
For R&D teams

What does Technology Transfer at the Third FoM look like?

The process of Technology Transfer is open to all Research teams at the Charles University, which believe that their innovative idea, knowledge or technology can find application in the practice. The first interaction of the scientific team with the Center for Knowledge and Technology Transfer (CPPT) is the submission of the Notice of Invention or Innovation. This document is prepared in cooperation with the Technology Scouts. The CPPT then pre-evaluates the commercial potential of the submitted project and proposes further actions accordingly. Several factors are analysed, including the current phase of the research project, potential market or the possibilities of intellectual property protection. The result of this evaluation is often negative. This is by no means a failure! Not all projects are ready for commercialization in their present form. The CPPT may therefore propose changes in the project or its direction, so that over time it will be a more suitable candidate for commercialization.

In the case of a positive preliminary analysis result, the project progresses to the Proof of Concept phase. The aim of this phase is to prepare a specific case for the use of knowledge generated by the research project. This analysis is based on the applicability of intellectual property protection, market analysis, testing, prototyping, etc. To acquire funding for this phase, it is possible to apply for programs such as GAMA of the Technology Agency of the Czech Republic, OP Prague - Growth Pole and others. At the end of this phase, the commercialization itself can begin.

Research teams may find themselves in a difficult position during the process of Technology Transfer. On the one hand, they can work on a project with potential commercial use, therefore it is necessary to protect the project's intellectual property. On the other hand, there is strong pressure on the team's publication activity in the evaluation of scientific teams. These two approaches are seemingly in conflict. However, in general it is sufficient to initiate the official process of intellectual property protection (which may take days or several weeks) and then it is possible to publish the results of the work.

Therefore, if you think that your project has the potential for commercial application, do not hesitate to contact the Technology Scouts, who will provide advice on this issue:

Technology Scouts of the Third FoM

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This process is regulated by the [Rector's Order No. 46/2018](#) and [47/2020](#)

What are the possible pathways of Technology Transfer?

The primary output of the Proof of Concept phase is the suggestion of the optimal way of commercialization of the analyzed research project. There are three ways by which a research project can be transferred into commercial practice:

- patenting and sale of patent or license
- joint research activities with a commercial partner
- establishment of a spin-off company

Each of the paths has its advantages, disadvantages and potential risks. Each of these is a complex procedure, thus each project requires careful expert evaluation and a very thorough legal analysis of the relationship between the Research Team and the Commercial Partner. At the Charles University, this process is supported by the [Center for Knowledge and Technology Transfer](#).

At this point, it should be emphasized that each Innovation Project is unique and the Technology Transfer process may therefore differ from the typical trajectory described in this text. For example, some projects may require Intellectual Property Protection at an earlier stage. This may be a project in which the participation of a commercial partner is required during the development of a prototype (Proof of Concept), usually due to the financial aspects of this phase.

Patenting and sale of patent or license

A patent is a state-granted exclusive right for making, using, or selling an invention that is new, result of an inventive step and can be used industrially. It is a powerful tool for its owner, thanks to which they gain exclusivity on the market for a given product or service. This puts them in a strong position and opens up additional revenue stream through licensing or sale of the patent. The duration of patent protection is 20 years from the date of filing the patent application. For Medicines and Plant Protection Products, this can be extended for up to 5 years.

The advantage of this pathway of commercialization is its relative simplicity. This classic, "linear" model of Knowledge and Technology Transfer has been used for a long time by research institutions. For them, this tool represents a potential source of future revenue from the sale or licensing of the patent. However, not all research projects are suitable for patenting. The law defines numerous exceptions and patent applications are subject to detailed scrutiny by the authorities. In addition, this approach typically does not provide feedback to the research institution from end-users, which complicates further product development. In addition, patenting is typically a lengthy process and is associated with costly fees.

We often choose this approach for small-scale innovations or when launching a product in a stable market with several strong competitors. In addition to Patenting there are other tools for the protection of intellectual property, such as Utility Models or Industrial Designs.

Joint research activities with a commercial partner

This procedure represents a mutually beneficial cooperation between an academic institution and a commercial partner. The academic institution contributes with its extensive theoretical knowledge in the field, whereas the commercial partner provides the knowledge of application practice and marketing, contacts suppliers and can invest financial capital into the project. The commercial partner thus outsources its R&D activities and the academic institutions gains access to knowledge from practice and financial resources to fund the project.

This means that the academic institution gains faster access to project funding than in the case of patenting or establishing a spin-off company. At the same time, researchers may have access to feedback from end-users, which fuels future development. Importantly, joint research activities pose risk in terms of intellectual property sharing. Therefore a more comprehensive contractual agreement may be necessary.

Joint research project with a commercial partner is usually the method of choice for most Technology Transfer projects, if a commercial partner can be found.

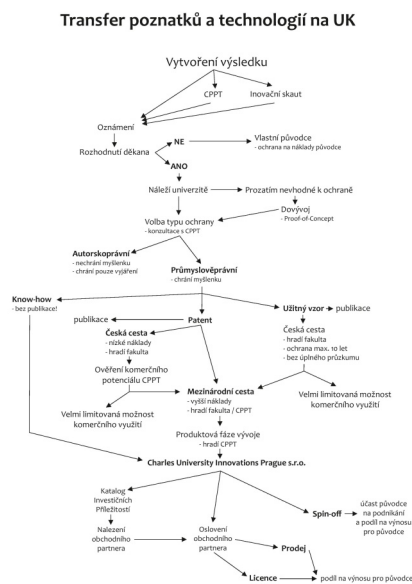
Establishment of a spin-off company

In terms of complexity, this path of technology transfer is clearly the most challenging. However, it is potentially the most advantageous path for an academic institution in terms of development and potential revenues. This is when a subsidiary is established from the parent company, which is linked to the academic institution. This subsidiary receives part of the intellectual property, technology or existing product from its parent company and further transforms them into new products or services. In addition to the first investment, the subsidiary's parent organization also shares its infrastructure.

We choose this approach for radical innovations or when launching in a dynamic market.

Every research project is different. It is always necessary to carefully assess each project individually and choose the appropriate path of commercialization. Commercialization is always a complex task that requires the participation of experts in several fields - Technology Transfer, Law, Intellectual Property Protection etc. For this reason, the Center for Knowledge and Technology Transfer was established at the Charles University. Its role is to provide research teams expert consultations and, together with CUIP, to support the entire process of Knowledge and Technology Transfer. If you are interested in consultations, please do not hesitate to contact the Technology Scouts based at the Third Faculty of Medicine or the CPPT directly.

The process of Knowledge and Technology Transfer at the CU is summarized in the following diagram.



Summary of the activities of Technology Scouts

- a. Monitor scientific activities at the faculty, especially in those teams that aim to commercialize / transfer their results and actively search for results suitable for Technology Transfer.
- b. Mediate meetings and cooperation between R&D Teams and potential commercial partners, e.g. with local innovation centers and small and medium-sized enterprises.
- c. Provide advice on Intellectual Property Protection (or mediate contact with the CPPT in this regard), refer to contact persons for patenting and legal support.
- d. Actively participate in searching for and negotiating with potential external partners according to the requirements of the scientific team, in cooperation and with the support of the CPPT. If required, to participate in the preparation and implementation of the marketing plan