



Skolkovo Institute of Science and Technology

Knowledge Transfer Office

**INTELLECTUAL
PROPERTY MANAGEMENT
AND TECHNOLOGY TRANSFER**
A GUIDE FOR RESEARCHERS





Skolkovo Institute of Science and Technology

Knowledge Transfer Office

Dear Skoltech faculty and researchers,

Skoltech is an innovation-driven university whose mission is to bring together the intellectual traditions and established best practices in science and technology to create new knowledge for the benefit of the public. As it continually grows and evolves, Skoltech seeks to become one of the most impactful research universities in the world. Driven by this vision, Skoltech aims to build research programs with the goal of integrating knowledge creation with innovation and applications of science and technology.

Intellectual property is a central element of the knowledge generation, management and commercialization process. It should be properly and effectively managed, so that it could be successfully and broadly used for the benefit of the general public. Therefore, Skoltech has established a Knowledge Transfer Office to provide faculty members and researchers with high-quality services based on the global best practices of technology protection and licensing.

This guide provides an overview of Skoltech's Knowledge Transfer Office and its services to faculty, students and research staff. I encourage you to learn more from this guide about how to handle your intellectual property and how our Knowledge Transfer Office can support you in all essential phases of technology development, transfer and commercialization, including intellectual property identification, assessment, protection and licensing.

Edward Crowley
President

A handwritten signature in dark ink, reading "Edward Crowley".

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TECHNOLOGY TRANSFER

Technology transfer is the drift of skills, knowledge, technologies, discoveries, methods & samples of manufacturing, as well as facilities from developers to a wider range of users so that they further develop and exploit the technology to create new products, processes, applications, materials or services for the benefit of the general public. All this may come via scientific publications, educated students entering the workforce, experience sharing at conferences, and building powerful relationship with the industries. In this particular guide technology transfer means formal licensing of technology, under the guidance of experts & professionals working in the universities, research foundations and business entitites, in departments specially focused on these activities.

Technology transfer is closely related to (and may arguably be considered a subset of) knowledge transfer.

WHAT IS KNOWLEDGE TRANSFER?

Knowledge transfer is the process of transferring information and experience from one party to another, either within an organization or between organizations. Knowledge transfer seeks to organize, create, capture and distribute knowledge and ensure its availability for new users.

HOW IS TECHNOLOGY TRANSFERRED?

A technology is transferred by securing legal protection for the intellectual property and then licensing it to established companies or start-ups. The inventor's active participation is usually important for the overall success of technology transfer process.



TECHNOLOGY TRANSFER



WHAT TYPES OF AGREEMENTS AND CONSIDERATIONS APPLY TO TECHNOLOGY TRANSFER?

Besides license agreements covering licensing deals, following agreements may also come in support of the technology transfer process:

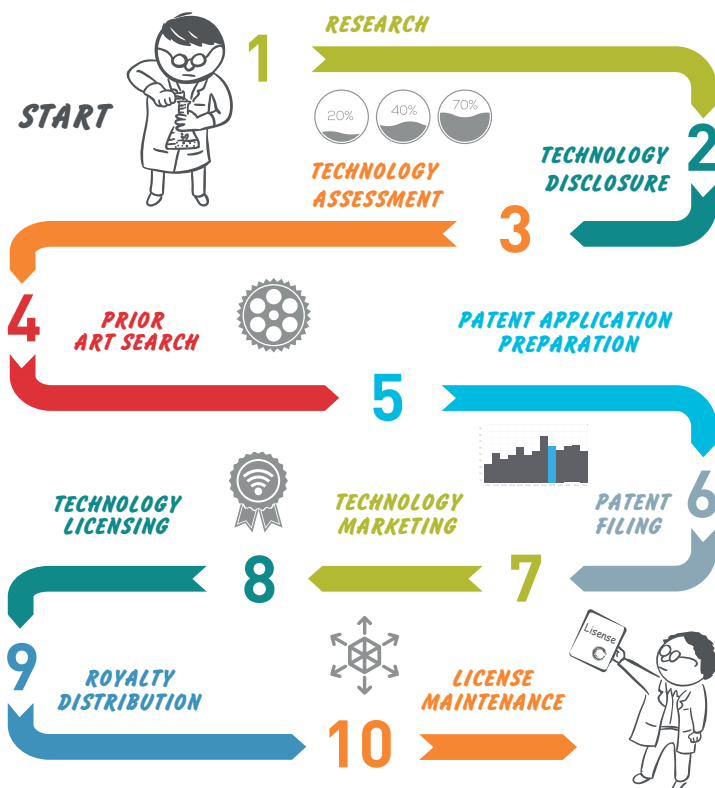
- **Nondisclosure Agreement (NDA)** – enables the parties to share confidential information;
- **Material Transfer Agreement (MTA)** – enables the parties to share tangible research property, such as samples produced for assessment;
- **License Agreement** – enables the licensee to use licensor's intellectual property within limited framework – territory, time, exclusivity, diligence, etc.
- **Option Agreement** – enables the optionee to reserve certain rights to the intellectual property for a limited period of time (usually 3-12 months) before signing the license agreement, and demonstrates the optionee's interest in the IP. The Option Agreement is usually signed between the holder of IP rights and the optionee in order for them to make a decision on whether to enter into a license deal;
- **Joint Invention Agreement (JIA)** – usable for cases when the employees of the parties become the co-authors of a single result of intellectual activity (RIA). The conditions usually specify the organization in-lead, patenting fees reimbursement, revenue distribution, etc.;
- **Research (and Development) Agreement** – a contractual agreement for Skoltech to conduct research which is financed by funding agency or company.

TECHNOLOGY TRANSFER

TYPICAL STEPS IN THE TECHNOLOGY TRANSFER PROCESS

The process of technology transfer is presented in the diagram below. Please note that the steps of this process can vary

in sequence, and in many cases multiple actions occur simultaneously.



WHAT ARE THE TYPICAL TIME FRAMES FOR THE TECHNOLOGY TRANSFER PROCESS STEPS?

- Technology Disclosure preparation – from 1 day to several months;
- Communication with the Principal Investigator (PI) during the technology assessment process – from 1 day to several months;
- Patent application preparation (patent attorney involved) – normally from 2 to 6 weeks;
- Patent filing (patent attorney's responsibility) – normally 1-2 weeks;
- Patent marketing – usually up to 3 years;
- License negotiations – from 1 to 3 months (usually features 2 or 3 meetings);
- License Agreement signing – normally 1-2 weeks.

INTELLECTUAL PROPERTY

Intellectual property is a legal term that refers to the creations of mind. Examples of intellectual property include music, literature, and other kinds of artwork; discoveries and inventions; words, phrases, symbols and designs. Some common types of intellectual property rights (IPR) are copyright, patents, trademarks, and in some jurisdictions trade secrets (know-how). Intellectual property rights are themselves a form of property, called intangible property.

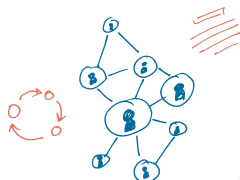
INTELLECTUAL PROPERTY

Results of intellectual activities (RIA)

- *works of science, literature, and art*
- *computer programs*
- *databases*
- *performances*
- *phonograms*
- *broadcasting or diffusion of radio- or television transmissions via cable;*
- *inventions*
- *utility models*
- *industrial designs*
- *selection attainments*
- *topologies of integrated circuits*
- *secrets of production (know-how)*

Means of Individualization (Mol)

- *trade names*
- *trademarks and service marks*
- *appellations of origin;*
- *commercial names*



The main factor that differs means of individualization [Mol] from results of intellectual activities (RIA) is that RIAs originate as a result of an individual's creative effort and, thus, imply authorship*.

The value of IP for the society lies in the encouragement of disclosure of significant knowledge created by people. In return, the patent legislation of Russia

and other countries grants the owner of IP the exclusive rights - monopoly on the use and disposition of the created knowledge for a limited period of time. Successful commercial companies gain certain advantages on the market out of this deal. At the same time, consumers benefit by being able to use the knowledge and intellectual property in the form of new products and services.

WHAT IS A RESULT OF INTELLECTUAL ACTIVITY (RIA)?

Result of intellectual activity is a legal term which refers to an intangible product developed by the creative effort of one or several individuals and which may be used in the commercial means.

RIAs that are granted legal protection include: inventions; utility models;

industrial designs; works of science, literature and art; computer programs; databases; performances; phonograms; radio, or television broadcasts or transmission via cable; utility models; industrial designs; plant breeds; topologies of integrated circuits; and broadly – know-how.

* According to the Russian Civil Code, an author of a result of intellectual activity is a person whose creative contribution has led to the creation of the result of intellectual activity. Authorship right is inalienable and non-transferrable, it always resides with the author.

INTELLECTUAL PROPERTY

WHY DOES SKOLTECH PROTECT INTELLECTUAL PROPERTY?

Skoltech is a non-commercial entity. Its students and personnel are producing new knowledge capable of benefitting the society. If an invention or other result of intellectual activity is published in an article, magazine, or publicized in some other way before it is legally protected, this object becomes part of the public domain. Therefore, any person or company may use this knowledge freely. However, often a business is not interested in commercializing a technology for which it cannot secure certain legal rights. Legal protection of the technology increases its value for the business by providing the latter with the right not only to use it but also allows them to prevent others from using it, thus providing the rightholder or the licensee with the needed level of exclusivity. This exclusivity increases competitive advantage of the business and lowers business risks. Thus, access to and securing IP rights to intellectual property serves as

an additional factor encouraging companies to invest their resources in further development, scaling and commercialization of technologies.

The importance of intellectual property protection is hard to overestimate. Usually intangible assets of high-tech companies comprise a significant part of the companies' total assets, often exceeding the value of tangible assets. This fact leads to a necessity of thorough management of intellectual property in commercial companies and within such innovation-oriented research organizations as Skoltech. The Knowledge Transfer Office is a unit of Skoltech that aims at providing such management services towards Skoltech intellectual property.

WHAT TYPES?

WHAT TYPES OF INTELLECTUAL PROPERTY SKOLTECH WILL PROTECT AND COMMERCIALIZE?

Skoltech is a non-commercial research institution, and its approach to protection and commercialization of intellectual property is different from the ones practiced by commercial companies. Universities generate results that usually represent basic principles of operation of devices, methods, etc. These results are usually too far from commercialization. Unlike other types of intellectual property, inventions are the most common results leaving Skoltech's labs. They are able to provide businesses with competitive advantage and, thus, could fall into their commercial interests field. Further development of products and services based on the Skoltech's inventions, and protection of other IP contained in such products and services is the responsibility of the commercial companies.

Other types of intellectual property that Skoltech is interested to protect include Skoltech's trademarks and copyright in 'works for hire'.

Skoltech is generally not interested in pursuing legal protection of the following types of IP: utility models, industrial designs, demarcations of origin, topologies of integrated circuits, copyright in computer software (with exception of patentable SW solutions) and in scientific publications (articles, presentations, lecture courses, etc.).

INTELLECTUAL PROPERTY

WHAT IS THE DEFINITION OF AN AUTHOR OF A RESULT OF INTELLECTUAL ACTIVITY, AND WHO DETERMINES THIS?

In accordance with the Civil Code of the Russian Federation, an author of the RIA is the person who has created the result. Only those who made significant intellectual

and creative contribution to at least a part of the result of intellectual activity may be considered an author of the RIA.



WILL I BE ABLE TO PUBLISH RESULTS OF MY RESEARCH AND STILL PROTECT COMMERCIAL VALUE OF MY INTELLECTUAL PROPERTY?

Any publication or verbal public disclosure which describes a result of intellectual activity prior to patenting may preclude obtaining patents in different countries. It is especially true for the most of European countries where there is no grace period given to file a patent after the essence of the invention has been published. Thus, the implications of publication upon patent rights should be discussed with the KTO as soon as there is a plan to publish your data so that a decision on patent filing can be reached promptly, and so that such publication will not be delayed.

INVENTIONS & PATENTS

Invention is a unique or novel apparatus, method, composition or process. It may be an improvement of a machine or product, or a new process for creating an object or gaining a result. Some inventions can be patented. A patent legally protects the intellectual property rights of the author (inventor), and the owner of the invention. The patent legally recognizes that a claimed invention is actually an invention.

Unlike other important intellectual property types, such as design patents, utility models or copyright, inventions are the native objects that are created by scientists within the research process. Patentable or patented inventions provide the broadest protection to basic principles of operation of devices, mechanisms, drugs, etc., thus allowing companies to have maximum exclusivity in using the inventions and thus be able to effectively compete with others. That is why Skoltech is willing to invest its resources in protecting commercially attractive inventions rather than other types of IP for subsequent licensing to interested companies.

WHAT IS THE PATENTING PROCESS?

The patenting process consists of the following stages:

- **Patent drafting:** Drafting a patent application together with a patent attorney;
- **Patent prosecution:** If filed according to PCT procedure*, within 9 month the patent attorney should receive a response from the patenting office as to whether the patent application claims are acceptable. On receiving this response, if needed, the author and the patent attorney work together to amend the patent application so that the patentability criteria are met. Unlike PCT, if the patent is filed according to a national procedure, the patent examination process may take years before the patent expert makes a decision regarding its patentability.
- **Patent issuance:** The patent office issues a patent;
- **Patent maintenance:** The patent requires certain owner's actions to be kept valid. Such actions include payment of maintenance fees and sometimes may require legal defense of patent rights in case of infringement or patent invalidation process.
- **Patent expiration:** In most countries the patent is valid within 20 years starting the invention priority date, unless invalidated or the owner decided to stop maintaining it earlier.

The stages of the patenting process mentioned above are similar for various countries where the patent is filed.

* About PCT please learn on page 13

INVENTIONS & PATENTS

WHO IS RESPONSIBLE FOR PATENTING?

The KTO@Skoltech will engage an external patent attorney selected specifically with respect to the particular RIA. This attorney will work together with

the authors in drafting the patent application and responding to the patent offices in the countries where the patents are filed.



WHO DECIDES WHAT GETS PROTECTED?

According to Skoltech IP policy, an invention will be assessed for patentability and commercial potential before it is legally protected by a patent. The final decision will be made by the KTO.

HOW DOES SKOLTECH ASSESS COMMERCIAL POTENTIAL?

Commercial potential of an invention for Skoltech is seen as a probability of licensing within a short period of time after filing a patent. Commercial potential also depends on the expected amount of licensing income which may be received by Skoltech as a result of successful commercialization of the invention by the licensees.

INVENTIONS & PATENTS

WHAT ARE THE CRITERIA FOR THE INVENTION'S PATENTABILITY?

According to the patent legislation in Russia and other countries, an invention is patentable if it conforms to the following criteria:

1. IT IS NOVEL (IS NOT PART OF THE PRIOR ART OR STATE OF THE ART)

**WHAT DOES
IT MEAN?**

WHAT DOES "STATE OF THE ART" OR "PRIOR ART" MEAN?

State of the art or prior art with respect to an invention, utility model or industrial design means any information and data published anywhere in the world before the priority date of such an invention, utility model or industrial design. Such data may include published articles, presentations, reports, published patents and patent applications, etc. It should be noted that unpublished or confidential information is not included in the prior art.

2. IT CAN BE APPLIED TO THE INDUSTRY ("USEFULNESS")

3. IT INVOLVES AN INVENTIVE STEP ("NON-OBVIOUSNESS")

**WHAT DOES
IT MEAN?**

WHAT DOES THE "INVENTIVE STEP" OR "NON-OBVIOUSNESS" MEAN?

Inventive step, also known as non-obviousness, is one of the invention patentability criteria. An invention is not obvious (contains an inventive step) if it does not obviously follow from the prior art for a person skilled in the field of invention. Invention does not contain an inventive step if it was obtained as a result of addition, substitution, exclusion, multiplication and other similar trivial operations with known elements and parameters in a product or a process by known methods and rules, and if the result of such operations is obvious for a person skilled in the art. An invention is also considered obvious if it concludes in making known device or its part out of known material in order to achieve an expected technical result conditioned by known properties of the material.

Generally, checking an invention for an inventive step is not an easy task. The KTO is willing to support Skoltech community with identification of patentable inventions which come as a result of research.

INVENTIONS & PATENTS

IS THERE SUCH A THING AS INTERNATIONAL PATENT?

There is no such thing as international patent. Patents are only valid in specific countries and can be filed in selected countries only. An alternative to filing a patent on a country-by-country basis is a PCT (Patent Cooperation Treaty) procedure. PCT is a convenient tool; it establishes

a streamlined filing and processing procedure for worldwide patenting. The KTO@Skoltech, at its own discretion and in accordance with potential licensee's request, will decide whether a certain application should be filed on a nation-by-nation basis or by standard PCT procedure.

Filing patents according to the standard PCT procedure provides the following benefits:

- According to PCT regulations, a patent examiner should provide a response as to whether the invention is patentable within less than 9 months. Filing a patent by national procedure may delay this process for several years.
- A 30-month grace period is given for selecting the countries where the patents should be issued, in contrast to the 12-month period provided by the Russian legislation for filing a patent based on a national application in a foreign country.
- It is simpler and more convenient to file one application instead of many applications in different countries;
- Payments and fees associated with PCT filings are lower than the fees required for filing in all the separate countries' patent offices.
- The PCT procedure will delay patent prosecution payments related to filing in each country. This allows to delay selection of countries where the invention will be protected.



**FILE
ABROAD?**

DOES KTO@SKOLTECH FILE PATENTS OUTSIDE OF RUSSIA?

Normally, the KTO may file a PCT application to the Russian patent office, which process is not regarded as filing a patent outside of Russia. The KTO may, upon the sponsor's or other licensee's request, file patents in foreign countries using the priority fixed by the PCT or national application. The licensee agrees to reimburse to Skoltech the associated patent filing and maintenance expenses.

INVENTIONS & PATENTS

WHAT DOES IT COST TO FILE FOR AND OBTAIN A PATENT?

The patent prosecution process is divided into three main stages: patent application drafting, patent filing, and negotiation of claims with the patent examiner. In the first step the author and a patent attorney prepare the patent application. This usually costs 3 000-15 000 USD depending on various factors (number of claims, necessity of prior art search, etc.). At the second stage the patent filing fee should be paid to the patent office. In the case of a PCT application filing in Russia, Skoltech will have to pay about 2 000 USD to the Russian Patent Office. There is often a lag (enduring from several months to 2-3 years) between the second and third

steps. The third stage itself can take about a year. As soon as the patents are issued, it is up to the KTO to make sure that the required annual patent maintenance fees are paid, in order to keep the patents valid in the countries of patenting. This may also cost several thousand USD, depending on the country of patenting.

Patents are valid only in the countries of issuance. If protection in multiple countries is needed, the stages should be repeated to complete the patenting process in each country. The total cost of obtaining and maintaining the patent throughout its life often exceeds 15 000-20 000 USD per country.

IS THERE AN IP PLAN AND BUDGET AT SKOLTECH? SHOULD I KEEP THE KTO AWARE OF MY RESEARCH PLANS?

The KTO has a limited budget for patenting. Each Skoltech laboratory/division/CREI should allocate budget for patenting depending on the yearly research plan. If the budget has not been alloc-

ated, the KTO will support you in finding certain funds to cover the patent filing expenses, however, the KTO does not guarantee that the funding for patent filing will be provided.



WILL SKOLTECH INITIATE OR CONTINUE PATENTING ACTIVITY WITHOUT AN IDENTIFIED LICENSEE?

Skoltech will decide whether to file a patent based on the technology assessment and commercial potential. Existence of a potential licensee is preferable but not an imperative.

The KTO may cease the patent maintenance process, if after a period of time the IP is not licensed.

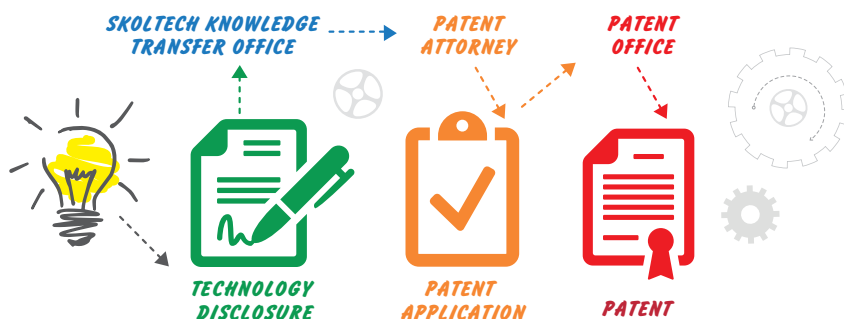
TECHNOLOGY DISCLOSURE

Technology Disclosure (TD) is a document describing the results of intellectual activity in sufficient detail and with sufficient data to enable the KTO to evaluate it for patentability and/or commercial potential. The Technology Disclosure also identifies the author(s) (full names, nature of participation in the creation of the result of intellectual activity), the authors' home organization, the relationship of each author to his or her respective home organization, the authors' places of residence at the time of creation, and the authors' location (country) at the time such result of intellectual activity was created. It should be noted however that the Technology Disclosure is not a patent or a patent application and does not imply any legal protection of the invention. The protection only occurs after the internal TD examination and filing a patent application on its basis.

WHY SHOULD I SUBMIT A TECHNOLOGY DISCLOSURE?

The TD is submitted to the KTO@Skoltech in order for the KTO to assess the technology towards patentability and commercial potential. If the technology is deemed patentable and commercially attractive,

the KTO@Skoltech will arrange the technology patenting process and will work with the author(s) and patent attorneys to protect the technology and market it to potential licensees.



HOW DO I SUBMIT A TECHNOLOGY DISCLOSURE?

A Technology Disclosure is submitted to the KTO via the Inventor portal, by e-mail, by postal service or in person. It is strongly recommended that the author(s) contact the KTO@Skoltech prior to submitting a disclosure.

For more information about the technology disclosure options available to you please visit the following web-page:
www.skoltech.ru/en/kto/tdf



TECHNOLOGY DISCLOSURE

WHOM SHOULD I LIST ON MY TECHNOLOGY DISCLOSURE?

The Technology Disclosure should contain information about individuals (authors) who made a creative contribution to the conception of at least a part of the invention. Individuals whose contribution was not creative should not be listed in the disclosure as authors – for instance,

those who provided measurements, helped in writing reports, articles and the Technology Disclosure, supervisors, administrative staff, etc. Listing a person who is not the author of the invention may significantly strengthen the chances for the patent to be invalidated.

HOW DOES THE KTO ASSESS TECHNOLOGY DISCLOSURES?

There are several steps in the technology assessment process.

One of the steps is to assess commercial potential. It is a collaborative effort of the author and the KTO to demonstrate that the technology provides a competitive advantage to the potential licensee and will create a reason for him/her to invest resources in commercializing the technology. As a result, a decision will be made by the KTO (in some cases, with the support of external experts) regarding whether the technology is commercially attractive, if it addresses the Skoltech's mission, and whether it is worth allocating money for its patenting. If no considerable advantage is provided for potential licensees or for Skoltech's research mission, the KTO may decline to apply for a patent and provide support

in commercializing the technology. In this case the authors may submit to the KTO a request on the waiver of patent rights in favor of the authors.

Another step is to determine whether the technology is patentable. This process is also a matter of collaborative effort between the author and the KTO. However, the author should make a preliminary prior art search before submitting a Technology Disclosure to the KTO. If no relevant prior art is found, the patent attorney retained by the KTO and assigned to prepare a patent application for a particular RIA will assume responsibility for this process.

HOW? WHEN?

HOW DO I KNOW IF MY RESEARCH RESULT/DISCOVERY IS AN INVENTION? WHEN SHOULD I SUBMIT A TECHNOLOGY DISCLOSURE?

In most cases it is critical that the technology transfer not be delayed. You are encouraged to contact the KTO as soon as possible to discuss the patentability and commercial potential of your discovery which you think may solve a significant problem and/or may have a significant commercial value. The KTO members will be happy to assist you in the assessment of commercial potential of your research results. The KTO can also advise you regarding alternatives to patenting and licensing.

SKOLTECH IP POLICY

Skoltech IP Policy* is a document which serves as an official codex of rules and guidelines for the efficient Skoltech's intellectual property management and commercialization.

Most of organizations have missions and strategies. One of the Skoltech's mission statements is to educate students, advance knowledge, and foster innovation in order to address critical scientific, technological, and innovation challenges and gaps facing Russia and the world.

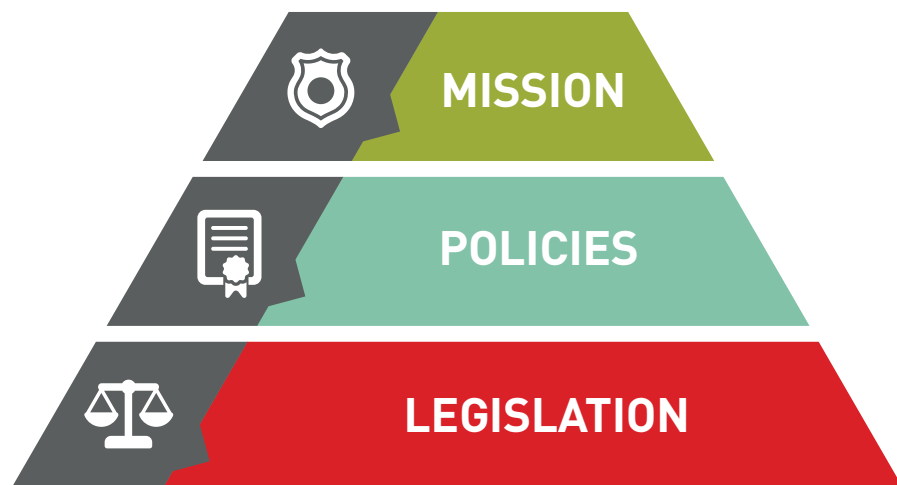
In order to follow the Mission, Skoltech has to develop, approve and implement its own policies and procedures as supporting tools allowing Skoltech to operate on the basis of centralized principles.

Creation and dissemination of knowledge is one of the key outcomes of a research university operations. However, broad dissemination of knowledge for the benefit of the general public is sometimes impossible without proper knowledge

management. The concern is in balancing the interests of sponsors and industrial partners with the correlated interest of researchers and the institute in designing a process that is transparent, auditable, and consistent with best licensing and technology transfer practices. The Institute Policy on Protection, Management and Commercialization of Intellectual Property provides consistent basis for terms and conditions, yet preserves the ability to customize agreements. Skoltech IP Policy encourages the beneficiaries of the technology transfer process, including researchers, Skoltech community and the industry, to effectively work together for the mutual benefit and the positive impact on the society.

Skoltech

Skolkovo Institute of Science and Technology



*The full text of Skoltech IP Policy can be found at http://www.skoltech.ru/en/kto/Skoltech_IP_Policy.pdf

SKOLTECH IP POLICY



**WHAT THE
PRINCIPLES ARE?**

WHAT ARE THE BASIC PRINCIPLES OF SKOLTECH IP POLICY?

- *With the exception of copyright in student thesis and scientific publications, Skoltech owns service results of intellectual activities developed by its personnel and students, as well as any intellectual property developed by others with essential use of Skoltech's funds and facilities.*
- *Agreements with sponsors provide that intellectual property created by Skoltech community members and students will be owned by Skoltech, whereas the sponsor gets a pre-emptive time-limited right to choose among the following options:*
 - *Royalty-free commercial nonexclusive license*
 - *Royalty-bearing commercial exclusive license*
- *Skoltech will seek legal protection only for intellectual property that is commercially attractive or has high potential of licensing.*
- *Skoltech is willing to license IP to companies, either established ones or start-ups, on fair commercial conditions that support licensee's business model.*
- *The authors benefit from commercial success of the technology by sharing in 1/3 of the net licensing income.*

SKOLTECH IP POLICY

WHAT ARE THE SKOLTECH IP POLICY OBJECTIVES?

Skoltech IP policy is designed around certain objectives, each of which is addressed in order to meet the needs and expectations of participants and beneficiaries of the technology transfer process. In general, the objectives can be summarized as follows:

FOR RESEARCHERS:

- Social impact of an invention
- More sponsored research
- Jobs for students
- Financial reward
- Assistance on commercialization



FOR THE INDUSTRY:

- Access to world-class technology
- Certain level of exclusivity in using IP
- Rights to background IP

FOR SKOLTECH:

- Preserve freedom of research and publication
- Continuous growth of research capability
- Recruiting entrepreneurial and innovative researchers and students
- Promotion of entrepreneurship
- Ability to provide social and economic impact locally and globally
- Attract and generate more funding out of collaboration with the industry



IP OWNERSHIP AND LICENSING RIGHTS

Skoltech is a university aiming at bringing certain commercial benefits by distributing generated knowledge widely. Companies usually want to obtain and secure rights to use discoveries created within the sponsored research projects, and Skoltech is willing to provide them the needed rights. Skoltech IP policy allows companies to have access to technologies within licenses, and to negotiate a certain level of exclusivity for the created results in order to achieve desired competitive advantage on the market.

WHO OWNS INTELLECTUAL PROPERTY I CREATED AT SKOLTECH?

According to the Skoltech IP Policy, a result of intellectual activity created by a Skoltech employee or a student, or others with the use of Skoltech funds and

facilities, should be assigned to Skoltech. However, Skoltech does not claim ownership of copyright in student thesis and scientific publications.

WHAT IF I CREATED A RESULT OF INTELLECTUAL ACTIVITY WITH A PARTNER FROM ANOTHER INSTITUTION OR A COMPANY?

Generally, in this situation each author will assign his/her rights to the RIA to his/her employer, and the RIA will be jointly owned by Skoltech and the other institution or the company. The KTO@Skoltech will work with other owners to determine who will take the lead in the management of

the invention: protect and license the RIA, share expenses associated with the RIA protection, and allocate the licensing revenue. Usually, the joint owners draw up an agreement which specifies their rights and responsibilities towards the RIA management.

IS AN INVENTION OR OTHER RIA EVER REASSIGNED TO THE AUTHOR?

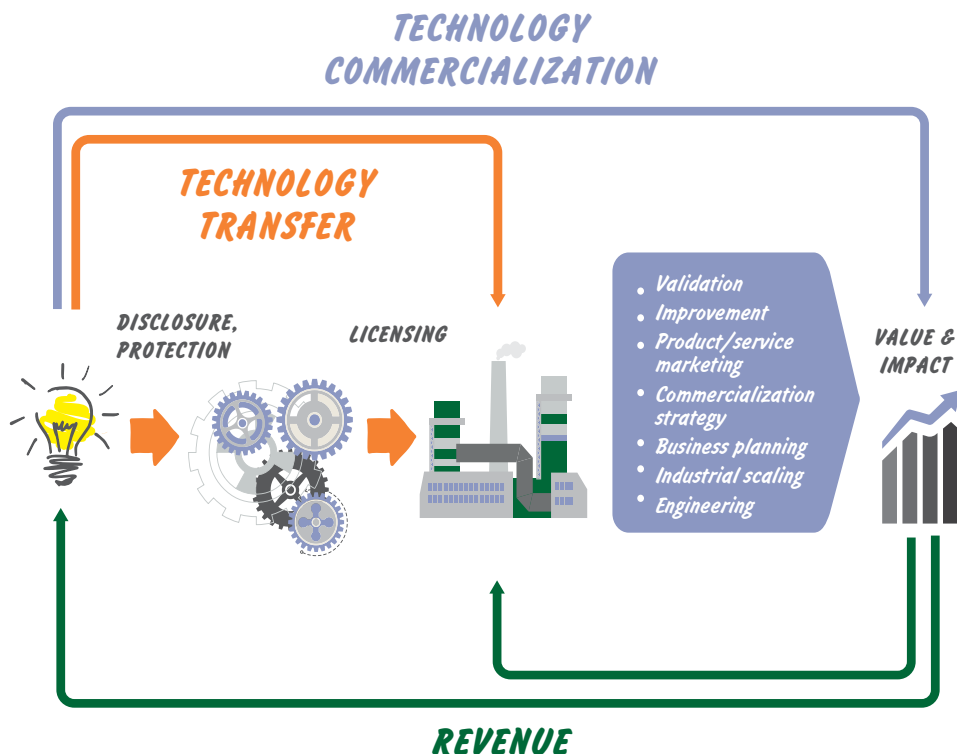
Skoltech will keep ownership of intellectual property to meet its obligations toward the sponsor and to promote the mission of Skoltech.

In other situations Skoltech may consider reassigning ownership to the authors upon their request.



TECHNOLOGY COMMERCIALIZATION

Technology commercialization is a process or a cycle of introducing and driving a new product, service or production method on the market. The steps in the process may include technology transfer, which is composed of certain steps itself, and specific efforts connected with technology implementation in new products or services and bringing them to the market. The efforts may include marketing, validation, scaling, engineering, setting goals and business strategy, planning the business, etc.



WHAT ARE THE COMMON WAYS AND APPROACHES FOR A TECHNOLOGY COMMERCIALIZATION?

Generally, there are two major ways for a university technology to be commercialized for the benefit of the general public. Depending on the technology features and situation on the market, the technology can be transferred to and effectively commercialized by either an established

business in the field of the technology, or a startup company specifically formed to commercialize the technology. The ultimate choice of the licensing strategy will be made by the KTO taking into account the authors' expectations, availability and motivation.

TECHNOLOGY COMMERCIALIZATION

WHAT IS THE RELATIONSHIP BETWEEN A RESEARCHER AND A LICENSEE DURING TECHNOLOGY COMMERCIALIZATION PROCESS, AND HOW MUCH OF THE INVENTOR'S TIME AND EFFORT WILL IT REQUIRE?

- At the technology assessment and marketing stage the researcher helps the KTO to identify the licensee.
- At the technology licensing stage the KTO may ask the researcher to provide the potential licensee with information and data about the technology's benefits for the licensee's business, and inform about potential risks and drawbacks the licensee should be aware of during the commercialization process.
- When the technology is licensed, the researcher may consult and technically support the licensee with the technology implementation in order to multiply chances for the commercial success. The licensee may also provide research sponsorship to Skoltech to advance the licensed technology.
- The amount of time needed for taking these activities usually varies depending on the needs of the licensee and availability and involvement of the researcher.

HOW LONG DOES THE TECHNOLOGY COMMERCIALIZATION PROCESS TAKE?

The process of protecting the technology and finding the right licensee may take months or even years. The amount of time needed will depend on the duration of the development stage of the technology,

the market for the technology and competing technologies, the amount of work needed to bring a new concept to market-ready status, and the resources and interests of licensees and inventors.



TECHNOLOGY COMMERCIALIZATION

WHAT ACTIVITIES OCCUR DURING TECHNOLOGY COMMERCIALIZATION?

University technologies are usually captured in their early stage. The licensee will continue to develop and enhance the technology, then work to reduce risks and prove reliability in order to satisfy the market, as well as customer requirements and needs. This usually involves prototyping, testing, finding/developing the proper technolo-

gical process for the manufacturing, etc. Documentation for training, installation and product marketing is often created at this phase. Benchmarking tests are often required to demonstrate the product/service advantages and to position the product on the market.

WHAT REVENUES ARE GENERATED FOR SKOLTECH IF COMMERCIALIZATION IS SUCCESSFUL?

The technology development and R&D process requires a lot of time and effort of the Skoltech faculty, researchers, postdocs and students. Skoltech allocates certain funding, including sponsorship money, for their work. The patenting process also requires certain related fees and payments for patent application drafting and filing. A portion of the expenses can be covered by revenues coming from successful technology commercialization.

In case of licensing a technology to large companies or start-ups, the licensees pay certain licensing fees (may include license issue fee, milestones fees, annual fees, etc.).

These fees can vary from a few thousands to hundreds of thousands dollars.

One more source of revenue is running royalties on the eventual sales of the licensed products, though, it can take years for the product to make a significant market contribution and, thus, earn much running royalty for Skoltech.

Equity, if included in a license (usually in case of licensing to start-ups), can yield similar returns, but only if a successful liquidity event occurs (public equity offering or the sale of the company).

WHY PARTICIPATE?

WHY WOULD I WANT TO PARTICIPATE IN THE TECHNOLOGY COMMERCIALIZATION PROCESS?

- *Make a positive impact on the society*
- *Feel a sense of personal fulfillment*
- *Achieve recognition and financial reward*
- *Generate additional funding for the researcher's department or center*
- *Meet the obligations of a research contract*
- *Raise funds for research*
- *Create educational opportunities for students*
- *Link students to future job opportunities*

COOPERATION WITH THE INDUSTRY

In many cases an applied research starts with a challenge statement that the research aims to face. The statement usually comes from companies or end-users. By facing the challenge and solving the problem, companies gain competitive advantage while the end-users get an additional value in products or services. That is why it is important to understand clearly the needs of a company or an end-user before starting the applied research, and to be able to flexibly adjust the research vector during the research.

WHO OWNS INTELLECTUAL PROPERTY CREATED WITHIN A SPONSORED RESEARCH?

According to the Skoltech IP Policy, with the exception of copyright in student thesis and scientific publications, the intellectual

property created by Skoltech students and personnel under the financial support of the sponsor will be owned by Skoltech.

WHAT RIGHTS DOES A RESEARCH SPONSOR HAVE TO ANY DISCOVERIES ASSOCIATED WITH MY RESEARCH?

Agreements with research sponsors provide that the rights to results of intellectual activities created by Skoltech employees and students are assigned to Skoltech.

The sponsor has a pre-emptive right to elect one of the following commercial licenses: a nonexclusive royalty-free license or an exclusive royalty-bearing license.



COOPERATION WITH THE INDUSTRY



WHY?

THE SPONSOR PAYS MONEY FOR THE RESEARCH, WHY CAN'T IT HAVE OWNERSHIP IN THE IP?

"Freedom of research" is one of the basic principles that will allow Skoltech to attract world-class researchers and create world-class technologies in the future. In order to be able to do research freely, Skoltech's prior intellectual property should not be blocked from future use and improvement, leaving the room to continuously advance Skoltech's knowledge and IP. The IP becomes accessible for sponsors within commercial licenses as well.

One of Skoltech's mission statements is to foster innovation for the benefit of the general public. Also, Skoltech is aiming at becoming one of the most economically impactful universities in the world. To accomplish this, Skoltech provides the research sponsor with as many commercial rights to the IP, and as much commercial exclusivity as is needed for the success and competitiveness of the sponsor's business, and for commercialization of the technology as widely and quickly as possible. The transfer of necessary rights to the sponsor can be done within exclusive or nonexclusive licenses. In this sense control of IP by Skoltech does not mean blocking IP: Skoltech will only reserve for others the remaining rights, such as other fields of use, other territories, other period/time, right to practice the IP for research purposes, etc.

Sponsored research implies funding within a limited period of time. However, what the sponsor gets within the funding period is access to researcher's experience and expertise often accumulated during long period of prior inventive work, that can be applied to the sponsor's project and for the sponsor's benefit as a result of Skoltech's policy to secure ownership of its inventions.

TECHNOLOGY MARKETING

According to the NTTC*, technology marketing is “the effort to efficiently transfer & transact technology”. More specifically, technology marketing concludes in collection and analysis of information about the market, adjusting the business strategy, making certain business decisions on the basis of this information.

HOW WILL THE KNOWLEDGE TRANSFER OFFICE MARKET MY TECHNOLOGY?

The KTO@Skoltech is willing to carry out the technology marketing activities with the active participation of the authors. First of all, the KTO will publish information about the technology on its web-site. Second, the KTO can search for and establish con-

tacts with companies that may be interested in the technology. Third, the KTO can advertise the technology at conferences, fairs, and on the Internet, as well as in specialized databases, such as AUTM Global Technology Portal, Inteum Technology publisher, etc.

HOW ARE MOST LICENSEES FOUND?

The authors should know best what the needs of the market are; often they can identify the best possible licensees for their RIAs. Therefore, the KTO@Skoltech will first talk with potential licensees identified

by the authors. As needed, the KTO will conduct technology marketing using specialized technology marketing tools and by contacting companies from the KTO's network of contacts.

HOW LONG DOES IT TAKE TO FIND A POTENTIAL LICENSEE?

In cases where an industrial sponsor funds the research, the sponsor gets an option to elect either an exclusive or nonexclusive license on the intellectual property cre-

ated as a result of the sponsorship. If the research isn't funded by a sponsor, it may take years to find a licensee.

HOW CAN I HELP?

HOW CAN I HELP TO MARKET AND PROMOTE MY TECHNOLOGY?

Researcher's efforts in technology marketing are vital, and the KTO seconds this. The researcher may market the technology by initiating contacts with potential licensees. Discussions with companies may be conducted freely around only those aspects which are covered by a patent or a filed patent application, and one should undertake maximum measures to keep the non-protected information undisclosed. However, it is possible to protect the information and sample transfer by signing a non-disclosure agreement (NDA) or a material transfer agreement (MTA). The KTO is willing to provide you with an administrative support by helping you compose an NDA or MTA based on a certain case. If in doubt, researchers may consult with the KTO regarding the content for a potential discussion, in order to define what could be disclosed and what cannot.

Terms and conditions of a license agreement cannot in any way be discussed or negotiated with investors or companies; KTO is the only authority to conduct such negotiation.

*National Technology Transfer Center of the United States.

TECHNOLOGY MARKETING

WHEN CAN I START THE TECHNOLOGY MARKETING PROCESS?

Companies gain competitive advantage by being first to market with new technologies. So the technology marketing process should be started as soon as possible – in some cases even before a technology is fully developed.

Note: concern is when the technology is being marketed to companies before the patent is filed. The KTO@Skoltech is willing to support you and provide advice prior to approaching a company with your idea/invention/technology.

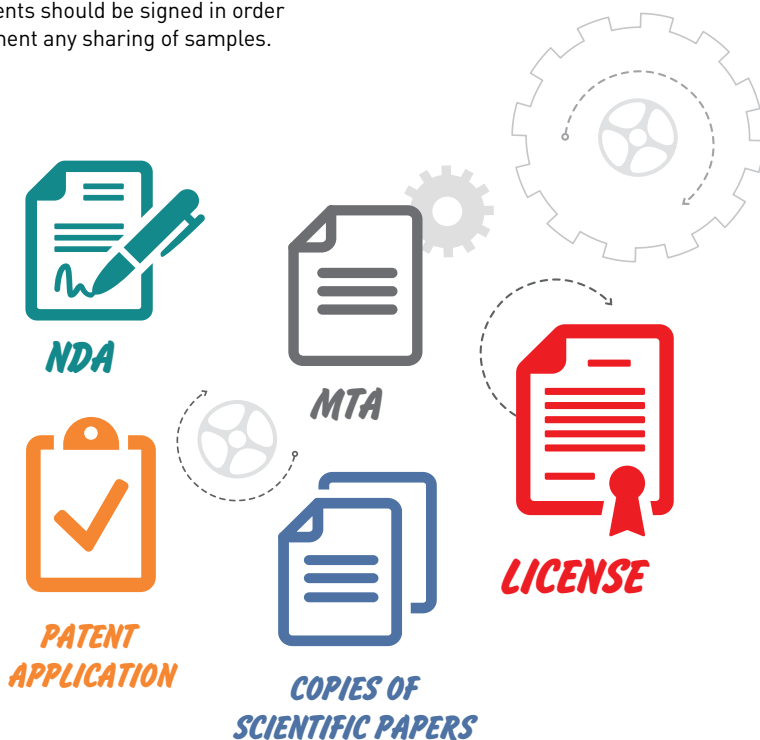
WHAT DOCUMENTS ARE USUALLY NEEDED TO COMMUNICATE WITH POTENTIAL LICENSEES DURING THE TECHNOLOGY MARKETING PROCESS?

If a patent is either not filed or not yet published, Nondisclosure Agreements (NDA) and Material Transfer Agreements (MTA) are usually executed prior to discussion with potential licensees in order to freely exchange information and/or samples;

If the patent application is published, it is relatively safe to talk to potential licensees without any Nondisclosure Agreements. However, Material Transfer Agreements should be signed in order to document any sharing of samples.

Patent applications and copies of scientific papers are the documents which are usually requested by potential licensees to assess your capability to create and/or transfer the technology;

License Agreement templates and Skoltech policy documents help provide potential licensees with general information concerning licensing rules, clauses, etc.



STARTUP CONSIDERATIONS

A start-up is a new business entity which is formed specifically to commercialize a technology licensed from Skoltech. Start-ups are usually created in order to commercialize a novel breakthrough technology that sometimes doesn't have its own market. Start-up is a high-risk venture, that is why large companies often prefer to buy successful startups rather than invest in technologies at the early stage or their commercialization. Creating a startup allows to create new niches of or occupy a part of an emerging market.

Startups formed with the direct involvement of the author, that are usually called the spin-out, have much higher rate of success compared to startups where the authors do not participate. That is why Skoltech, and the KTO specifically, will provide as much support as possible for the spin-out to succeed.

WHO DECIDES WHETHER TO FORM A SPIN-OUT?

It is important that the researcher comes to the KTO with a high degree of motivation. The researcher who wants to form a spin-out should provide the KTO with a preliminary version of a business model, and the KTO will work with the researcher to determine the likelihood of success. Ultimately, the final decision is made by the KTO based on the commitment of investors (such as venture capitalists or angel investors) and the technology appropriateness for the start-up formation.

WHAT IS THE ROLE OF THE KTO@SKOLTECH IN FORMING A SPIN-OUT?

The support provided by the KTO includes matchmaking with investors, making suggestions on the business plan, and negotiating the License Agreement.

SHOULD THE START-UP PAY LICENSING FEES AND RUNNING ROYALTIES?

Usually start-ups don't have enough cash to pay substantial initial licensing fees. Thus, Skoltech can negotiate for equity as a partial substitute for cash to be initial licensing fee. Running royalties are usually based on sales, and they are negotiated on a case-by-case basis.



STARTUP CONSIDERATIONS



WHAT KEY FACTORS SHOULD BE CONSIDERED WHEN FORMING A START-UP?

The critical factors behind making a decision to form a start-up are as follows:

- *Is the inventor ready to be involved in a start-up? One of the criteria for the investors to make a decision on funding the start-up is that the author is an active participant and the driving force in a start-up.*
- *Is this technology appropriate for a start-up or is it better suited for licensing to an existing company?*
- *Will the start-up be able to raise enough funding to develop its business?*
- *What is the development risk? In many cases large companies don't want to take the risks associated with technology commercialization. These companies would rather buy a successful start-up.*
- *What are the development costs vs. the investment return? Can the start-up investors obtain their needed rates of return?*
- *What are the potential revenues, and will future products be sufficient to create a sustainable company?*

LICENSING

A license is a tool by which the owner of intellectual property (the “licensor”) grants another party (the “licensee”) permission to assume some of the owner’s rights to the technology. Typically the terms and conditions of a license are regulated by the License Agreement. A License Agreement is a contract describing rights and responsibilities of the licensor and a licensee with respect to a certain invention or other intellectual property. Terms and conditions of a License Agreement usually include but are not limited to the following: payment method and payment amount (licensing fee, running royalty, etc.), territory of use, field of use, exclusivity, licensee’s diligence, and duration. In negotiating License Agreements, the KTO always retains the right to use the technology for noncommercial purposes at Skoltech and elsewhere.

CAN THERE BE MORE THAN ONE LICENSEE?

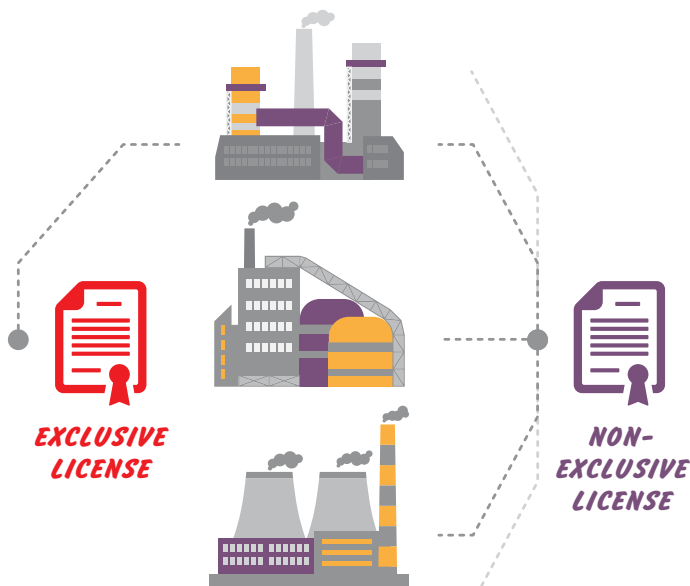
The more investment is needed for the technology to be brought to market, the more exclusivity the investors usually require. To address this situation an exclusive or nonexclusive license can be executed with respect to a technology.

For every IP there can be an unlimited number of nonexclusive licenses.

In case of exclusive licenses there can be more than one licensee for one IP, too.

For example, exclusive licenses can be set according to fields of use or territories. Skoltech can choose either to license broadly or limit licenses to specific territories, scope or fields of use.

There are also so-called ‘co-exclusive licenses’ which provide a limited number of licensees, usually two or three, with the same licensing rights in the same territory, scope and field of use.



LICENSING

WHAT CAN I EXPECT TO GAIN IF MY TECHNOLOGY IS LICENSED?

There are several major benefits the authors gain from technology licensing. Those include license revenues (1/3 of the license revenue income less patenting and administrative costs). Additionally, authors enjoy the satisfaction of knowing

their technology is being deployed for the benefit of the general public. Another benefit is the close relationship to industry, which can help augment the quality of the author's teaching, research and consulting.

IF I WISH THAT ALL TECHNOLOGIES BE LICENSED NONEXCLUSIVELY TO ALL POTENTIAL USERS FOR THE PUBLIC GOOD, WILL SKOLTECH HONOR MY REQUEST?

In some cases, a particular technology can be effectively brought to market and, thus, provide more benefit for the general public if licensed exclusively rather than nonexclusively. The KTO will consider

each Technology Disclosure from this point of view while taking into account the authors' commercialization wishes, the objectives of co-authors and any obligations to sponsors or other third parties.

WHAT WILL HAPPEN TO MY TECHNOLOGY IF THE LICENSEE IS UNSUCCESSFUL? CAN THE TECHNOLOGY BE LICENSED TO ANOTHER ENTITY?

Licenses typically include performance milestones that, if unmet, can result in termination. This allows for subsequent

licensing to another business. However, time delays and other considerations can hinder this re-licensing.



LICENSING



HOW IS A LICENSEE CHOSEN?

Statistically, the authors of results of intellectual activities are usually the most valuable sources of information when searching and choosing companies for licensing. That is why the KTO manager will first talk to the author in order to collectively identify potential licensees, using the author's awareness about the technology, and the KTO's business expertise.

In general, the licensee should be chosen by its ability to commercialize the technology for the good of the general public and societal benefit. Generally, there are two groups of potential licensees:

- *established companies skilled in the field of technology, and*
- *start-up companies, usually formed by the Skoltech faculty, researchers, or students.*

The decision of whether the technology should be licensed to an established company or a start-up is based on the technology features and, in the case of the creation of a spin-off, the researchers' motivation and business skills. Since researchers may not have enough business experience, they often seek entrepreneurs with business skills and expertise to partner with them. Through the CEI Helpdesk Skoltech is prepared to help identify and match authors willing to create a spin-off, and such entrepreneurs.*

* CEI Helpdesk is an initiative within the Center for Entrepreneurship and Innovation, that was specifically created to provide support and mentorship to Skoltech's employees and students in their entrepreneurial activities. A request for CEI Helpdesk support should be sent at cei_helpdesk@skoltech.ru.

REVENUE DISTRIBUTION

HOW ARE LICENSE REVENUES DISTRIBUTED?

As per the Skoltech IP Policy, potential revenues received from licensees as a result of successful technology commercialization will be distributed in favor of the authors (1/3 of Net IP revenue) of

the licensed technology and to Skoltech budget (2/3 of Net IP revenue). Licensing revenues are distributed after all patenting expenses and other administrative fees are covered.

WHAT ARE THE TAX IMPLICATIONS OF ANY REVENUES I RECEIVE FROM SKOLTECH?

According to the Russian legislation, licensing revenues received by individuals

are subject to social tax and personal income tax.

HOW ARE THE REVENUES DISTRIBUTED IF THERE ARE MULTIPLE AUTHORS IN A LICENSED TECHNOLOGY?

The revenues are usually distributed equally among the co-authors unless all of the authors agree on a different allocation. The au-

thors may submit to the KTO a document reflecting the degree of co-authors' participation in the invention creation process.

WHAT IF I RECEIVE EQUITY FROM A COMPANY?

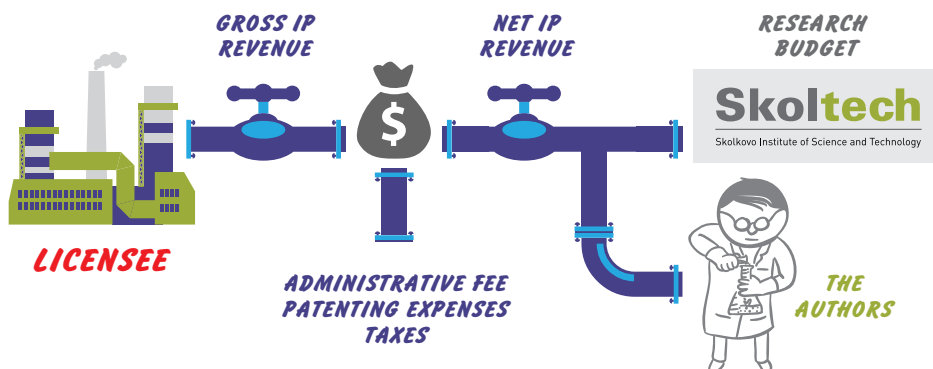
Skoltech policy regulates that if the author has received or will receive equity directly from a start-up which had licensed the Skoltech technology, this author cannot

claim any part of the company's equity received by Skoltech in connection with that license. Equity may include stock, stock options and/or stock warrants.

HOW IS EQUITY DISTRIBUTED?

Equity received by Skoltech under License Agreement is distributed to authors upon the liquidity event, in accordance with the same regulations

as distribution of cash revenues. This applies only to cases when the author doesn't receive equity directly from the company.



SKOLTECH KNOWLEDGE TRANSFER OFFICE

Knowledge Transfer Office is a unit within Skoltech that is responsible for Skoltech's IP portfolio management, including assessment, protection, management and licensing of Skoltech intellectual property to interested companies – either startups or an established business.

KTO facilitates social and economic impact by assisting inventors with the steps needed to bring technological innovations to market. These steps are designed to balance the interests

of research sponsors, spin-outs, the authors and Skoltech. The KTO aims to insure transparency, auditability, and consistency with university licensing best practices.

The KTO is always at your disposal to help you with identification, protection and commercialization of your inventions, and is ready to provide you with the following support:

- Reviewing and discussing your ideas and research results to determine what is patentable, how soon, and what you might do to strengthen your invention;
- Working with patent attorneys to make the patent applications as strong as possible;
- Working with your research sponsors and collaborating institutions to address any IP policy, joint invention or licensing issues that might occur;
- Marketing your inventions and negotiating with licensees;
- Helping you spin out companies.

Other KTO functions include negotiating IP terms in research contracts, and negotiating and signing Nondisclosure Agreements, Material Transfer Agreements and Option Agreements with potential licensees in order to give them time and an opportunity to make a decision whether to acquire the license rights or not.

For more information about KTO please visit: www.skoltech.ru/en/kto/ or contact us at: kto@skoltech.ru **+7 495 280 14 81 (ext. 3306)**



SKOLTECH KNOWLEDGE TRANSFER OFFICE



OTHER OFFICES@SKOLTECH THAT WILL SUPPORT YOU IN THE PROCESS OF TECHNOLOGY TRANSFER

OFFICE OF GRANTS AND CONTRACTS

The Skoltech Grants and Contracts Office is committed to provide high quality support to the Skoltech faculty for external and internal research funding award administration.

<http://www.skoltech.ru/research/en/organization/grants-contracts/>

SKOLTECH'S INDUSTRIAL ADVISORY GROUP

Skoltech's Industrial Advisory Group maintains relationship with large industry partners and understands well the priorities of Russian industry that have been determined for each key sector of the Russian economy, as well as the list of their application areas.

<http://www.skoltech.ru/en/industry/scientific-industrial-policy-group/>

EFFICIENT ALLOCATION OF ROLES AND RESPONSIBILITIES WITHIN THE TECHNOLOGY TRANSFER PROCESS

Bringing a technology to the marketplace requires a number of resources of different types. Besides monetary factors, certain expertise should be attracted from various fields. Such expertise usually includes but not limited by: patent attorneys, lawyers, economists, business managers, engineers, etc. However, researcher's engagement in this process is critical.

In most situations it is very difficult to successfully transfer the technology without the author's support, because the authors are the most knowledgeable persons who recognize every pro and contra of the technology he or she created with respect to a particular application or a market niche. That is why it is very critical that all these technical, legal and business professionals work together efficiently.

The KTO is a unit of Skoltech that was specifically created to support technology transfer from Skoltech researchers to the industry. The KTO consists of licensing and technology commercialization professionals which are able to link scientific and technical benefits and effects of the technology, its commercial perspectives and all necessary expertise in one process in order for the knowledge created at Skoltech to provide impact on the society.

Roles in the technology transfer and commercialization process should be effectively shared among researchers, the KTO and the industry or a start-up so that the complementary skills and expertise of the people involved would lead to an effective and successful commercialization of Skoltech's technologies.

WHAT ARE THE SPECIFIC FUNCTIONS OF THE KTO@SKOLTECH AND WHAT IS ITS ROLE IN THE TECHNOLOGY TRANSFER PROCESS?


The KTO's primary functions are as follows: assessment of Skoltech's inventions towards patentability and commercial potential, protecting commercially perspective inventions by patents, marketing technologies

to companies which may benefit from their commercialization, negotiating and signing license agreements with interested companies, and controlling obligations of the licensees within the license agreements.

WHAT IS MY ROLE DURING TECHNOLOGY COMMERCIALIZATION?

The researcher's role during technology commercialization varies depending on his/her interest and involvement, and the interest of the licensee in utilizing the technology for various assignments. Obligations and responsibilities to the sponsor will also affect the researcher's degree of participation in this process.

WHAT IS MY ROLE?

STEPS	SKOLTECH KTO ROLES AND RESPONSIBILITIES	RESEARCHER'S ROLES AND RESPONSIBILITIES
1. RESEARCH	<ul style="list-style-type: none"> Working with research sponsors and collaborating institutions in negotiating IP terms (ownership, management, revenue sharing, etc.) of research contracts. Supporting and consulting employees and students regarding execution of Material Transfer Agreements (MTA) or Nondisclosure Agreements (NDA) in order to safely exchange samples or confidential information at the research contract negotiation stage. 	<ul style="list-style-type: none"> Prior art analysis and identification of existing solutions that will/can be improved during the course of the research work. Develop technical part of the Scope of Work in research contract. Make research work in accordance with the Scope of Work. Sign documents (if necessary) that state researcher's agreement with the research contract provisions.
2. TECHNOLOGY DISCLOSURE 	<ul style="list-style-type: none"> Reviewing and discussing new ideas and research results to determine what is patentable, how soon, etc. Assisting with completion of Technology Disclosure Forms. 	<ul style="list-style-type: none"> Visit the KTO to discuss any ideas or research results that seem to have commercial potential. Complete a Technology Disclosure Form once a novel and potentially commercially attractive invention is created.
3. TECHNOLOGY ASSESSMENT	<ul style="list-style-type: none"> Patentability assessment of technology disclosures (novelty, non-obviousness, usefulness). Identification of inventors and owners of inventions. Negotiating and signing Joint Invention Agreements (JIA) with other joint owners, if any. Expertise towards realization of technology's commercial potential and likelihood of licensing. Making decision on technology protection (filing a patent). 	<ul style="list-style-type: none"> Provide as much information as possible in order for the KTO to properly assess the invention towards patentability and commercial potential.

STEPS	SKOLTECH KTO ROLES AND RESPONSIBILITIES	RESEARCHER'S ROLES AND RESPONSIBILITIES
4. PRIOR ART SEARCH	<ul style="list-style-type: none"> ■ Helping researchers with interpretation of results of the prior art analysis. 	<ul style="list-style-type: none"> ■ Analyze the state of the art (all public data, including patents, articles, presentations, etc.) in order to demonstrate that the technology is new and, thus, novelty as one of the patentability criteria is met.
5. PATENT APPLICATION PREPARATION	<ul style="list-style-type: none"> ■ Finding and contracting relevant patent attorney for a specific technology and handling all related contractual paperwork. ■ Assistance in patent application drafting, review, and editing. 	<ul style="list-style-type: none"> ■ Working closely with the patent attorney to help him/her prepare a good and strong patent application covering your invention.
6. PATENT FILING	<ul style="list-style-type: none"> ■ File patent application with the Russian Patent Office (via a patent attorney) – either nationally or via PCT procedure. ■ Nationalizing patent applications in other countries upon direct licensees' requests. ■ Analysis and approval of patent application examination reports. ■ Assistance with clarification of patent claims. 	<ul style="list-style-type: none"> ■ Work closely with the KTO and the patent attorney to clarify patent claims, once needed.
7. TECHNOLOGY MARKETING	<ul style="list-style-type: none"> ■ Facilitate inventor's contacts with companies. ■ Advise inventor on the possibility of startup creation when interested, facilitating his/her contacts with venture capitalists. 	<ul style="list-style-type: none"> ■ Find strengths of the technology in various industries and niches. ■ Finding and contacting companies in order to discuss applicability of the technology from technical point of view.

STEPS	SKOLTECH KTO ROLES AND RESPONSIBILITIES	RESEARCHER'S ROLES AND RESPONSIBILITIES
	<ul style="list-style-type: none"> ■ Advising on communication strategy with interested companies ■ Developing and executing Material Transfer Agreements (MTA) and Nondisclosure Agreements (NDA) with companies, once needed. 	<ul style="list-style-type: none"> ■ Disclose the technology principles to interested companies (only after consulting with the KTO).
8. TECHNOLOGY LICENSING	<ul style="list-style-type: none"> ■ Negotiate and execute option and license agreements with potential licensees (big companies or startups/spin-offs) on commercial conditions. 	<ul style="list-style-type: none"> ■ Researcher may support licensees with implementation of the technology at their site in order to maximize the company's commercialization efforts.
9. ROYALTY DISTRIBUTION	<ul style="list-style-type: none"> ■ Keep track of licenses and statistics in terms of royalty distribution to inventors, Skoltech and other institutions. ■ Work with accounting office regarding royalty calculation and timely distribution. 	<ul style="list-style-type: none"> ■ Share in resulting licensing fees and royalties.
10. LICENSE MAINTENANCE	<ul style="list-style-type: none"> ■ Manage and maintain the license throughout the life of a license agreement. ■ Oversee executed license agreements, control licensee's diligence, licensees' audit if necessary. ■ Re-negotiation and making amendments in the license agreements, once needed. 	<ul style="list-style-type: none"> ■ Support licensees with technical and/or commercial implementation of your technology.

GLOSSARY

INNOVATION – transfer of knowledge and ideas into valuable products and services.

INVENTION – a unique or novel apparatus, method, composition or process. It may be an improvement of a machine or product, or a new process for creating an object or a result.

TECHNOLOGY DISCLOSURE – a document describing a result of intellectual activity in sufficient detail and with sufficient data to enable evaluation for patentability and/or commercial potential.

TECHNOLOGY TRANSFER – the process of securing IP rights to and subsequent licensing of technology under the guidance of experts and professionals at universities, research foundations and businesses.

TECHNOLOGY COMMERCIALIZATION – technology transfer combined with technology implementation in new products or services, and bringing such product or service to the market.

KNOWLEDGE TRANSFER OFFICE – a unit of Skoltech managing Skoltech IP portfolio, including assessment, protection, management and licensing of Skoltech intellectual property to interested companies – either startups or established businesses.

Start-up – a new business entity which is formed specifically to commercialize a technology licensed from Skoltech, in particular a novel breakthrough technology that sometimes does not have its own market.

TECHNOLOGY MARKETING – collection of information about a market and making certain business decisions on the basis of this information.

RESULT OF INTELLECTUAL ACTIVITY (RIA) – an intangible object created by one or several individuals (authors).

AUTHOR OF A RESULT OF INTELLECTUAL ACTIVITY – the creator. An authorship right is a non-property right recognized by the Russian law and is inalienable (always resides with the author).

INTELLECTUAL PROPERTY RIGHT (IPR) – a right given by the law to use, sell, license, defend or in any other form dispose of results of intellectual activities and means of individualization.

MEANS OF INDIVIDUALIZATION (MOI) – designations serving to distinguish goods and services, businesses, organizations, and other objects in the field of economic turnover.

GLOSSARY

PATENT – a document constituting a recognition of the authors' non-property rights and the owner's property rights to an invention, utility model or an industrial design.

STATE OF THE ART/PRIOR ART – any information and data published before the priority date of an invention, utility model, industrial design or any other intellectual property object.

PRIORITY DATE – the date when the initial patent application is filed.

LICENSE – a tool by which the owner of intellectual property (the "licensor") grants another party (the "licensee") a right to use the technology.

ROYALTY – a payment made by the licensee to the licensor for the ability to legitimately use the licensor's intellectual property. Royalty payments usually consist of running royalties and licensing fees. The latter usually include: license (issuance) fee, annual fees, milestone fees, patenting expense reimbursement, etc.

RUNNING ROYALTIES – usually periodic payments of royalties by the licensee to the licensor as a reflection of a commercial success of the licensed technology. In many

situations running royalties are set as a percentage on sales of goods under the license.

LICENSING FEE – an initial fee received by the licensor from the licensee within a license agreement as a reflection of commercial value of the license for the licensee.

PROJECT IP – intellectual property created within a specific research project or a contract.

BACKGROUND IP – with respect to a Project IP is the Dominating IP created before the start of a research project, and that is owned or in some other way controlled by the creator of the Project IP.

DOMINATING IP – intellectual property that the user of IP should secure rights to in order to be legally able to exercise the IP.

FOREGROUND IP – with respect to a Background IP is the intellectual property created after the Background IP and that becomes an improvement over the Background IP.

PCT (PATENT COOPERATION TREATY) – a tool which establishes a streamlined filing and processing procedure for worldwide patenting.

CONTACTS

The process of technology development and transfer starts with YOU. The KTO is always at your disposal and is happy to serve you at any stage of technology transfer process, from research to commercialization. We encourage you to contact the KTO in the course of your research activities to ensure that you are knowledgeable about the IP management and protection options available to you. The KTO staff will assist you with any questions related to Skoltech policies and procedures, marketability, patenting, other protection methods, new business start-up considerations, and any other relevant subject areas.

For all generic requests please use the following e-mail address: kto@skoltech.ru or call at: +7 495 280 14 81 (ext. 3306).

THE FOLLOWING RESOURCES AND TOOLS ARE ALSO AVAILABLE TO YOU:

- **KTO web-site:** www.skoltech.ru/en/kto/
- **Skoltech IP Policy:** www.skoltech.ru/en/kto/Skoltech_IP_policy.pdf
- **Skoltech Technology Commercialization FAQ:** www.skoltech.ru/en/kto/faq/
- **Technology Disclosure Forms and Guidelines:** www.skoltech.ru/en/kto/tdf/
- **Inventor's Portal:** www.skoltech.ru/en/kto/inventorportal/
- **Office of Grants and Contracts:**
www.skoltech.ru/research/en/organization/grants-contracts/
- **Industrial Advisory Group:**
www.skoltech.ru/en/industry/scientific-industrial-policy-group/



ACKNOWLEDGEMENT:

KTO is very grateful to Christopher Noble, CLP, RTP, Technology Licensing Officer at MIT Technology Licensing Office for support, guidance, and advice in preparation of this handbook.

September 2015

Skoltech

Skolkovo Institute of Science and Technology