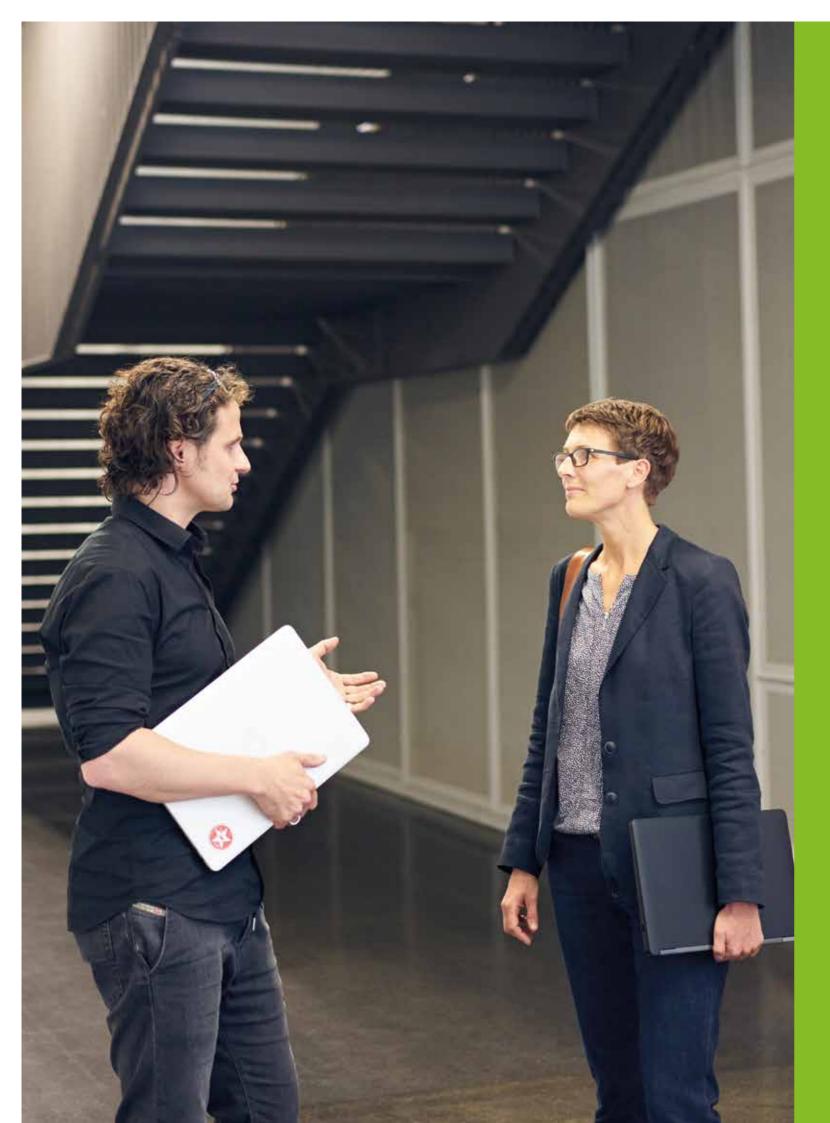


TRANSFER STRATEGY of the University of Wuppertal

JANUARY 2017





1. INCORPORATION IN THE MISSION STATEMENT AND IMPLEMENTATION OF THE FORMULATED CLAIM

In its mission statement adopted in 2009 and updated in 2015, the University of Wuppertal incorporated an extended understanding of transfer as a third central mission ("Third Mission") – alongside its traditional core university work in research and teaching. The University, which has grown very successfully and with enormous dynamism in recent years, bases its identity on this.

Inter alia, the mission statement declares: "The University of Wuppertal undertakes leading international research in different fields. (...) It attaches particular importance to education by providing critical reflexivity, social judgement and an ability to act. It educates employees and students in a highly qualified manner for their future work in a democratic society, academia and other professional fields. (...) At the same time, it acts with an awareness of its regional relevance, particularly in the area of (...) transfer. Overall, it is concerned with understanding and shaping society, culture, technology and nature and its change."

Furthermore, it then stresses that, alongside developing numerous individual measures, the University of Wuppertal "cultivates systematic dialogue with a broad public, is expanding its involvement in regional networks to support teaching, research and transfer and, in this context, seeks cooperation with private, intermediary and public partners within a regional environment." This involves, inter alia, that "in the context of promoting life-long learning (...) attention must be directed at institutions along the entire education chain – starting with school, further education and university courses for senior citizens, often referred to as the "University of the Third Age".

This undertaking, formulated in the mission statement, is today embodied university-wide – not least thanks to a discourse held at the time with broad-based involvement from the entire university. The transfer strategy derived from this and presented here was also developed with the active involvement of many very different organisation members and bodies. It is integrated in the strategic development of the entire organisation and thus includes systematic links, above all, to the strategic goals and actions set in research and teaching.



2. TRANSFER GOALS IN THE CONTEXT OF A "THIRD MISSION"

Behind the extension of the traditional understanding of university knowledge transfer outlined above is the conviction that, compared to earlier beliefs, present-day civic society can and should be supported by academic life in many more areas. The latter is the core objective of the University of Wuppertal's transfer strategy. Accordingly, a number of new support and discourse formats were developed in recent years, which focus specifically on economic, administrative, political, social and cultural contexts. Current higher education legislation (such as the North Rhine-Westphalia University Future Act), financial support programmes (e.g. the EU "Horizon 2020" programme) and other public initiatives (including the German national "Innovative University" competition), strengthen the University of Wuppertal in its conviction that this extension of the target range is appropriate to meet changing social conditions.

Fundamentally, in a civic society there is a need for an awareness of the common good, as well as the good of the individual members of society. To this end, it is imperative to uphold what has proved itself over years (tradition), replace what has served its time with better solutions (criticism and improvement) and, at the same time, pursue our approach towards the bigger picture of a social order desirable for the future (utopia). The university can make a valuable contribution to all three tasks by its fact-based involvement in discourses, through intelligent initiation and configuration of consultancy processes, and through its evaluation expertise, largely independent of external interests and, time and time again, very specifically through innovative solutions.

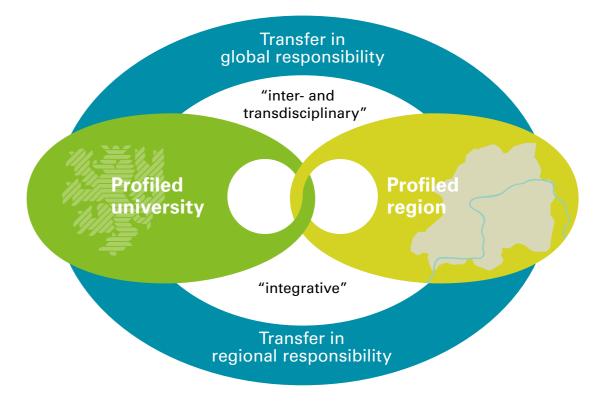
The University of Wuppertal views innovations as new answers to existing or changed social, cultural, economic, political, technical and natural challenges. These "new answers" might be ideas, theories and suggestions for discussion, as well as specifically new products, processes or organisational approaches to a solution. The University adopts a "glocal" approach in view of internationally converging problem structures, meaning that it feels duty bound to the guiding principle of "global citizenship", even if its transfer actions are directed not only, but predominantly at its regional surroundings. Transferable goal systems, such as the United Nations' Sustainable Development Goals, are regarded as being helpful for the operational organisation of the aforementioned orientation towards the common good. This highlights how multi-dimensional, interdisciplinary, transdisciplinary and globally connected the individual spheres of activity of a "common good" agenda are. At the same time, it highlights

which points represent specific starting points for teaching and research at the University of Wuppertal. The conviction prevails that discourse and ongoing collaboration with partners in business and society can only be successful if intra-university and non-university formats are developed, which permit a contemporary unit consisting of research, teaching and transfer, beyond the unit of research and teaching traditionally required. Success, in this context, is judged as being mutual benefit for the groups involved along the jointly developed goal systems: therefore groups of researchers, lecturers and students, on the one hand, and social interaction partners, on the other.

Apart from pan-regional collaborations, with regard to issues that specifically affect the University's regional relationship, the University of Wuppertal directs its transfer action to the specifics of the Bergisch region, wherever it appears meaningful in the interests of both parties. The Bergisch region includes at its core, the region known as the 'Bergisch City Triangle'. consisting of the cities of Wuppertal, Solingen

and Remscheid. However, cooperation projects are also organised in the Upper and Lower Bergisch region as far as Cologne in the south, Düsseldorf in the west, Bochum and Essen in the north and Hagen in the east, on a project by project basis. The challenges that arise from the polycentricity, heterogeneity and strong urban-rural disparities of the region are consciously included. The history of the core region, with its striking religious-cultural, political and industrial traditions, which still today continues to struggle with the challenges associated with a profound structural change (migration, de-industrialisation etc.), also plays a key role in cooperation between academic life and business and the formulation of common goals.

FIGURE_01 | GUIDING PRINCIPLES OF THE UNIVERSITY'S TRANSFER APPROACH







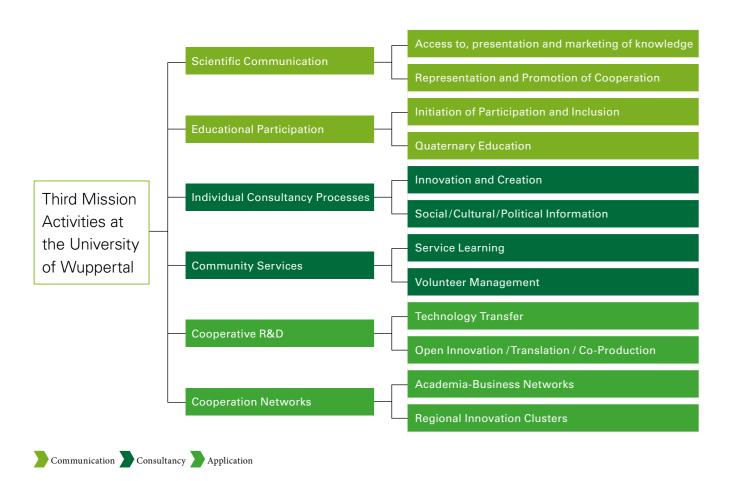
It is essential to develop, first and foremost, a common understanding of transfer mechanisms and corresponding spheres of activity and options on route to implementing the outlined transfer goals. In addition, a transfer model, such as this, also involves clear ideas about interlinking transfer with research and teaching, both to embed it organisationally and for quality assurance.

The basal categories within transfer mechanisms include cognitive processes, such as understanding, questioning, deconstructing and "reframing" relevant realities of life and coping strategies. These processes are found in social, cultural and political relationships, as well as in economic and technical contexts. To set them in motion, the University will contact non-university partners from the different areas

and offer its services as a contact. Ideally a differentiation is made between three modes of contact, which differ in their reach – based on a policy document by the Science Council (Science and Technology Transfer, 2016, page 21): (a) representatives of the University communicate in different ways with non-university partners, (b) they are on hand to offer solutions to problems and queries and (c) they supervise the implementation of concepts in, as it were, "practice" with academic expertise. The portfolio of Third Mission activities, already developed and maintained by the University of Wuppertal, can be systematised on the basis of these three modes (cf. Figure_02):

It will be supported by the University's press and PR work within the arena in which academia seeks communication

FIGURE 02 | SYSTEM OF THE UNIVERSITY OF WUPPERTAL'S THIRD MISSION ACTIVITIES



knowledge. Academic and creative departments, working with other functions concentrated in the University Communication Office and other functional office in the University of Wuppertal, are committed to making public their base expertise in a comprehensible manner. This entails the University being available in an appropriate form to find suitable partners and be identified by them as a contact. The University of Wuppertal also regards its task as being to increase participation in education among under-represented groups in society and groups insufficiently considered in other educational contexts. This includes, inter alia, offerings in political education work and university courses for senior citizens. The latter enables a growing number of older people to become part of newer developments for their own benefit and for the benefit of society. However, academic further education in general will also be expanded. The focus will always be on complementing the regional knowledge society where the University of Wuppertal can make a specific contribution - taking into account the cultural, religious, social, political and economic needs of the Bergisch region. Alongside from Central Student Advisory Services, the Centre for Further Education in particular plays a key role in this arena. The University of Wuppertal is also the majority shareholder of a voluntary further education society, which also enriches the corresponding offering. In this context, it continues to be worth mentioning the cooperation with the Junior Uni Wuppertal, which is unique in Germany in this form and addresses a large percentage of children and young people from educationally disadvantaged strata in society, as well as the courses offered by the Bergisch Technical College (BeST).

with professional business knowledge or social everyday

On the one hand, Entrepreneurship Support is assigned to the higher-level "Consultancy" sphere of activity, which also includes the promotion of social entrepreneurship (also within the ENACTUS initiative) alongside traditional support for start-ups. Responsibility for this area lies partly with the Schumpeter School of Business and Economics, which offers a comprehensive, interdisciplinary foundation qualification programme as well as consultancy services with its founding chairs and institutes. As a shareholder of W-Tec, the Wuppertal Start-up and Technology Centre, the University also provides its own incubator for its successful start-ups. Secondly, the University provides consultancy in the wider sense in the context of community services. Appropriate formats are developed with the involvement of all schools in various ways and require political, regional, social, cultural and

religious sensitivity. A particular focus is on Service Learning and in the provision of consultancy for voluntary regional initiatives (Community Outreach). This particularly entails the cross-fertilisation of academic organisational knowledge and a sensitisation to the importance of the local involvement of voluntary and creative bodies and cultural diversity. Consultancy of this nature is provided, inter alia, by the Institute for Democracy and Participation Research (IDPF), which provides support to municipal or regional decision-making processes and influences the objectification of debates and the reinforcement of public acceptance.

The "Application" sphere of activity finally includes "cooperative research" and "cooperation networks". Cooperative research is provided, firstly, by traditional technology transfer. The Academic Transfer Office plays a mediating role in this as a further functional office of the President. It also includes the direct involvement of the various social groups in the University's research activities and the development and provision of research results to solve specific problems - whether in terms of open innovation, socio-scientific public policy and co-production. Through a cooperation partnership with the Interdisciplinary Centre for Transformation Research founded with the Wuppertal Institut für Klima, Umwelt, Energie gGmbH, the University of Wuppertal is investigating new formats for equal "co-production" of knowledge between experts and stakeholders in civic society. The "Cooperation networks" sphere of activity involves setting up, maintaining and further developing practical contacts within partnerships in academia-business networks, such as the Bergisch Skilled Worker Alliance or the Bergisch Transfer Group, as well as within innovation clusters. The University of Wuppertal is represented in the most important of these clusters by institutes (as research partner, think tank and network promoter) and also partly by the foundation chairs financed by the partners.





up to 3 interdisciplinary centres per profile line

At the core of the University of Wuppertal's transfer strategy is a particular focus by Third Mission activities on the University's research and teaching profile. The profile is roughly outlined by six lines, known as profile lines, also defined in the University's mission statement, which run across the schools and their departments. The key corridors for interdisciplinary cooperation can be seen from the matrix thus produced (cf. Figure_03). Two to three Interdisciplinary Centres (ICs) have been set up per focus area to motivate the academics within the different departments to cooperate along this profile, define specific projects and create exchange forums.

The transfer strategy also provides for the creation of specific participation options for the university partners according

FIGURE_03 | PROFILE MATRIX EMPHASISING PROFILE LINE V AND THE DEPARTMENTS COOPERATING THEREIN

PROFILE LINES	English Language and Literature German Language and Literature	History Classical Philology / Latin Music Teaching	Philosophy Romance Languages and Literature	I heology (Prot. / Cath.) Education / Educational Theory	Geography	Political Science	rsychology Sociology	Sports Science	Business Administration	Law	Economics	Chemistry	Mathematics and Computer Science	Physics	Architecture Civil Engineering	Printing and Media Technology	Electrical Engineering Computer & Information Engineering		Safety Engineering	Industrial Design/Media Design Art and Design Technology	School of Education	ICs
l. Material, Experimental, Simulation and Mathematica Methodology Modules	: :	: :	: : :'	: :	ľ	ľ	Ī		ľ	ľ			. :	ľ		. :	:	T	T		T	
II. Education, Knowledge and Culture in Social Contexts	••••••••	•••••	•••••••	••••				••••••					••••••			••••••	····•					
III. Healthcare, Prevention and Exercise				· · · • · · · · · · · · · · · · · · · ·																.		
V. Language, Narration and Editing			••••••••					••••••		· · · · ·			••••••			••••••	.			.		
V. Environment, Engineering and Safety						J					h			المعالد						J		
VI. Entrepreneurship, Innovation and Economic Change																						

to the highlighted importance of the cross-departmental themes of the six profile lines. The most appropriate mix of measures in each case, depends on the specific themes, research phases, project configurations and other parameters.

The departments (vertical green bars), preferably working together in inter- and transdisciplinary projects, can be seen from the example of the "Environment, Engineering and Safety" profile line (horizontal green bar): in this case, Geography, Political Science, Sociology, Business Administration and Economic, Law, Biology, Chemistry and Physics, Architecture and Civil Engineering, Electrical Engineering, Mechanical Engineering and Safety Engineering, Industrial Design and the School of Education. The Interdisciplinary Centres responsible for this profile line include the important role played by the aforementioned Centre for Transformation Research (TransZent). University departmental representatives collaborate with the Wuppertal Institut für Klima, Umwelt, Energie gGmbH within its framework. In terms of content, the exchange between Social Sciences, Economic Science and Nature, Technology and Design Science in particular plays a key role.

Interdisciplinary departmental combinations and transdisciplinary partnerships can be outlined in a similar way for the other profile lines, which will regularly result in pioneering projects. Depending on the theme, the development of transfer projects even far beyond the regional reference originally outlined seems very likely.





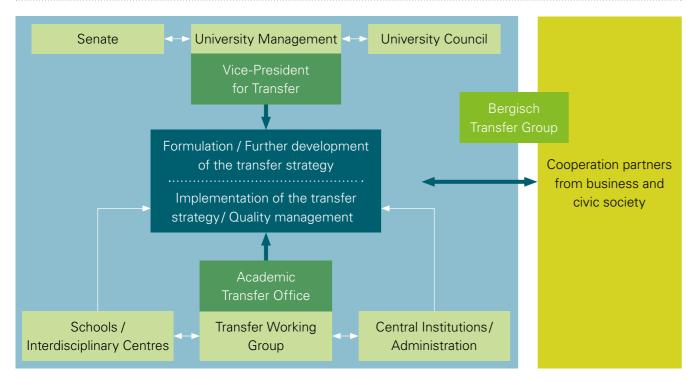
Ultimate responsibility for the implementation, quality control and further development of the transfer strategy lies with the Management of the University of Wuppertal. Its role is to sensitise, motivate, bring together transfer partners, develop long-term cooperation structures, promote specific Third Mission projects and ensure measure-specific impact analysis. In doing so, it is supported by the functional offices, central institutions and administration. Key roles in this structure are played by the Academic Transfer Office, University Communication Office, Central Student Advisory Office and the Centre for Further Education including the Careers Services which resides there. There are a number of interfaces and initiatives to the Schools and Interdisciplinary Centres, functionally defined by the academic-centred character of the Third Mission.

The Academic Transfer Office, within the specific remit of the President's Office, primarily the Vice-President's Office for Transfer, is called upon to thematically record the relevant transfer activities and make them available for internal and

external communication. The specific spheres of activity and action portfolios, as well as the partners involved, are defined along the individual project themes and integrated into an ongoing quality management system. The Academic Transfer Office works closely with the "Transfer Working Group" on this. The latter is made up of representatives from all areas of the University and provides stimulus for the ongoing further development of transfer and accelerates the diffusion of new developments into the University (cf. also Figure_04).

Generally, the serious need for creativity and innovation with Third Mission activities requires a governance structure and management system, which places value on a high degree of freedom and free will. In view of the postulate governing all universities to utilise funding in a task-orientated and economical manner, it is, at one and the same time, essential to maintain a profound overview of activities and adequate information on relevant cost structures. This can be difficult in individual cases, as experience has shown, as Third Mission activities on the one hand occur as "add-on products" and/or

FIGURE_04 | ORGANISATIONAL CHART OF RESPONSIBILITIES AND PROCESSES



at the intersection of normal research and teaching activities. On the other hand, primary and voluntary involvement by the individual Third Mission stakeholders can overlap. In addition, the output side, above all, is reluctant to perform conventional evaluation analyses, as contributions to improving the common good in society can generally only be justified in the long term and more so in qualitative respects.

However, a qualitative record can permit adequate quality management. Obstacles in the implementation of Third Mission activities, for instance, can also be identified in this way. This experience can be used to improve the incentive scenario and also gain additional stakeholders.

Commonly used documentation and assessment instruments in

the Academic Communication Office include the recording of feedback about activities in the public media, demand analysis and surveys.

The Academic Advisory Office at the University of Wuppertal is concerned with the transparent documentation of consulting services, the roles and responsibilities of the respective partners, the data and methods used and the results and their possible publication. The sheer number of orders accepted, the reputation of the client, but more so feedback about results achieved from the public can served as indicators of quality.

With regard to the Cooperative Application of Academic Results, the number of cooperation agreements with business partners and the level of external funding obtained for contract research, for example, can be documented. Moreover, the number of inventions by University members of staff, the number of patents, the level of licensing fees raised or even the number of start-ups supported by the University can be used as indicators. Furthermore, case studies can be used specifically with unorthodox or quantitatively unrecordable settings to obtain qualitative evidence in this manner.

With all three transfer categories, it is also essential that the deployment of resources is transparently documented and – where possible – an impact analysis performed. Only by careful analysis of completed transfer projects can conclusions be drawn for the further development of the transfer strategy overall, specific support structures derived and undesirable developments avoided in future. Examples of support

that the University of Wuppertal can offer include the specific matching of suitable stakeholders (e.g. in person or via a database of researchers), the provision of meeting space, the implementation of a culture of appreciation of transfer services (transfer price etc.), access to monetary funding (e.g. by fund-raising), the specific qualification of young talent, the establishment of regional platforms and networks and the creation of space to test innovative cooperation formats

Ultimately it requires support by appropriate legal instruments particularly to effectively set up and apply these innovative formats. The University of Wuppertal generally attaches importance to its transfer projects run in conjunction with non-academic businesses, like its research projects, having high ethical standards with regard to protecting human dignity and the autonomy and self-determination of the stakeholders involved. If in doubt, the President will call upon the Ethics Commission of the University of Wuppertal to issue a statement with recommendations for ongoing proceedings. Depending on the case scenario, the University's Compliance Officer can also become involved. The aim is to move away from case-by-case assessments in time and use the growing experience gained from specific projects to derive a code of rules and regulations for good academic communication, good academic consultancy and good practical cooperation.

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