



Transfer strategy 2025  
**Making knowledge  
socially effective**

**Technology**  
**Arts Sciences**  
**TH Köln**



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# 1 Introduction

The renaming of Fachhochschule Köln/Cologne University of Applied Sciences to TH Köln – University of Applied Sciences (TH Köln) on September 1, 2015 and the associated new self-image of the university necessitated an analysis focusing on coherence and the further development of the transfer sector. This "Transfer Strategy 2025" of TH Köln is the result of an intensive internal evaluation and development process, which was initiated in 2016 by the Executive Board of TH Köln.

As early as 2013, TH Köln was one of the first universities of applied sciences in Germany to adopt a knowledge and technology transfer strategy.<sup>1</sup> The concept of transfer defined therein concentrated on knowledge and technology transfer with companies and institutions with the leitmotif "Achieving innovation through co-operation". The goals and planned measures set out in this strategy formed the basis for extensive internal and external analyses of transfer activities throughout the university. An intensive dialog with the faculties, the central scientific institutions and the university administration (cf. Chapter 3) provided a differentiated picture of the status quo which showed that the range of transfer activities of TH Köln already extends well beyond a classical, unidirectionally oriented understanding of transfer. A new, common transfer concept was therefore developed with stakeholders from all parts of the university (cf. Chapter 2), which led to new strategic and operational goals for the transfer of ideas, knowledge and technology (cf. Chapter 4) as well as an agreement on suitable evaluation tools and monitoring procedures (cf. Chapter 5). The contents of the present transfer strategy were discussed and reflected upon with the Standing Commission for Research and Knowledge Transfer, the University Conference, the Senate, the University Advisory Board and the Board of Trustees of TH Köln. The "Transfer Strategy 2025" was adopted by the Executive Board of TH Köln on 02/08/2017 in agreement with the Senate.

<sup>1</sup> Cf. "Wissens- und Technologietransferstrategie 2020", published by the Executive Board of Fachhochschule Köln/Cologne University of Applied Sciences (2013).Source: [https://www.th-koeln.de/mam/downloads/deutsch/forschung/wissens\\_und\\_technologietransferstrategie.pdf](https://www.th-koeln.de/mam/downloads/deutsch/forschung/wissens_und_technologietransferstrategie.pdf) (01/24/2017)

## 2 Extended understanding of transfer: Making knowledge socially effective

TH Köln sees itself as a "University of Technology, Arts and Sciences". It is an internationally oriented and regionally anchored university, which fulfills a societal mission with its distinctive research capabilities and forward-looking teaching concepts: making knowledge effective for civil society, economy, culture and politics.

TH Köln therefore regards the transfer of ideas, knowledge and technology as a core task anchored in research, teaching and continuing education for the science-based advancement of society. Based on its core values of "plurality", "open-Mindedness", "internationalization", "cooperation", "quality" and "relevance", TH Köln is expanding its legal mandate for knowledge transfer with this understanding.<sup>2</sup> It represents an extended concept of transfer that defines transfer processes as complex exchange relationships between research institutions and stakeholders from civil society, economy, culture and politics.<sup>3</sup> These relationships work reciprocally and shape the respective areas: Insights from the scientific world change civil society, economy, culture and politics. Insights from civil society, economy, culture and politics enrich and expand scientific approaches.

In order to meet the social, technological, cultural, ecological and economic challenges of our time, transfer must be conceived as a multidirectional and recursive practice that involves co-operation on issues and solutions at eye level. If research and development plans take the respective environment into account and involve external stakeholders from the outset so as to jointly plan necessary changes, their social acceptance and impact will increase sustainably. When learning and working in the professional and academic world evolve into an increasingly integrated system, practice-oriented higher education is in a better position to meet the needs of ever more rapidly changing occupational fields. Successful transfer concepts link experiences from the professional and academic worlds and promote both academic education and competence development through problem-based, project-oriented and research-based learning. Research and teaching are therefore required to enable transdisciplinary work and generate social effectiveness, and thus, true to the leitmotif of TH Köln, "shape social innovation together".

<sup>2</sup> North Rhine-Westphalia's legislator assigns universities and universities of applied sciences "tasks of knowledge transfer (in particular scientific further education, technology transfer)". Cf. Section 3 (2) of the Higher Education Act of the State of NRW.

<sup>3</sup> TH Köln considers its strategic orientation confirmed by the position paper of the German Council of Science and Humanities: Cf. "Wissens- und Technologietransfer als Gegenstand institutioneller Strategien. Positionspapier". Prints 5665-15. ed. by the German Council of Science and Humanities (2016).

## 3 Transfer of ideas, knowledge and technology: Status quo and development potential

### 3.1 Research and development

TH Köln sees itself as a researching university, which with its diverse research activities in the profile areas "Integrative Society & Resilience", "Digital Work & Living Environments" and "Sustainable Management & Resources"<sup>4</sup> assumes responsibility for the advancement of science, civil society, economy, culture and politics. It researches and develops instruments and strategies to meet societal challenges and actively shape sustainable development processes at regional, national and international level.<sup>5</sup> In the context of its transfer activities, TH Köln represents a research philosophy that opens up research to a wide range of stakeholders from civil society, economy, culture and politics. It extends traditional notions of a science-centered research concept and an economy-centered transfer concept by creating space for the reciprocal transfer of ideas, knowledge and technologies throughout the entire research process. Research work at TH Köln is based on disciplinary scientific findings and develops into an inter- and transdisciplinary, application-oriented practice with a focus on topics and methods.

#### Status quo

The knowledge and technology transfer strategy already established in 2013 pursued two strategic goals: First of all, the visibility of TH Köln as a competent and reliable partner in transfer activities was to be enhanced. To this end, TH Köln has significantly expanded its network activities and significantly strengthened the research and transfer marketing with a target group-oriented digital communication strategy in the context of TH Köln's new website. Furthermore, the university was to provide its researchers with targeted support in actively using their science-based and application-oriented competencies for transfer relations. In order to achieve this, the university's own incentive system for transfer activities in the form of a transfer premium was bolstered, opportunities for a research sabbatical and a semester in industry were extended, and the central support structures for the transfer of ideas, knowledge and technology were expanded.

These central, permanent support and organizational structures are provided by the "Department of Research and Knowledge Transfer". The department, which reports to the Vice President for Research and Knowledge Transfer, coordinates amongst other things external co-operation inquiries as well as internal administrative procedures for initiating third-party funding and transfer projects. In addition, it works successively on the visibility of research-based transfer activities and organizes events to maintain the regional networks of TH Köln. Other transfer-relevant tasks of the department include patents and their exploitation as well as business start-ups. Furthermore, the Gummersbach campus offers a regional contact point for co-operation partners that supports close networking in the region. The "Department of Communication and Marketing", which reports directly to the President of TH Köln, continues to provide centrally organized support services in the field of transfer. In order to increase the scope of research and transfer activities, the department provides targeted communication of research projects, research co-operations and the diverse social commitment of the university and its members to the public.

To promote the research-based transfer of ideas, knowledge and technology, TH Köln is actively engaged in various international, supraregional and regional networks. At European level, TH Köln has been a member of the European University Association (EUA), which networks universities from a total of 47 European countries, since 2009. Furthermore, it is part of UAS7 e.V., an association of seven research-oriented German universities of applied sciences that pursue common strategic goals in research, teaching and knowledge transfer. In 2014, the UAS7 universities jointly published an

<sup>4</sup> The research profile of TH Köln is characterized by three profile areas and nine profile topics. Further information is available at: [https://www.th-koeln.de/forschung/profilbereiche\\_5261.php](https://www.th-koeln.de/forschung/profilbereiche_5261.php) (02/24/2017).

<sup>5</sup> The strategic advancement of the vision and guiding principle of the research understanding of TH Köln is a separate process, the result of which will replace the current "Research Strategy 2015"

agenda for knowledge and technology transfer.<sup>6</sup> This was followed in 2017 by a joint position paper on the promotion of business start-ups and entrepreneurship education.<sup>7</sup> In a regional context, TH Köln maintains strategic partnerships with various institutions, including the Cologne Chamber of Commerce and Industry, the Cologne Chamber of Crafts, the Rheinisch-Bergische Wirtschaftsförderung, the Wirtschaftsförderung Leverkusen and the Forschungsdialog Rheinland.<sup>8</sup>

As a member of the Cologne Science Forum<sup>9</sup>, TH Köln promotes Cologne as a science location by networking regional science institutions both with each other and with industry and the city of Cologne. In addition, there are a large number of long-term co-operations and participations in various networks at faculty level.

### **Transfer forms in research-based transfer of ideas, knowledge and technology**

The fields of action and key areas of the research-based transfer of ideas, knowledge and technology of TH Köln and its researchers lie particularly within:

- Publicly funded research and development projects carried out in co-operation with companies and other institutions as well as privately financed contract research and research services.
- Research and implementation projects in which scientists collaborate with external partners in workshops, exhibitions, accompanying studies, transdisciplinary conferences and other projects outside of financial support from public or private sources, thereby contributing to the visibility of TH Köln as an engaged university, especially in the regional environment.
- The exploitation of knowledge resources through patents and business start-ups. With its structured exploitation process, TH Köln pursues an active patent policy<sup>10</sup> and is continuously expanding its support for start-up projects and for entrepreneurial ideas and activities among students and staff.<sup>11</sup>
- A wide range of activities to communicate research knowledge to the general public. These include for instance articles, guest contributions and interviews by researchers in the media, the presentation of research results on the website of TH Köln, public lecture series and events such as the "Night of Technology".
- The networking, guidance and professional exchange of researchers. Committee work, expert opinions, activities in professional associations as well as other formal and informal activities of the researchers of TH Köln create a mutually beneficial exchange with the extramural environment.

### **Development potential of the research-based transfer of ideas, knowledge and technology**

Development opportunities within the research-based transfer of ideas, knowledge and technology arise in particular from the size, diversity and research strength of TH Köln. With its broad range of subjects, from social and cultural sciences to information and engineering sciences and applied natural sciences, the university offers great potential for a holistic approach to socially relevant issues. The aim is the further development and expansion of inter- and transdisciplinary research structures in order to maintain the dialog with various interest groups with proven competence as a partner. The university and its faculties already have well-developed regional, supraregional and international networks, but the awareness of their strengths and opportunities among potential partners should be increased. It is therefore necessary to develop co-operation and communication formats that promote and consolidate networking among researchers and their links to the extramural environment, in order to strengthen research topics together with external partners. On the other hand, the research competences and transfer activities of the researchers must become

<sup>6</sup> "Wissens- und Technologietransfer: Agenda der UAS7-Hochschulen". Ed. by UAS 7 e.V. (2014).

<sup>7</sup> Cf. UAS7 e. V., source: <http://www.uas7.de/Entrepreneurship.177.0.html> (02/06/2017).

<sup>8</sup> Cf. Wissenschaft und Wirtschaft schaffen Erfolg. Eine gemeinsame Mission. Source: <http://www.rheinland.ihk.de/IIRforschung.AxCMS?ActiveID=5682> (01/16/2017).

<sup>9</sup> Cf. Kölner Wissenschaftsrunde. Source: <http://www.koelner-wissenschaftsrunde.de/koln-stadt-der-wissenschaft/kolner-wissenschaftsrunde/> (01/16/2017)

<sup>10</sup> As early as 2010 TH Köln published a patent strategy, which was supplemented in 2015 by a "TH Köln guideline on the handling of inventions" [cf. "Patent Strategy" of TH Köln (2010)]. As part of the NRW University Patent Network, TH Köln works closely with other universities in the state as well as with the patent and exploitation agency PROvendis GmbH, of which TH Köln is a co-partner.

<sup>11</sup> As co-founder of the start-up network "hochschulgründernetz cologne" (hgnc), TH Köln is systematically expanding its start-up support. A strategy for "Start-ups & Entrepreneurship Education" is currently being developed.

just as visible as possible co-operation opportunities, so that new external stakeholders also perceive TH Köln as a potential transfer partner.

## 3.2 Teaching and learning

TH Köln offers a variety of degree programs in engineering, humanities and social sciences as well as in applied natural sciences. These include dual, part-time and internationally oriented degree programs, some of which are designed as double degree programs with renowned partner universities. All degree programs aim to provide excellent learning and teaching. In its teaching and learning culture, the university therefore blends the principles of socially relevant and vocationally oriented competence building with methods for scientifically guided learning. In research-based, problem-oriented and project-oriented learning, students develop an "investigative" attitude that extends far beyond their time at the university and enables them to play an active and responsible role in shaping free democratic societies. TH Köln thereby considers the transfer forms anchored in teaching and learning to be a bridging function between the goals of academic education, the needs of the professional and industrial world and social requirements.

### Transfer forms in teaching

The degree programs of TH Köln are characterized in particular by a high degree of applicability and practical relevance. Close networking with partners from civil society, economy, culture and politics is facilitated primarily through:

- Transdisciplinary curriculum workshops, in which external partners are suitably integrated into the development and advancement of degree programs in order to integrate both internal and external perspectives.
- The curricular integration of project-based forms of teaching and learning in which students experience scenarios of their future workplace and work together with external partners.
- mandatory curricular practical phases, especially in the Bachelor degree programs
- Co-operation with representatives from civil society, economy, culture and politics within the framework of educational research projects, lecture series, advisory services, excursions, fairs and exhibitions as well as teaching assignments.
- External final theses, especially in the fields of computer science, natural sciences and technology.
- The development of networks as well as contact opportunities with future employers through various centrally and decentrally organized schemes such as career service, job portals, mentoring programs with external partners, support and alumni associations as well as participation in and organization of job fairs.

### Development potentials in teaching with transfer relevance

With regard to the strategic further development of the transfer of ideas, knowledge and technology, the project-based nature of the degree programs means that the area of teaching and learning offers particularly great potential. Educational research projects for instance, which are conceived and conducted jointly with external partners, combine research, teaching and transfer and can serve as a starting point for long-term research and co-operation projects. Corresponding formats are already in use in the faculties, but this area can be further developed and expanded through targeted funding and academic teaching support and research, in order to anchor the university's extended understanding of transfer in its teaching and learning in the long term.

## 3.3 Continuing education

A declared goal of scientific continuing education at TH Köln to provide professionals and those re-entering work with access to scientific findings and to qualify them for new and changing conditions in society and the working environment. At the same time, co-operation with continuing education students gives TH Köln valuable insights into external practice and current societal demands. With the "Academy of Continuing Education" and the "Center for Advanced Training in Library and Information Science (ZBIW)", TH Köln has proven expertise in the field of continuing



education. In the spirit of lifelong competence development, continuing education programs and postgraduate courses, certificate courses as well as various long-term further education seminars, symposia and specialist conferences are offered across the entire range of subjects at the university. The need for continuing education topics and contents is also continuously analyzed in order to develop new programs and services based on jointly defined profiles of graduates and qualification goals. The alignment and further development of this area are the subject of a separate strategy process.

## 4 Strategic further development of the transfer of ideas, knowledge and technology

The strategic further development of the transfer of ideas, knowledge and technology at TH Köln is based on two strategic goals, which address both the perspectives of external partners from civil society, economy, culture and politics as well as those of researchers from the university. An increase in the university's transfer activities with a focus on societal relevance and effectiveness is only possible if external partners perceive TH Köln as a reliable partner in the transfer process. For this purpose, the university must have a regional and supraregional profile as an institution, engage in active, reciprocal communication and be open to impulses from the aforementioned environment.

### Strategic key goal 1

**Together with partners from science, civil society, economy, culture and politics, TH Köln discusses, develops and designs research-based, solution-oriented contributions to major social challenges and future tasks at regional, national and international level.**

Strategic sub-goals	Objectives for action
The networking of the university's researchers both among themselves and with partners from civil society, economy, culture and politics for joint research, development and innovation processes is strengthened.	<ul style="list-style-type: none"> <li>– Establishment of networks of long-term, strategic partnerships that are supported by common beliefs and goals and address unresolved issues of the future</li> <li>– Increase in the share of transfer-relevant inter-faculty research and teaching projects by 5 % per year</li> <li>– Increase in the number of transfer-relevant research and teaching projects by 5 % per year</li> <li>– Increase in third-party funding by stakeholders from civil society, economy, culture and politics by 5 % per year</li> </ul>
The visibility and presence of TH Köln as an active and reliable transfer partner and socially committed university at all its sites and beyond is strengthened.	<ul style="list-style-type: none"> <li>– Creation of meeting venues within the framework of target group-specific events and other activities</li> <li>– Gradual expansion of the website in order to transparently present the specialist competencies and focal points of the researchers and their advisory and research provision for and with third parties</li> </ul>
TH Köln pursues active science communication in order to foster an interest in science, to contribute to education, to shape socially relevant dialogs and to develop transfer potentials.	<ul style="list-style-type: none"> <li>– Target group-oriented and comprehensible communication of research work in order to provide access to socially relevant issues and their scientific consideration</li> <li>– Increased use of various media formats, in particular new social media, in order to effectively help shape social dialogs</li> <li>– Development of media partnerships to strengthen the reach of communication</li> </ul>

In addition to the strategic key goal, which is primarily concerned with the interactions between TH Köln and its non-university environment, one of the central goals of the university is to further develop its understanding of transfer in an open discourse and to provide researchers with appreciation and support for transfer activities. Transfer should not be seen as an additional task, but as an integral component of action that strengthens teaching and research and highlights their social relevance.

## Strategic key goal 2

TH Köln motivates, guides and supports its researchers in actively using their research-based and application-oriented knowledge, skills and experience for transfer activities and creative collaborations with stakeholders from civil society, economy, culture and politics.

Strategic sub-goals	Objectives for action
TH Köln is characterized by a transfer culture that enables its researchers and external partners to play an active role in shaping the university's understanding of transfer and to test and further develop new transfer formats on the basis of research and teaching.	<ul style="list-style-type: none"> <li>– Raising researchers' awareness of the impact that their research results may have on society</li> <li>– Raising the awareness of external partners of the impact and consequences that their activities may have on science</li> <li>– Establishing opportunities for dialog, exchange of experiences and continuing education in transfer formats, forms and channels, in particular for new academic staff</li> </ul>
The researchers of TH Köln receive recognition and appreciation for their transfer activities from the university.	<ul style="list-style-type: none"> <li>– Establishing further incentives for participation in the transfer of ideas, knowledge and technology, taking into account both third-party funding and other transfer indicators</li> <li>– Increasing the proportion of researchers involved in transfer-relevant projects</li> </ul>
TH Köln offers professional support in the initiation, implementation, documentation and evaluation of transfer projects.	<ul style="list-style-type: none"> <li>– Expansion of central support structures for transfer projects, network maintenance and the exploitation of research results on industrial property rights and start-ups</li> </ul>

In order to implement the strategic goals, TH Köln has initiated a participatory process to develop a concept of measures<sup>12</sup> based on previous experience, which will be continuously refined. The further development will incorporate impulses from researchers and external partners as well as the results of the transfer audit, with which the state of North Rhine-Westphalia and the Stifterverband will support TH Köln in 2017 in the development of its co-operation strategy.

<sup>12</sup> Cf. TH Köln, Transferkultur. Source: [https://www.th-koeln.de/hochschule/transferkultur\\_40870.php](https://www.th-koeln.de/hochschule/transferkultur_40870.php) (02/09/2017)

## 5 Quality assurance and monitoring

In keeping with its self-image as a learning organization, TH Köln has set itself the task of regularly evaluating the goals defined in the "Transfer Strategy 2025" on the basis of qualitative and quantitative indicators and of continuously monitoring both their implementation in the university and their effectiveness through concrete measures.

This involves annual monitoring of relevant key figures (input - output) and selected best practice reports (outcome - impact) both at the level of the entire university and at the level of the individual faculties.<sup>13</sup> The necessary content is collected centrally by the "Department of Research and Knowledge Transfer" with the support of all members of the university. Indicators are collected in the following areas.

- transfer-relevant teaching and research projects<sup>14</sup>
- third-party funding from transfer-relevant teaching and research projects
- joint publications with non-scientific partners
- contributions by researchers at symposia, congresses, exhibitions and trade fairs organized jointly with external partners
- teaching co-operation projects, practical semesters, external final papers
- co-operation partners and strategic partnerships
- invention disclosures, patent applications and granted patents as well as projects and income from exploitation based on these
- start-up projects and completed start-ups
- researchers' activities aimed at sharing research knowledge with non-scientific target groups in the form of public lectures and articles in social media and the press
- existing central structures and staff to support the transfer of ideas, knowledge and technology, as well as researchers active in transfer activities

In addition to the regular collection of key figures, an initial detailed interim evaluation of the implemented measures and the resulting successes will be carried out three years after the adoption of the "Transfer Strategy 2025", using multi-perspective feedback from internal and external stakeholders. The most important results are published in a report and presented to the university committees by the Executive Board. A new evaluation is subsequently carried out every two years.

<sup>13</sup> TH Köln follows the recommendations of the German Council of Science and Humanities on the core data set of research. Cf. Empfehlungen zur Spezifikation des Kerndatensatz Forschung, Prints 5066-16. German Council of Science and Humanities: Berlin 2016.

<sup>14</sup> All projects that are carried out together with stakeholders from civil society, economy, culture and politics and are based on scientific research have direct transfer relevance. This also includes those that can be assigned to the "classic" technology transfer and are not necessarily undertaken with partners. Indirect transfer relevance refers to projects that are carried out solely in co-operation with other universities and research institutions.

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