

**Patent Strategy of the
Hamburg University of Technology (TUHH)
and**

Guidelines for the Handling of Intellectual Property

(passed by the Academic Senate at the 169th AS meeting on 27.10.2021)

I. TUHH Patent Strategy

1. Preamble

This patent strategy forms the basis for the handling of intellectual property at the Hamburg University of Technology (TUHH). The TUHH considers it a strategic task to make acquired knowledge accessible to the public, to protect intellectual property and to use it beneficially for both the university and the public. The interests of the TUHH, its scientific institutions and employees are to be safeguarded, scientists supported and at the same time access to research results, their dissemination and use through sale, licensing or spin-offs promoted and regulated.

2. TUHH Mission Statement

The TUHH is a competitive, family-friendly and sustainable university with high performance and quality standards that strives for research excellence in its fields of competence. It is an internationally oriented university in the Hamburg metropolitan region, committed to the Humboldtian ideals of education. It contributes to the development of the technical-scientific competence of society by training the next generation of engineers and scientists with modern teaching and learning methods and by promoting technology transfer and the establishment of companies.

3. Research and Technology Transfer at one of Germany's most innovative Universities

According to its mission statement, the TUHH, founded as Germany's northernmost technical university, is one of the most innovative and modern universities in the Federal Republic. Beyond the role defined in the HmbHG in § 4 paragraph 6, the TUHH has pursued forward-looking approaches in research, teaching and knowledge and technology transfer since its foundation in 1978. Teaching and research activities have been organised on an interdisciplinary basis from the very beginning, and with TUHH-Technologie GmbH, now Tutech Innovation GmbH, founded in 1992, Germany's first university-owned technology transfer company was created.

In research, the performance of the scientists is documented by many collaborative R&D projects funded by the DFG, the European Union, federal ministries and research foundations. The consistently high volume of third-party funding also underlines the high level of research work at the TUHH. For TUHH, knowledge and technology transfer also aims to transfer intellectual property from science to society for its benefit. In order to further promote application-oriented research and to transfer research results to industrial use in an even more targeted manner, TUHH relies on a pronounced inventor culture and consistently pushes ahead with the protection of innovations and the development of an IP portfolio.

4. Strengthening innovative potential through internationally visible and patent-relevant research fields

As part of its strategy process, the TUHH has further developed its research structure in order to make the existing research topics of the institutes even more visible and to further strengthen application and technology-oriented expertise.

The analysis of current research topics results in five research fields of the TUHH, which represent the decisive trends of research at the TUHH internally and externally in a bundled form:

1. Advanced Materials & (Bio-)Processes
2. Aviation & Maritime Technologies
3. Cyber Physical & Medical Systems
4. Environmental & Energy Systems
5. Logistics, Mobility & Infrastructure

In addition to these application-oriented research fields, there is the area of "Methods of Research" and the area of "Societal and Economic Impact", which presents the results and processes of university research and their influence on the economy and society.

With this research structure, the TUHH clearly focuses on internationally significant and patent-relevant research and development areas, actively participates in cross-university competence clusters, for instance in aviation, life sciences, medical technology or regenerative energies, and makes its contribution in generating and communicating new knowledge.

The TUHH attaches great importance to the further expansion of knowledge and technology transfer for the benefit of society and the economy. The patenting of inventions is an indispensable prerequisite for ensuring the

economic exploitation of university-generated findings. TUHH links the quality of scientific research results with optimised patent protection and thus makes this quality visible to the public with its own patent applications. The TUHH takes account of its responsibility arising from the amendment of the Employee Invention Act (ArbEG) in 2002 by applying for patents for university inventions for which a justified potential for exploitation can be predicted

5. Inventor-friendly climate at the TUHH for the benefit of the scientists and the university

The exploitation of inventions at the TUHH is not unilaterally aimed at the economic development of the university. The interests of the scientists, in particular their scientific development, are also taken into account, thus creating an inventor-friendly climate at the TUHH. With the “Patent Verwertungsagentur Hamburg” (PVA Hamburg), an external service provider serves as a central contact point for invention consultation, patent management and patent exploitation. It evaluates the invention and gives the TUHH a recommendation either to claim or release the invention. The criteria for the evaluation are

- the novelty of invention,
- the inventive step,
- the technicality and industrial applicability of the invention
- as well as the practicability, which should be verifiable by corresponding experimental data, drawings or existing prototypes.

When evaluating inventions, applying for patents and exploiting technology, care is taken not to delay the publication of research results through these activities, if possible. Negative freedom of publication, i.e. the right not to publish results, is also reserved for the scientist. Inventors are encouraged to actively participate in the processes of invention evaluation and exploitation. At the same time, it is not disregarded that it is appropriate and desirable for both the TUHH and the inventors to profit from the exploitation of their results. The aim of the exploitations is, on the one hand, an appropriate return flow of the generated funds into university research, and on the other hand, the remuneration of the inventors, also as an incentive for the development and reporting of further inventions. Inventions with no prospect of exploitation or no strategic importance are generally not claimed. Thus, when deciding how to proceed with inventions, the TUHH takes into account its own interests as well as the interests of society and those of the inventors. Inventions recommended for patent application are regarded by TUHH as evidence of excellent research work, analogous to outstanding scientific achievements (e.g. high-quality publications, collaborative research projects). The TUHH offers all freelance inventors with a connection to the TUHH, for example students or scholarship

holders, the opportunity to transfer the rights to their inventions to the TUHH under the same conditions as apply to university employees, subject to an evaluation under property law and a positive exploitation assessment, and to have the inventions exploited by the TUHH.

6. Successful patent management and technology exploitation through cooperation in professional structures

The TUHH strives to operate a professional invention, patent and exploitation management system in cooperation with other technology-oriented Hamburg universities and non-university research institutions in collaboration with PVA Hamburg, which acts as a service provider. The cooperation with the PVA Hamburg is regulated on the basis of a respectively valid target agreement. The knowledge resources available at TUHH are to be made accessible to industry by ensuring the identification, evaluation, protection under patent law and exploitation of research results.

7. Early protection of intellectual property as a basis for successful spin-offs

In accordance with its mission statement, the TUHH supports spin-off projects and corresponding applications from prospective start-up teams based on research results in order to drive the implementation of these results into marketable products and thus the creation of jobs. The TUHH therefore promotes a lively start-up culture and provides appropriate structural and further training opportunities for students and staff. Since 2013, the path towards becoming a university for start-ups has been consistently pursued and expanded, particularly within the framework of the nationwide measure "EXIST-Gründungskultur - die Gründerhochschule" (EXIST Start-up Culture - the University for Start-ups) and the joint project "beyourpilot" funded by the FHH. The TUHH promotes the sensitisation of university lecturers, scientific staff and students interested in founding a company to the confidential handling of IP and the evaluation of an early protection of ideas and research results under intellectual property law both in teaching and through extracurricular information events.

TUHH will also support start-ups by providing industrial property rights for the purpose of using and exploiting the university's own knowledge. In this context, the TUHH is in principle to participate in the proceeds of these companies and/or to be compensated for costs incurred, i.e. official fees, lawyer's and translation costs as well as inventor's remuneration. For reasons of state aid and competition law, the TUHH must ensure that the remuneration for the use of industrial property rights is in line with the market. When negotiating the conditions for the use of industrial property rights, the TUHH takes into account both the financial possibilities of the founding teams and the legal framework conditions to which it is subject as

a university. The design of the utilisation conditions should reflect a positive development of the spin-off projects, e.g. by granting instalment payments for an upfront payment, the design of realistic milestone payments and an appropriate share in any revenue. The TUHH is supported in these discussions by the “Patent Verwertungsagentur Hamburg” (PVA Hamburg).

The PVA Hamburg should be involved in the spin-off process as early as possible. When exploiting university inventions, the patent exploitation agency is expected to give special consideration to spin-off projects. In addition, early cooperation with the PVA Hamburg makes it possible to optimally coordinate the patent strategy, e.g. with regard to determining the markets and countries relevant to property rights. The TUHH can support the founders until the conclusion of the utilisation agreement in a letter of intent, the TUHH can offer the founders the prospect of exclusivity to the IP rights until the conclusion of the utilisation agreement. This is usually possible for up to 30 months from the date of the first IP right application, in justified cases also for a longer period.

8. Working in partnership with industry

University inventions and patent applications can represent a considerable economic value for industrial partners. When exploiting IP rights, it is therefore important to work out the specific value for the companies and to support the partnership relationship with the companies. The companies should be motivated to pay customary market compensation for the acquisition of IP rights. For inventions that arise in the context of contract research or research and development co-operations between TUHH and companies, regulations on how to deal with these inventions are made at an early stage in the cooperation agreements. Early clarification and clear regulations are essential for all parties involved. In the case of exploitation, the respective contractual regulations are taken into account. An appropriate balance of interests and the protection of the inventor's rights are important imperatives for the TUHH. This should also lead to the promotion of mutual trust, because only when the interests of all parties involved are taken into account long-term and targeted research collaborations can be created.

II. Guidelines for dealing with intellectual property

Against the background of this strategy, the following guidelines apply in addition to the Patent Act (PatG) and the Employees' Inventions Act (ArbEG) in their respective valid versions.

1. Definitions

For the purposes of this Guideline, inventor means a person who, alone or jointly with others, has made an invention. Invention means any patentable or potentially patentable idea or know-how and the technology required for the development or application of that idea or know-how.

Service invention means an invention within the meaning of the ArbEG and these guidelines made during the term of employment, which has either arisen from an activity incumbent on the employed person at the university (task invention) or is significantly based on experience or work at the university (experience invention).

Free invention means an invention that does not meet the previously mentioned criteria of a service invention.

2. Obligation to notify and report

2.1 Service inventions

The employees of the TUHH are obliged to report their service inventions, which are to be made publicly available, to the Presidential Research Department of the TUHH using the online form "Invention Disclosure". If several employees are involved in the creation of an invention, a joint invention disclosure should be submitted. The inventors are requested to fill out the invention disclosure completely.

2.2 Communication of free inventions

Inventions made during the term of employment and considered by the inventor to be free inventions shall be indicated with the marking "Notification of a free invention".

3. Confidentiality, publications, disclosure of knowledge

TUHH employees are obliged to take the necessary precautions to ensure that TUHH can exercise its rights to exploit service inventions without restriction. This includes in particular the secrecy of an invention. Both the inventors as employees and the TUHH as employer are obliged to maintain the confidentiality of inventions to the extent regulated in Section 24 ArbNErfG (Employee Inventions Act). Before each publication (e.g. in the form of a publication, a publicly accessible abstract, a lecture or a press release), it must be checked whether the intended publication contains inventions for which a patent application can be filed.

Employees of the TUHH who have reported an invention are also obliged to immediately notify the patent exploitation agency or the TUHH of any

reasons known to them or of which they become aware that stand in the way of the granting of a patent (e.g. their own or third-party publications or lectures at specialist conferences).

4. Utilisation

The TUHH forwards the invention disclosures to the Patent Utilisation Agency for evaluation. This evaluates the invention and gives the TUHH a recommendation either to claim or release the invention. The criteria for evaluation are

- the novelty of the invention,
- the inventive step,
- the technicality and industrial applicability of the invention,
- the practicability, which should be assignable by corresponding experimental data, drawings or
- existing prototypes,
- the commercial potential of the invention, and
- possible other relevant factors specific to the invention.

On the basis of a statement by the patent exploitation agency, the TUHH decides within the statutory period on a possible claim of the invention according to Section 6 (1) or (2) ArbNErfG.

5. Patent application

In the event of a claim to an invention, the TUHH aims to file a patent application without delay, unless there are other obligations from cooperation agreements. The patent exploitation agency is responsible for the patent application procedure, in principle with the involvement of expert patent law firms. The inventors shall cooperate in the application procedure as stipulated by the TUHH in consultation with the Patent Utilisation Agency.

6. Commercial exploitation

With regard to commercial exploitation of an invention, the TUHH in principle has sole decision-making authority and relies on the opinions of the patent exploitation agency in its decisions. The operational exploitation tasks, as regulated in a corresponding target agreement, also lie with the patent exploitation agency. In cases where agreements with third parties (e.g. with public funding institutions or industrial partners) contain rules on the handling of TUHH inventions, TUHH will take these provisions into account and implement them to the best of its ability. Insofar as inventions are not part of such third-party funding contracts, the TUHH will ensure, to an appropriate extent, that the inventors concerned are involved in the

exploitation procedure and that their industrial contacts and project planning are taken into account appropriately. Inventors are encouraged to support the exploitation activities as far as possible and necessary.

7. Revenue sharing

The inventors participate in the proceeds from the exploitation of an invention in accordance with the provisions of the ArbEG. This inventor remuneration represents a share of the proceeds for personal use by the inventors (employee inventor remuneration).

8. Release of inventions

Should the TUHH not wish to claim an invention, withdraw a patent application before a patent is granted or not wish to maintain a patent, the invention will be released to the inventor(s) or offered for retransfer after expiry of the four-month release period (cf. Section 6(2) ArbNErfG). It is checked in advance that the release or retransfer of the invention does not violate existing agreements with third parties. If the inventor(s) express the will to transfer the invention within the specified period, all rights to the invention shall be transferred to the inventor(s). Costs incurred in further patent proceedings must be borne by the inventor(s).