused Performers.

It has to be noted that different missions co-exist; there are no such UAS that focus only on teaching or research. Neither are there any UAS with a specific Third Mission profile that do not do at least undertake a certain amount of research or teaching. Under these circumstances, it is the flexible interplay of these three missions that creates the individual profile and vision of any individual HEI.

3.2 Current Missions in Research and Third Mission

3.2.1 Current activities in research and Third Mission from the perspective of UAS leaders

There are differences in terms of the size of the UAS: Bigger UAS (with more 5000 students) are much more active in all research and Third Mission activities than smaller UAS (with less than 1000 students). About nine in ten UAS leaders from big UAS answered that their UAS was active in the following realms:

- scientific networking
- non-university networking
- research cooperation with business /economy

- student participation in research and Third Mission
- science and technology transfer
- regional engagement

Leaders from smaller UAS instead gave a much more diverse impression of their current research and Third Mission activities. The most often mentioned realms span the following facets:

- scientific networking (76.9 %)
- non-university networking (85.7 %)
- science and technology transfer (mentioned by 66.7 % of UAS leaders)
- science communication (64.3 %)
- civil research cooperation (61.5 %)
- exercising social responsibility (57.1 %)
- non-university acknowledgment (53.8 %)
- academic publications (50,0 %)

As these two lists illustrate, there are certain missions that are mentioned by most of UAS leaders (such as scientific and non-university networking). While the answers of leaders of big UAS seem to be homogenous, smaller UAS are nonetheless active in a variety of missions.

3.2.2 Current activities in research and Third Mission from the perspective of UAS professors

When asked about their activities in the last two semesters (besides teaching), 74.2 % of UAS professors answered research, followed by academic self-governance (69.2 %), cooperation with partners from business or society (53.7 %)² and science and technology transfer/innovations (39.4 %)³. About one third of UAS professors participated in lifelong learning activities or continuing education (34.3 %) and science communication (30.1 %)⁴. One out of four UAS professors mentioned regional engagement as a realm of activity (24.2 %).

3.3 Visions of UAS

3.3.1 Future UAS activities from the perspective of its leaders

In terms of the future development of UAS, 87.7 % of UAS leaders want their UAS to be more involved in research activities. More than half of the respondents are in favor of more science and technology transfer (76.5 %), projects with non-university partners (75.3 %), more lifelong learning/continuing education activities (74.1 %), regional engagement (59.3 %), and an occupation with social challenges (53.1 %). There is tendency that leaders from big UAS with more than 5000 students are much more active in developing a huge variety of missions, while smaller units of UAS with less than 1000 students concentrate on specific profiles.

3.3.2 UAS professors' wishes for the future profiles of their individual HEI

With reference to the wishes for the development of their own UAS, professors primarily answered that their UAS should strengthen research (66.4 %), science and technology transfer (47.4 %), cooperation with business partners (42.1 %)⁵ and teaching (37.5 %). One third of UAS professors are in favour for a development in the direction of more lifelong learning and continuing education activities

2 This was not asked in the CHE opinion survey.

3 In the CHE opinion survey, technology transfer and knowledge transfer were separated statements. These have been conflated for the analysis, which is a possible error source.

4 This was not asked in the CHE opinion survey.

5 This was not asked in the CHE opinion survey.

(33.3 %). One out of four UAS professors would favour a stronger engagement of their UAS in cooperating with partners from society (25.7 %)⁶ and a stronger regional engagement of their UAS (24.7 %). An enhancement of science communication was mentioned by 17.4 % UAS professors, civil engagement was mentioned by 15.8 %.⁷

3.4 Obstacles for Research and Third Mission at UAS

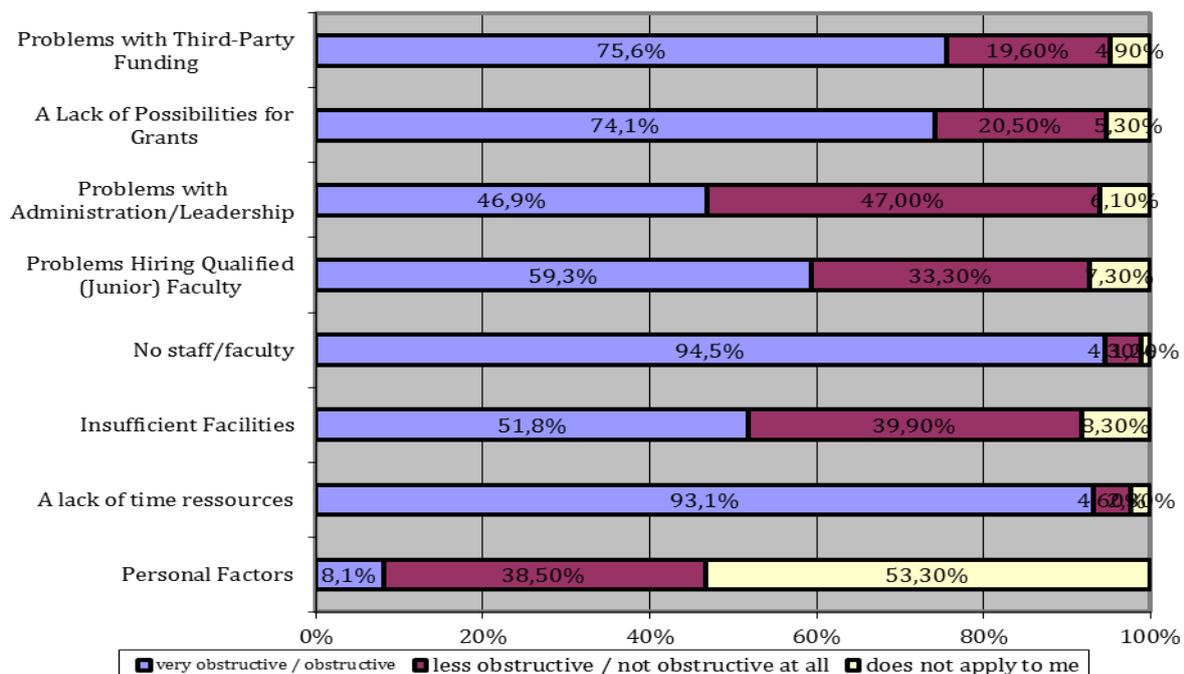
The previous section made clear that UAS leaders and professors want to strengthen research and Third Mission activities at their UAS. Yet there were mentioned a variety of obstacles that will be analysed in the following.

3.4.1 UAS leaders' views on obstacles for research and Third Mission

UAS leaders agree that the main obstacles for research and Third Mission are the professors' lack of time resources (96.2 %), no staff/faculty supporting professors (88.5 %), a lack of possibilities for grants (80.5 %), problems with third-party funding (76.6 %), insufficient facilities (64.9 %), and personal factors of professors (such as no interest in research and Third Mission, or a lack of qualifications) (59.7 %). Every other UAS leader noted that the main obstacles were problems hiring qualified (junior) faculty (48.1 %) and problems with administration (46.1 %).

3.4.2 UAS professors views on obstacles for research

In the case of the research mission, UAS professors identified a wide array of obstacles. On average, for more than nine out of ten professors, a lack of time resources (93.1 %) and the unavailability of staff/faculty (94.5 %) are the main obstacles for doing research. A significant number also mentioned problems with third-party funding (75.6 %), a lack of possibilities for grants (74.1 %), problems hiring qualified (junior) faculty (59.3 %), insufficient facilities (51.8 %) as well as problems with the administration/leadership of the UAS (46.9 %). Personal factors were only mentioned by 8.1 % of the professors.

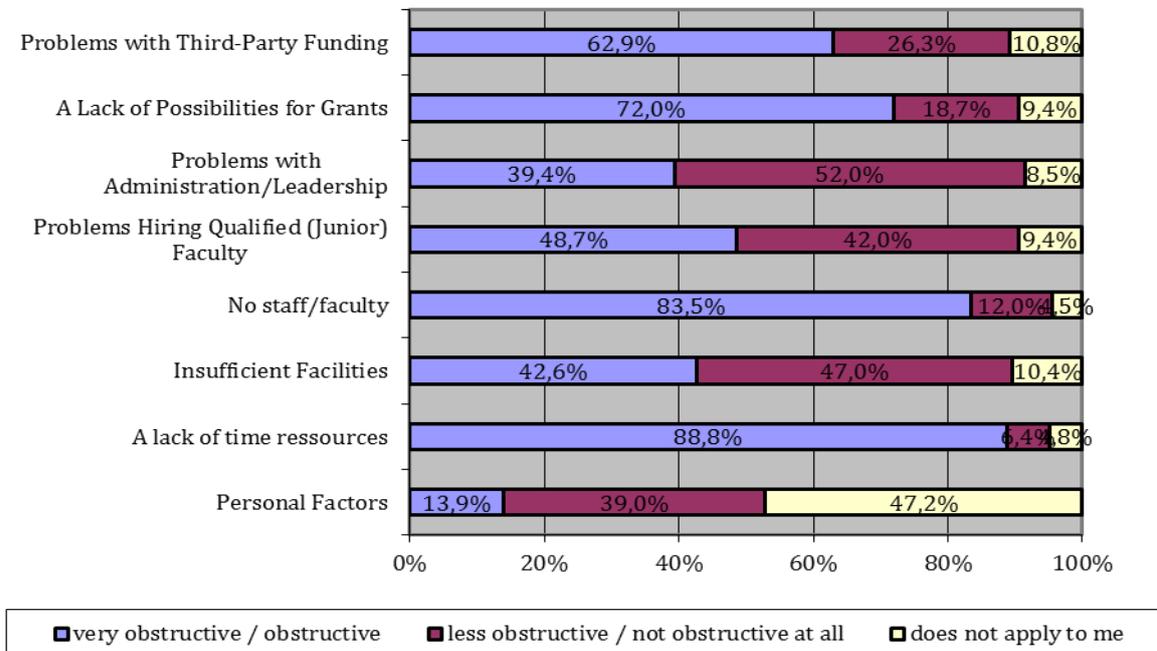


6 This was not asked in the CHE opinion survey.

7 Both were not asked in the CHE opinion survey.

3.4.3 UAS professors views on obstacles for Third Mission

With reference to Third Mission as a mission, UAS professors also identified a variety of obstacles for fulfilling this mission. Just like it is the case with the research mission, the most common obstacles named were the non-existence of staff/faculty (83.5 %) and a lack of time resources (88.8 %).



3.5 Supporting Structures

Besides obstacles, there were also mentioned supporting structures that could help to fulfil the research and Third Mission visions UAS leaders and professors have for their specific UAS.

3.5.1 UAS leaders' views on means of supporting research and Third Mission

A high degree of approval can be seen in the views of UAS leaders on how to support research and Third Mission at their UAS. Almost every UAS leader mentioned the following dimensions:

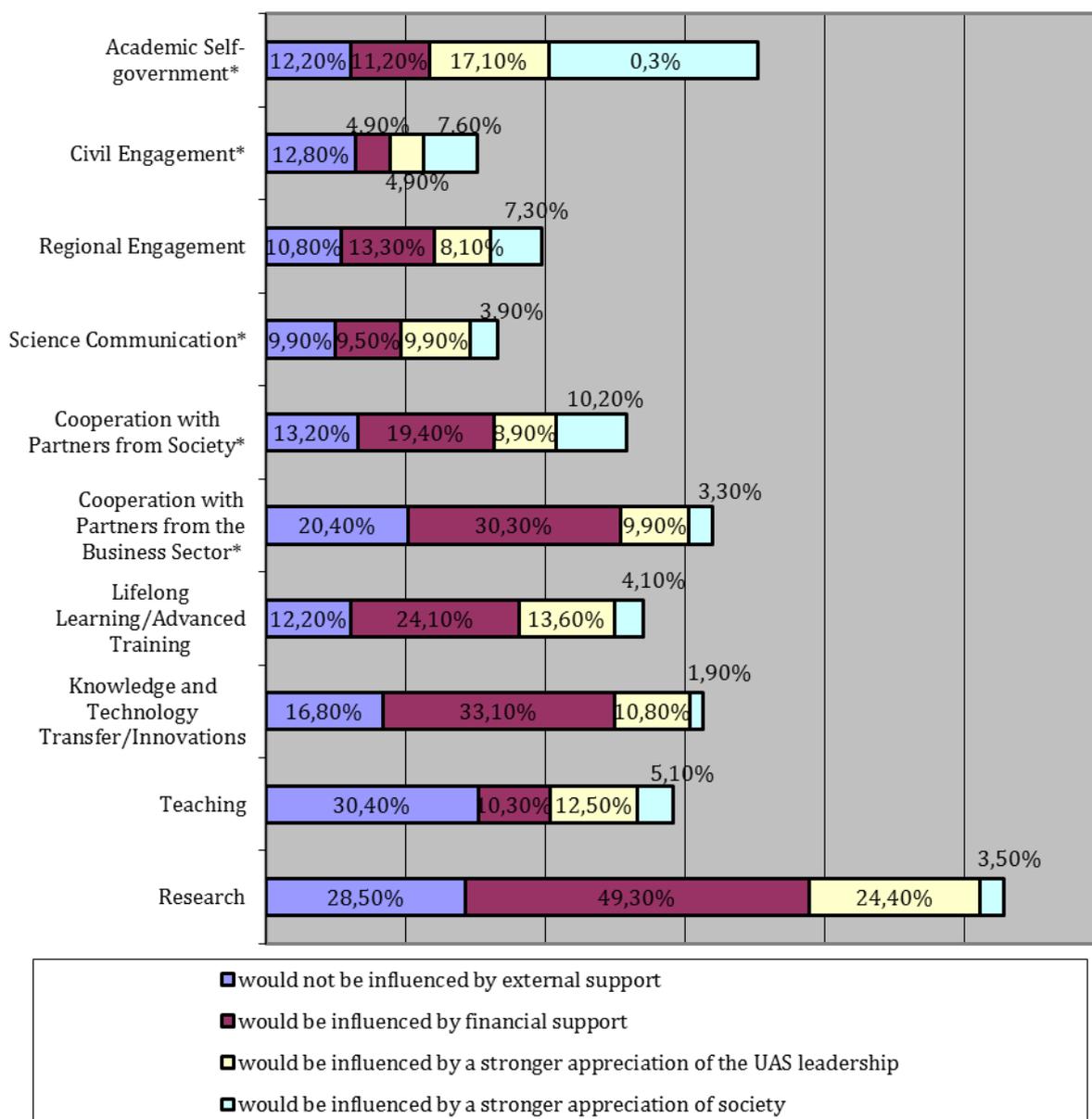
- reducing the teaching load (98.7 %)
- the existence of a spirit of facilitating research and Third Mission at the UAS (94.7 %)
- university means for financing research and Third Mission (96.1 %)
- the federal state's consideration of research and Third Mission (96.1 %)
- the national government's consideration of research and Third Mission (94.7 %)
- providing rooms, laboratories, and equipment (94.7 %)
- centrally provided research infrastructure (94.7 %)
- strategic cooperation with universities, research institutes, business enterprises (94.6 %)
- centrally organised supporting service (93.3 %)
- opportunities for doing a PhD (90.7 %)

Other factors were also regarded as essential such as:

- EU or other international organisations' consideration of research and Third Mission (89.2 %)
- consideration of research and Third Mission through private and public financiers (89,0 %)
- the university leaders' expectation to do research and Third Mission (88.0 %)
- consideration of research and Third Mission in salaries (83.8 %)
- the implementation of research and Third Mission in university strategy (82.9 %)
- allocation of third-party funding by the university (78.7 %)

3.5.2 UAS professors' own future activity plans in the case of enhanced support

The following graph shows the extent individual missions could be motivated with the help of external factors:



It may not come as a surprise that a high number of professors would enhance their own research activities with increased financial support (49.3 %). Yet about one out of four professors each also acknowledged that their own research would not be impressed by an increased external support (28.5 %), but also that they would be more active in research if they got more appreciation from their UAS leaders (24.4 %).

Financial factors were also seen as the most decisive ones in the realm of knowledge and technology transfer/innovations (33.1 %), cooperation with business partners (30.3 %), lifelong learning/continuing education (24.1 %), cooperation with partners from society (19.4 %), and regional engagement (13.3 %). Yet there are also other factors that could influence the extent different UAS missions are pronounced. In the realm of science communication most professors estimated that their own activities would not be influenced by external factors or that their activities would increase

if the UAS leadership would appreciate these activities to a larger degree (9.9 % each). On the level of civil engagement, 12.8 % and on the level of teaching, 30.4 % stated that their own activities would not increase if there was any additional external support. On the level of academic self-regulation, 17.1 % would increase their activities if their UAS leaders would appreciate these activities.

For a significant number of professors, a higher appreciation from UAS leadership would not only increase their activities in research (24.4 %), science communication (9.9 %) and academic self-regulation (17.1 %), but also in teaching (12.5 %), knowledge and technology transfer/innovation (10.8 %) and lifelong learning/continuing education (13.6 %).

One out of ten professors stated that their level of activity in the realm of cooperation with society would increase if there was a higher appreciation of society for this kind of activity (10.2 %). There is a small influence of societal appreciation on the other mission dimensions, from 1.9 % in the realm of knowledge and technology transfer/innovations to 7.6 % in the realm of civil engagement.

It is also noteworthy, for every mission at least one out of ten professors indicated that the degree of their future activities in this mission would be unaffected by external support.

4. Reflections on the Findings

The results of the analysis show on the one hand that the way to a profile based on all three missions is difficult. Moreover, the results prove that the HEIs already use a broad range of facets. Nevertheless, obstacles emerge on the way to new profiles. These can be classified into internal and external factors. Internal factors are, for instance, a too large amount of teaching obligation, the lack of equipment or an administration that is not yet laid-out for missions like technology transfer or EU-research projects. External factors are for example the lack of funding for applied research or legal restrictions. The surveys also gave hints and ideas on how to respond to these obstacles. Possibilities are, for instance, providing central administrative support, third party funding applications, reducing the teaching obligation load for the professors or establishing central institutions for research and Third Mission.

As explained beforehand, it is necessary for HEIs to develop an own profile. HEIs can work out this profile by emphasising their performances. They can concentrate on at least one out of three missions (teaching, research, Third Mission) and create an own vision of how they want to be seen on these missions.

The following steps can help UAS leaders to find their own position and to reach this aim, based on the findings of the project. This is the first preliminary development of a how-to manual for finding a position. Further research (and feedback) in the project will, of course, sharpen the facets and the steps.

Step 1: Where do you want to go? Do you already have a basic idea of your intended profile?

Step 2: Indicate in the following matrix the areas where your university is already active. Insert "1" when you are already (very) active in the facet. Sum up all points.

Vision / Mission	Facet	Is your UAS already (very) active in this facet?
Research Profile:	Academic networking	
	Academic research projects	
	Up-and-coming academics	
	Academic publications	
	Academic acknowledgments	
<i>---> Points in the area "Research Profile" (max. 5):</i>		
Research and Third Mission Profile:	Research projects with business enterprises	
	Research projects with civil society	
	Student engagement	
	Knowledge and technology transfer	
	Involvement of external expertise	
	Valorisation	
	Unpublished research reports	
	Creative activities' output	
	Innovations for business enterprises	
<i>---> Points in the area "Research and Third Mission Profile" (max. 9):</i>		
Third Mission Profile:	Non-university networking	
	Continuing education	
	Social responsibility	
	Regional engagement	
	Science communication	
	Non-university cooperation	
	Non-university acknowledgments	
	Income from continuing education	
<i>---> Points in the area "Third Mission Profile" (max. 9):</i>		

Step 3: Check if you already have a clear profile. Consult Page 6 for an explanation of the traits of each performance group.

- High-Level Full Performer
- High-Level Broad Scope Performer
- Broad Scope Performer
- Mixed Performer
- Third Mission Performer
- Research Performer
- Non-Research Performer
- Non-Focused Performer

Step 5: Compare your intended profile with your performance profile. Does it fit together? If necessary, ask yourself if your intended profile is realistic or if it could be better to strengthen another area where you are already good at.

Step 6: Face the obstacles!

Step 7: Have a look on the possibilities how to support research or Third Mission. These ideas could also help with regard to other profiles. Could you realise at least some of these ideas?

5. Conclusions

This paper dealt with the question how to implement a mission and how to use this for positioning.

The study "Using various missions for positioning" closes some lack in research about the missions of HEI. It explains the need for profiling and how HEI can deal with this need. To be able to use existing missions for profiling it is necessary for the HEI to answer the following questions:

- What can be my vision?
- Which mission do I need for that vision?
- Which obstacles do occur?
- How can I respond to these obstacles?

The study gives hints on how to answer these questions. Germany is a good example for how HEIs can deal with the changing needs and requirements of the society and economy. In total, more than 400 HEI exist, more than 50% belong to the special type UAS. This type of university is in many ways qualified for differentiated profiles. The UAS are already emphasizing plenty of visions and missions. Their experience can be used by other HEI for the development of own visions and hence for own profiles.

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