

Technology Transfer Process IFE EdTech 2023

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TECHNOLOGICAL TRANSFER

What is technology transfer?

It is the process of transmitting knowledge between companies or organizations to produce goods and services and generate technological capabilities that ensure better levels of economic efficiency and competitiveness.

In educational institutions, technology transfer is the path that a research result must follow to become a product or service that reaches the market and impacts society.

Any research result that can be protected by some mechanism may be transferred, essentially through intellectual property rights (Industrial Property and/or Copyright).

Why is it important to transfer?

The academics and researchers at Tecnológico de Monterrey develop science and technology (technology being understood as the “set of instruments, technical resources or procedures used in a certain field or sector.” Not necessarily digital technology) that has the potential to improve the quality of life of people, through products and services that impact the development of the country and the world.

Technology transfer seeks to transform research results, in addition to impacting the academic community through publications or conferences, into products or services that improve people's quality of life. In this framework, it is understood that transferring a research result can be for profit or without profit, depending on the strategy that is followed or the purposes that its creators want to achieve.

Technology transfer can be carried out through commercial licenses or licenses for for-profit or non-profit use.

Steps of the Transfer process



1 DESCUBRIMIENTO

Etapa donde se desarrolla un proyecto y se genera una innovación.



2 DOCUMENTACIÓN

Se identifica la innovación, así como sus resultados y ventajas en la aplicación.



3 EVALUACIÓN

Se evalúa el posible impacto de la implantación de dicho descubrimiento.



4 PROTECCIÓN

Se genera la propiedad intelectual, para garantizar que no se produzca el plagio.



5 COMERCIALIZACIÓN

Se trata de comercializar la propiedad intelectual, tratando de que ésta se implante y se desarrolle en un caso real.



6 LICENCIA

Se logra un acuerdo con los inversores interesados, con el objetivo de poner en práctica la innovación y el desarrollo.



7 DESARROLLO

La organización, una vez tiene la licencia, pone en práctica y desarrolla el resultado extraído de la investigación.



8 EXPLOTACIÓN

Nuevos productos o servicios, se comercializan en el mercado y se generan rendimientos.

What support does the IFE EdTech Transfer and Entrepreneurship provide?

The EdTech Transfer and Entrepreneurship of the IFE (Institute for the Future of Education) provides internal service to teachers, collaborators, and researchers of the Tecnológico de Monterrey in developments applied to education, being the supports or activities most important the following:

Intellectual protection

Advises researchers, collaborators and other Tec de Monterrey personnel in the design of the best intellectual protection strategy for their creations or inventions - whether through copyright registrations, invention patents or industrial secrets. , among other modalities - with the objective of generating clear rules and incentives for the transfer and dissemination of results.

Transfer

The EdTech Transfer and Entrepreneurship Directorate is responsible for determining the commercial potential of the invention or educational development, as well as searching for possible users or “early adopters” to whom the educational developments are useful or who have an interest in them. ; These “early adopters” can be companies, non-profit organizations or public agencies. The purpose of this prospecting of entities is to look for partners who may be interested in implementing the research results and thereby support the negotiation of conditions and the subsequent signing of a transfer agreement.

How is a research result transferred?

Once the suitable partners are found to carry out the transfer, the EdTech Transfer and Entrepreneurship Directorate manages and leads the negotiation with third parties that may lead to the signing of a license contract or the creation of a spin-off company with a scientific and technological base. (EBCT).

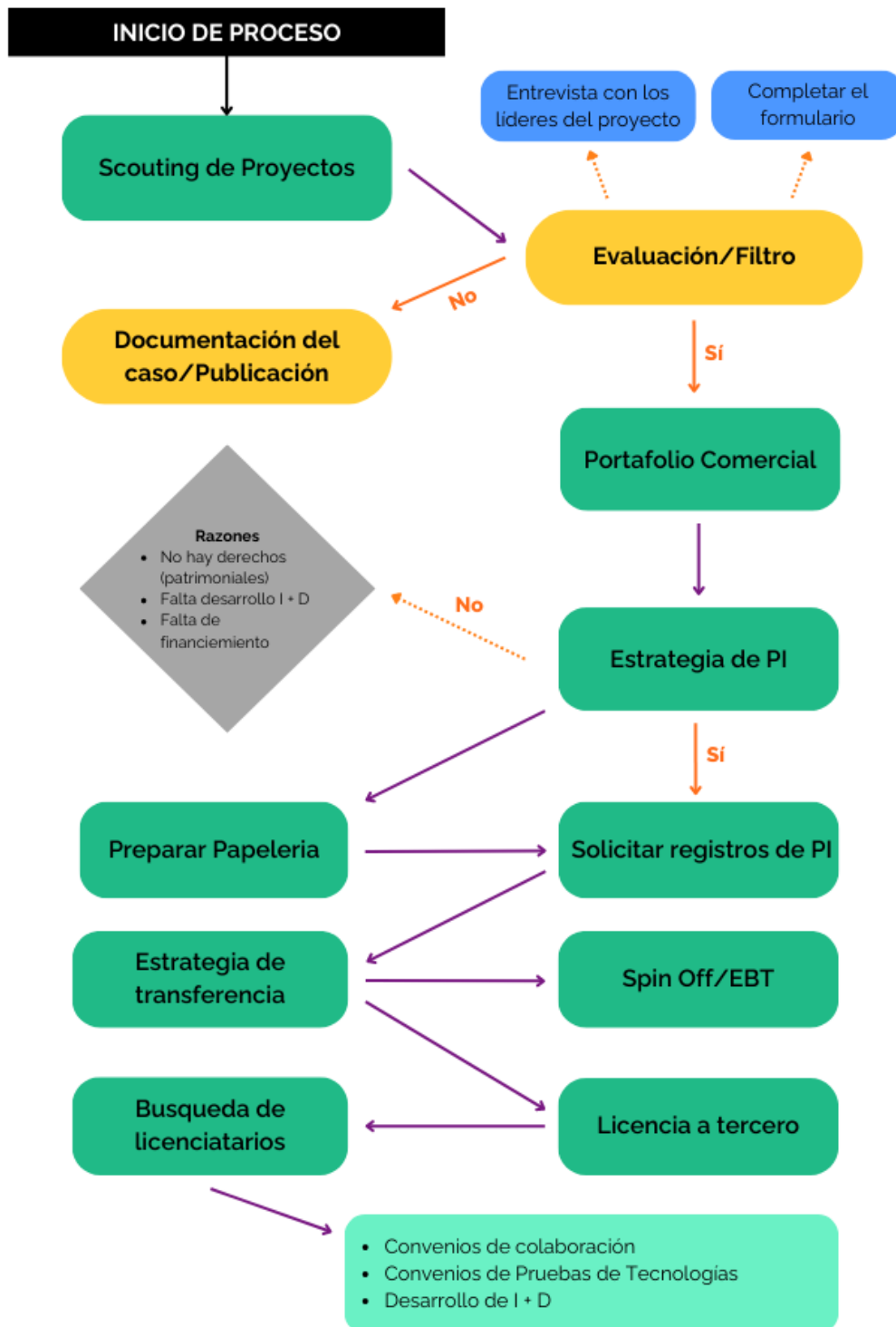
What is a license agreement?

It is a document by which the owner of a property authorizes a third party to exercise the right of exploitation, under specific conditions, in a defined time and territory, in exchange or not for a royalty.

What is a spin-off?

When a researcher is interested in starting a business based on their technological development, it is possible to create a company that contributes to the transfer of research results in the form of innovative products or services.

Development of the EdTech Transfer Process at the IFE



DATA PROTECTION

How to protect my research?

The intellectual protection of research results is a key objective, as it allows for the generation of clear rules, conditions and incentives for the transfer and dissemination of research results.

There are various mechanisms to protect inventions. In general terms, an idea is not subject to intellectual protection, but rather the materialization or realization of an idea is protected.

A creation can be protected using one or more of the following mechanisms, depending on the case:

- Copyright*
- Patents
- Brands
- Designs
- Plant varieties
- Business Secret
- Domain Names

*In educational developments or technologies, it is the most used intellectual protection mechanism.

Four recurring myths about intellectual property

If I patent I can't publish

This is one of the most recurring myths among researchers. Patenting and publishing are two perfectly compatible actions, however, it is important to take care of the order in which they should be carried out. Given that one of the conditions for a result to be patentable is novelty, it will be essential that a patent application be filed first (if the intellectual property is susceptible to that right being granted). From that same day, researchers are free to publish their results, without affecting the possible patenting of their development.

Intellectual property registries only seek a commercial purpose

Intellectual protection through various legal mechanisms (patent, utility model, copyright, among others) is a strategy that facilitates technological transfer, as it generates clear rules for the massification and commercialization of innovations. According to the intellectual property policy (You can consult it here), Tec de Monterrey will exercise economic compensation when there is any income to the institution as a result of any technological transfer through licensing. However, there will be transfer agreements that imply \$0 income, as they are non-profit organizations, but they are committed to implementing innovation for the benefit of people. Generally, they are inventions with high social impact such as a vaccine or a new educational methodology. It is then in these cases where the intellectual property registry becomes an instrument that regulates the use of the invention or development so that it is carried out within the framework and conditions for which it was created.

The university does not share intellectual property

Tecnológico de Monterrey shares the intellectual property of a research result with those institutions involved in the development, whether they are research centers, companies or other universities, as long as this contribution is of an inventive nature. The intellectual property policy of Tecnológico de Monterrey mentions that the research results are the property of the institution that develops them, therefore, in the case of joint projects with other entities, the intellectual property is shared.

There is no financial remuneration to inventors

When intellectual property is licensed to third parties, generating economic benefits from its use or commercial exploitation, the intellectual property policy of Tecnológico de Monterrey clearly establishes the distribution of income, recognizing the inventor(s) with 50% of the profits. income, once administrative expenses have been deducted.

TECHNOLOGICAL MATURITY LEVEL (TRL)

What is TRL?

TRL stands for "Technology Readiness Level" (Technological Maturation Level, in Spanish). The TRL is a scale used to evaluate the degree of development and maturity of a technology or innovation. It was originally developed by NASA in the 1980s and has since been adopted by different organizations and government agencies to evaluate the progress of technological projects.

The TRL scale consists of nine levels, representing different stages in the development cycle of a technology, from basic research (TRL 1) to commercialization and widespread adoption (TRL 9).

Here is an overview of the nine levels of the TRL:

TRL 1: Basic research: Early theoretical or experimental research. Basic principles observed.

TRL 2: Applied research: Beginning of research and practical development. Concept of technology and/or formulated application.

TRL 3: Proof of concept: Initial validation of technological feasibility.

TRL 4: Laboratory validation: Laboratory tests to demonstrate functionality.

TRL 5: Validation in relevant environment: Testing in simulated or real-world environments.

TRL 6: Validation in conditions close to real ones: Tests and demonstrations of the prototype in environments close to real ones.

TRL 7: Prototype Demonstration: Development of scale or full-size prototypes. Demonstration of the prototype in a real operating environment.

TRL 8: Validation and verification in operating conditions: Extensive testing and validation in real conditions. Complete and qualified system in operational environment

TRL 9: Finalized product or technology: Technology ready for commercial implementation and widespread adoption. System tested and operated successfully in a real environment.

Measurement of technological maturation

The TRL provides a way to assess and communicate the development status of a technology, helping to determine necessary resources, identify risks, and establish future stages of development. It is also useful for decision making and the allocation of financing in research and technological development projects.

