

David A. Fabjan, dr. Irena Hreljac, Tomaž Bizjak

# KNOWLEDGE TRANSFER AT THE NATIONAL INSTITUTE OF CHEMISTRY

Researchers' manual



EUROPEAN UNION  
EUROPEAN REGIONAL  
DEVELOPMENT FUND



REPUBLIC OF SLOVENIA  
**MINISTRY OF EDUCATION,  
SCIENCE AND SPORT**

The operation is financed by the Republic of Slovenia and the European Union  
from the European Regional Development Fund



KNOWLEDGE TRANSFER AT THE NATIONAL INSTITUTE OF CHEMISTRY

Researcher's manual

Editor: David A. Fabjan

Authors: David A. Fabjan, dr. Irena Hreljac, Tomaž Bizjak

Translation: Barron d.o.o.

Design: CREATOOR d.o.o.

Publisher: National Institute of Chemistry, Hajdrihova ul. 19, SI-1000 Ljubljana

Year of publication: Ljubljana, 2019

Circulation: 100 copies

Financier: National Institute of Chemistry

Free copy

CIP - Kataložni zapis o publikaciji

Narodna in univerzitetna knjižnica, Ljubljana

001.101(035)

KEMIJSKI inštitut (Ljubljana)

Knowledge transfer at the National Institute of Chemistry : researchers' manual / [authors David A. Fabjan, Irena Hreljac, Tomaž Bizjak ; translation Barron]. - Ljubljana : National Institute of Chemistry, 2019

Izv. stv. nasl: Prenos znanja na Kemijskem inštitutu

ISBN 978-961-6104-43-2

1. Gl. stv. nasl. 2. Fabjan, David Aleksander 3. Hreljac, Irena 4. Bizjak, Tomaž, 1987-  
298117888

## What you can find in the manual:

1. Patenting an invention at the National Institute of Chemistry	
1.1 What is an invention, what is a patent, what can we patent?	6
1.2 How to prepare for the invention disclosure?	7
1.3 The procedure for invention disclosure of employees' inventions	9
1.4 The main steps from an idea to commercialization of the invention	10
2. Formal procedures for protecting the invention	
2.1 Protection of intellectual property	12
2.2 Maintenance, costs of patenting and patent strategies	15
3. Knowledge commercialisation	
3.1 Ways of knowledge commercialisation to the industry and innovation revenue	17
3.2 What is important to know when commercialising knowledge?	19
4. Frequently asked questions and important links	21



## The knowledge transfer cycle from NIC to industry



*The results of the National Institute of Chemistry's research have been transferred to industry from its earliest days, as the level of cooperation between the basic research organizations and the industry is one of the main routes of transforming scientific results to new technologies. For this reason, for the past decade the Institute has been systematically building on the intellectual protection of its knowledge, enabling it to expand its strategic portfolio and to commercialize most applied technologies that arise as a result of the breakthroughs of basic research.*

At the National Institute of Chemistry (NIC), the procedures for protecting intellectual property and transferring knowledge to the industry are facilitated by the Committee for Innovation and the Knowledge Transfer Office. The Committee for Innovation is responsible for evaluating and forming opinions on the takeover of employees' inventions and preparing all procedures and instructions for implementing the entire policy in the field of innovation.

The Knowledge Transfer Office takes care of the various forms of intellectual property protection and leads negotiations and final marketing. In marketing, one of its main tasks is to understand the market and find new partners. The ultimate goal of the negotiations is the development of technology cooperation, the granting of licenses, the selling of patents, and, with that, the generation of revenue from innovations.

In 2017, the NIC joined the National Technology Transfer Consortium (KTT), which aims to strengthen and further develop knowledge transfer activities from Slovene research institutes to the industry. The KTT project combines knowledge transfer offices from the University of Ljubljana, University of Maribor, University of Primorska, Jožef Stefan Institute, National Institute of Biology, Agricultural Institute, Faculty of Information Studies in Novo mesto and National Institute of Chemistry. The overall objective of the project is to provide high-quality, efficient and professional support for the transfer of knowledge from the above-mentioned institutions to the industry.

**Knowledge Transfer Office  
at the National Institute of  
Chemistry:**

**Tomaž Bizjak,  
David A. Fabjan,  
Irena Hreljac, PhD  
(from left to right)**



## 1. PATENTING AN INVENTION AT THE NATIONAL INSTITUTE OF CHEMISTRY

### 1.1 What is an invention, what is a patent, what can we patent?

An invention (innovation) is a new product or object with new features, a new manufacturing or technological process, a new method or use. An invention has unique novel characteristics and is not obvious to the average expert in the field.

One of the most common ways to acquire the material benefits of an invention is its protection via patent and the marketing of patent rights. Before an invention can be patented, it must meet three basic criteria:

#### COMMON MISTAKES OF THE INVENTOR

**THE INVENTION  
ISN'T NEW**

#### 1 COMPLETE NOVELTY

The invention has never been publicly presented.

#### 2 AN INVENTIVE STEP

The proposed solution is not obvious from previous knowledge to the average expert in the technological field of the invention.

#### 3 INDUSTRIAL UTILITY

The invention should have practical use in at least one economic activity.



#### IMPORTANT!

*Important! Even if the invention meets all the basic patenting criteria, there are exceptions that cannot be patented. These include mathematical formulas, scientific discoveries, most of computer programs (these are protected by copyright), methods of treatment, surgical and diagnostic procedures and inventions that are contrary to morality and public order.*

We cannot patent only an idea. We can only patent inventions that are useful and proven technically feasible. The same patent can cover 4 categories of protection of inventions, namely, we can protect the product (device, substance), the process for obtaining the product, novel methods of use and the system (technology) for obtaining this product.



### Examples of patent protection

- The procedure for the production of nanocellulose from biomass;
- A final product or device, for cleaning air indoors with a photo-catalytic filter;
- New polymer composites and their use;
- New active ingredients for plant protection and their use;
- A new way of protecting the lithium metal anode, this increases stability of the battery.

## 1. PATENTING AN INVENTION AT THE NATIONAL INSTITUTE OF CHEMISTRY

### 1.2 How to prepare for the invention disclosure?

The start of the protection of the invention and the desire for commercialization occurs when researchers themselves or with the help of the Knowledge Transfer Office find that, based on new knowledge, there is a good potential for the development of marketable products or new services. Every employee at the National Institute of Chemistry has the opportunity and the duty to present their inventions to the Innovation Committee, which decides on the takeover of the employees' invention, and at the same time provides guidance on further protection procedures. The procedure for patenting employees' invention is also described in detail in the Regulations on Innovation, which is available on the Institute's internal web pages.

Before starting the formal registration process for the invention, it is very useful to find answers to the questions below and check that they are well thought out and that all the key elements for submitting an official application are ready:



**Have I checked the current state of the art?** Am I convinced that the invention has never been described or used for the same or similar purpose? In addition to scientific literature, information on the state of the art in past patent applications can be found in patent databases. For help with searching through various databases, you can contact the Knowledge Transfer Office.

**What kind of problem does the proposed technology address and who are the users?** The invention should have industrial applicability and economic viability in order to achieve sufficiently large development and market potential.

**What is the key part of the invention?** Precisely define the part that solves a specific technological problem and without which the same or very similar results cannot be produced.

**Does your idea have commercial potential?** Have you already collaborated with an industrial partner during research? Find out what your competition is and the marketing potential of your idea. Prepare the first preliminary overview of partners and markets where you would need and successfully market the invention.

**What is the full path to the final product?** Is your invention already at the stage of development where you have a prototype ready for demonstration? For successful marketing, demonstrations of a prototype are desirable in a production environment, outside the laboratories. If the invention is not yet at such a high level of development, the usual minimal requirement is a convincing laboratory demonstration of the prototype's performance.

**Who was involved in the work and research that led to the invention?** It is necessary to give an exact indication of all inventors and to what extent they contributed to the invention. The authorship of the patent is determined and the innovation revenue divided depending on the role and extent of contribution. The owners of patent rights are usually institutions where the inventors are employed. In the case of cooperation with other institutes or universities, it is necessary to conclude an additional contract on joint invention and the distribution of ownership shares among the organizations involved.



## IMPORTANT!

*Before filing a patent application, the invention must not be publicly presented, which also includes to the publication of scientific papers and lectures. The publication of a scientific paper before the patent application is submitted is considered a public disclosure of the invention, which consequently precludes patent protection.*



## 1. PATENTING AN INVENTION AT THE NATIONAL INSTITUTE OF CHEMISTRY

### 1.3 The procedure for invention disclosure of employees' inventions

For all inventions involving a regular employee or an external collaborator of NIC, the Knowledge Transfer Office should be notified. The Office will provide you with assistance and proper procedures for preparing the invention disclosure form for the official submission of the employees' invention to the Innovation Committee. The Committee conducts an evaluation and creates a proposal for the assignment of the invention to NIC and any further procedures for the protection of intellectual property.

At the NIC, all necessary regulations, forms and procedures have been harmonized with Slovene national legislation, which enables the fast and effective protection of intellectual property emerging from the work of a public research organization.

When the invention is endorsed by the Innovation Committee and officially accepted by the NIC as an invention and officially assigned to the NIC. The Knowledge Transfer Office helps with the preparation of the patent application. It ensures the selection of patent attorneys and participates in the search for suitable partners. The preparation of a good patent application is very important, as the patent is the only legal means to ensure a market monopoly for companies that own exclusive licensed or patented rights. The Innovation Committee may also decide not to assign the invention to NIC.



After the positive Committee's decision the NIC becomes the formal owner and is responsible for the procedures and all costs of protecting the invention and the final marketing of the patent. The inventors cooperate with the Knowledge Transfer Office in the preparation of the patent application and communication about marketing for industrial partners. If the marketing of the invention is successful, inventors are entitled to innovation revenue in accordance with NIC internal regulations. The inventors are entitled to 30% of the revenue generated by licensing fees or proceeds from the sale of intellectual property related to the invention. This also applies in cases where the inventor is no longer in an employment relationship with the NIC. If the institute does not decide to takeover or continue patent protection, it shall inform the inventors in writing, and they then have the opportunity to assume ownership of the invention, as well as the related rights and obligations.

The procedure for the takeover of a employees' invention is presented in more detail below in the next chapter „The main steps from an idea to the marketing of an invention“.

## 1. PATENTING AN INVENTION AT THE NATIONAL INSTITUTE OF CHEMISTRY

### 1.4 The main steps from an idea to commercialization of an invention



#### THE FORMATION OF THE INVENTION

1

new process, material, etc.

At the beginning of the application process, it is important that the inventor has already answered the questions that are found in the section „Key questions before patenting the invention“.

2

#### INFORMAL DISCUSSION

with the Knowledge Transfer Office, and the first assessment of the value of the invention

At the beginning of the application process, it is important that the inventor has already answered the questions that are found in the section „Key questions before patenting the invention“.



#### INVENTION DISCLOSURE

3

filing the Notice of the Invention form and start of preparing the patent application draft

The description of the invention must be structured so that it is understandable to an expert in the field, to the extent that it can be replicated. In order to prepare a patent application, it is possible to use material for future publications, such as introductory summaries, explanations of the method and images. In patent applications, the prior art description as much more concise than in a paper, and there is no classic discussion. The technical details of the inventions are most important. All figures in a patent application must be black and white.

7

## MARKETING

In collaboration with the inventor, the Knowledge Transfer Office prepares technological material needed in order to present the economic potential of the invention and clearly define its technical essence. The inventor assists in marketing by providing information about businesses and other connections acquired during the research that may become potential beneficiaries of the new knowledge.



## THE PROCESS FOR PROTECTING THE INVENTION

by patent or by other appropriate means

6

The Knowledge Transfer Office is responsible for preparing the documentation for the protection of the invention. The researcher cooperates with the Office by discussing all possible uses of the invention and preparing a sufficiently detailed description. If necessary, the Office includes external patent attorneys in the preparation of the documentation, in order to secure a better-quality patent application.

5

## TAKEOVER OF THE INVENTION

The decision to take over the employees' invention is taken by the Director in consideration of the Committee's opinion of the innovation. The deadline for the director's decision is three months.



## THE RESEARCHER BRIEFLY PRESENTS THE INVENTION

to the Innovation Committee, which then gives an opinion on the takeover or rejection of the invention

4

The Knowledge Transfer Office forwards the Notice of Invention to the Innovation Committee. This is followed by an invitation to the inventor and a hearing with the Committee, where the inventor introduces the invention in a short, 5-minute presentation. Within three months from the date of the hearing, the Committee shall deliver an opinion on the takeover or rejection of the innovation.

## 2. FORMAL PROCEDURES FOR PROTECTING THE INVENTION

### 2.1 Protection of intellectual property

Once the employees' invention has been taken over, patent application is prepared and filed. Some types of inventions, such as methods or processes, are patented only if a scientific paper is about to follow a patent application; otherwise these are protected as a trade secret.

1

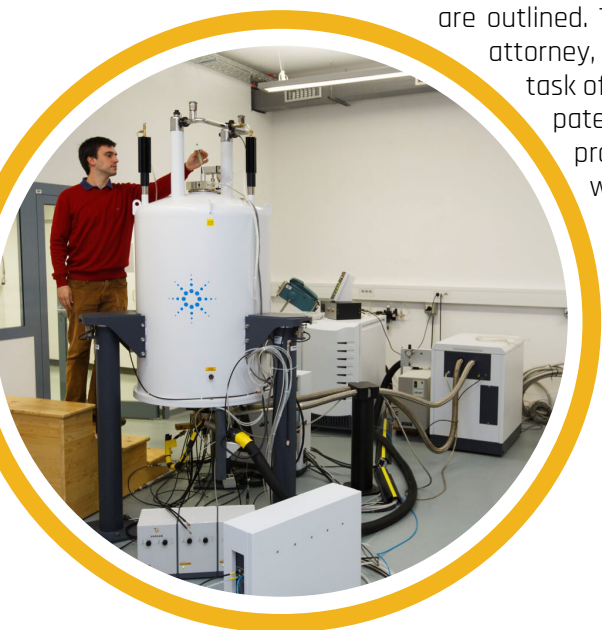
#### Prior art search

A prior art search needs to be conducted before applying for a patent, which is usually done by the Knowledge Transfer office in cooperation with the inventors. The search makes it easier to determine the novelty, the possible extent of protection, and at the same time to obtain the first insight into a set of potential strategic marketing partners.

2

#### Preparation of the patent application

In an internal patent application procedure, the inventor, in collaboration with colleagues of the Knowledge Transfer Office, prepares the description of the invention with images in the appropriate patent application format. Patent claims are outlined. The draft application is sent to a selected patent attorney, who reviews and completes the application. The task of the patent attorney is the preparation of a quality patent application, which determines the extent of the protection of the invention. When preparing claims, we strive to protect as many of the following categories as possible in one patent (providing that each one is novel) : the product itself (the device, the substance), the process for obtaining the product, its method of use and the technology required for its implementation.



#### **IMPORTANT!**



*It is always important to conclude a Non-Disclosure Agreement (NDA) before talking to business partners. The Knowledge Transfer Office provides all the necessary forms for concluding such an agreement.*

### Submitting the first patent application

The Knowledge Transfer Office itself, or through a patent attorney, files the documentation comprising a request for the granting of a patent together with a patent application proposal (a summary, a description of the prior state of the art, a description of the invention, patent claims and sketches). The date on which a patent application is submitted is recorded as a so-called priority date. The novelty of the invention is only checked until the priority date.

The Patent Office officially publishes the entire patent 18 months after the application, but the inventors may make the contents of the invention publicly available immediately after the application and acquisition of the priority date. Regardless of a successful patent application, it is recommended to consult in advance about disclosing the details of the invention to third parties.

Any national, regional or international patent office may be selected for submitting a patent application. The decision on where we file the application is linked to the marketing strategy of the invention and the means available to fund the protection. The patent strategy (how and where to protect the invention) is determined jointly by the inventors, the Knowledge Transfer Office and the Innovation Committee. Since the first application is important primarily for the purpose of obtaining a priority date, the first application of the invention can also be submitted to the Slovenian Intellectual Property Office. The application is followed by a formal test to verify that the documentation is truly relevant and complete.



### Extension of patent protection to additional countries - up to 12 months from the first application

A patent application can be filed in other countries or other national patent offices at any time in the following 12 months. Any application filed in this time will have the priority date of the first patent application. We therefore have a year to decide in which countries it is reasonable to obtain patent protection, and this time can be further extended by another 18 months by filing an international patent application (so called PCT application at the World Intellectual Property Organization - WIPO).



This longer period of time allows us to check the market potential in detail, as well as establish contacts and potentially coordinate protection with business partners. In addition to the World Intellectual Property Organization, there are also regional patent offices that combine the procedures for verifying and granting patents for individual geographical areas. The most important regional office for the NIC is the European Patent Office, as it provides a single administrative procedure for some 40 Member States of the European Patent Organization (EPO).

At present, a granted European patent does not apply in the whole area of the EPO. The countries where the patent will be valid must be specifically decided on at the time of the granting. By 2019, protection of the so called Unitary Patent should become available, which will enable one-time certification and the granting of a European patent in 26 EU Member States (all EU Member States except Spain and Croatia).

## 5

### Publication of the patent application - 18 months after the first application

After 18 months from the priority date have passed, the patent application becomes publicly accessible and is published in online databases. If you have not already published any scientific articles in the meantime, the subject of the patent application remains a secret prior to this time. A patent application is usually the first public disclosure of the invention, and in the case of industrial inventions it is often the only one.

## 6

### Prior art search and patent examination

Different patent offices have different patent application procedures. At the EPO, the first prior art search is made within a few months from the date of application and is conducted by an experienced examiner from the field of the invention, who conducts an assessment of novelty and reference to the most similar solutions. A thorough prior art search may be an indication of how likely the patent is to be granted later on. The first search is followed by a substantive examination where experienced patent examiners dig deeper into the proposed patent application. During this process, it is possible to establish a dialogue with them, but it is highly recommended that the communication be done by an experienced patent attorney. Often, the final scope of the patent depends on the skills and experience of the attorneys.



## Granting a patent

If the examiners decide to grant the patent, this decision shall take effect from the priority date. Individual patent offices work independently, so it is possible that the length of the process and decisions may vary from country to country. However, many countries have made agreements to harmonize patent prosecution amongst each other in order to speed up the process.

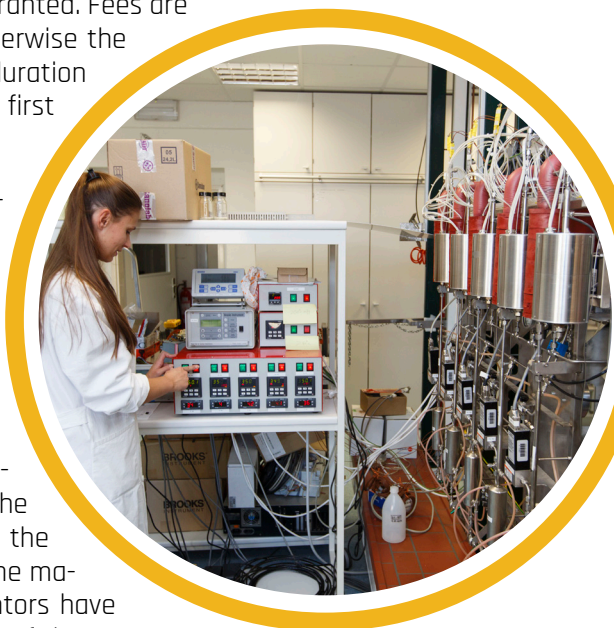
After the patent is granted, the opposition period begins to run, during which time third parties (usually competitors) may object to the grant and provide evidence as to why the patent should not have been granted. The objection procedure takes place at the Patent Office. After the opposition period has expired, the only possibility for an invalidation of a patent is an appeal for invalidity filed at the competent court, which therefore brings substantially higher procedural costs than an appeal at a patent office.

## 2. FORMAL PROCEDURES FOR PROTECTING THE INVENTION

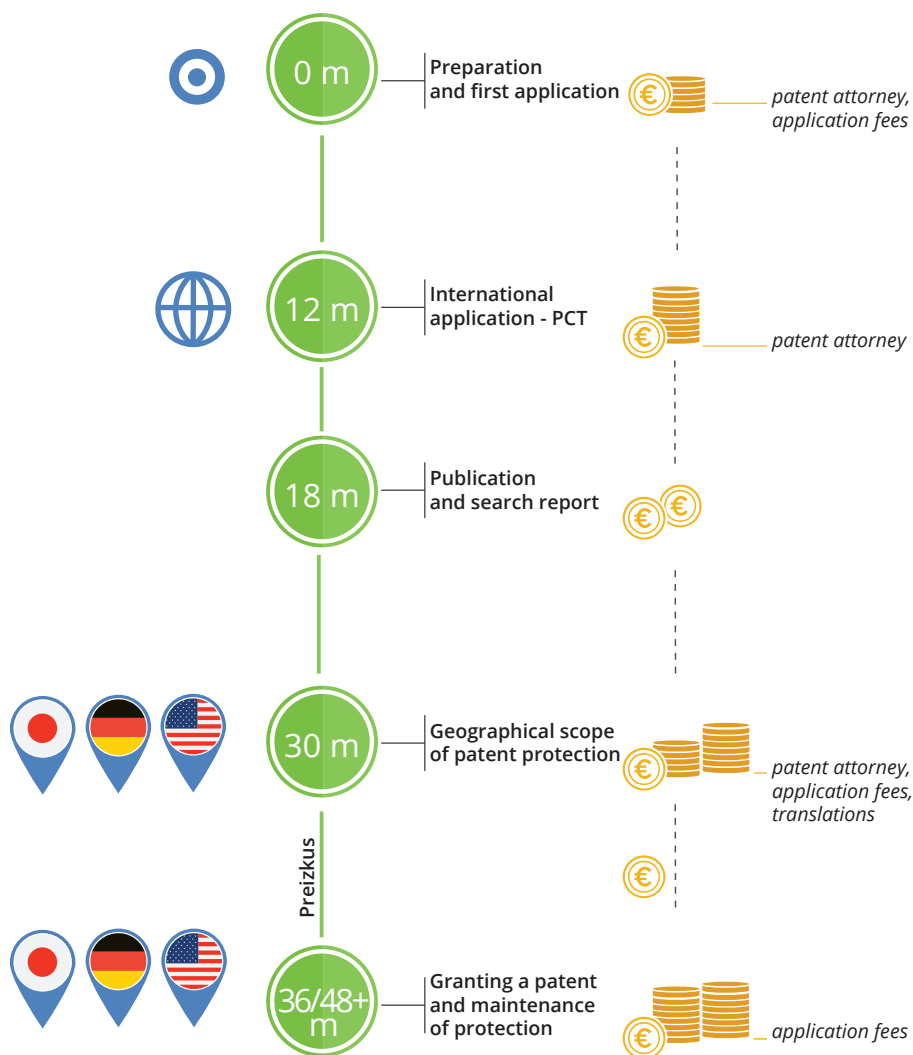
### 2.2 Maintenance, costs of patenting and patent strategies

The NIC owns a set of national patents that were created in the process of the protection of intellectual property. Each nationally granted patent applies exclusively to the geographical area of the country in which it was granted. Fees are required to be paid annually for each patent, otherwise the patent protection expires. The maximum allowed duration of a patent is up to 20 years after the filing of the first application.

However, due to constant technological development, only a few patents are maintained to reach their full potential life span. The average maintenance of patent protection is between 8 and 9 years. Up to and including the third year from the filing of the patent, fees at the NIC are shared by the department and the NIC administration at the ratio of 30:70, and after the third year, the cost of the fees is fully covered by the NIC administration. In the event that attempts to market the patent within a few years do not produce results, the Innovation Committee may propose to suspend the maintenance of the patent. In such cases, the inventors have the opportunity to take over the entire ownership of the patent as well as the costs of further maintenance of protection.



The image below shows one of the possible patent strategies, with the timeline, important events and a schematic representation of the amount and type of costs. The timetable shows the possible sequence of the geographical scope of patent protection. The strategy presented is common to research institutions, as it typically includes the first application at the office, that enables the acquisition of a priority right and has low application fees (such as in Slovenia, Luxembourg, the Netherlands etc.).



After a year, when the commercial potential of the filed patent has been well-assessed, but there are not yet any final decisions, the filing of an international application (PCT) follows, which allows an 18-month delay in deciding on the final number of countries where the patent will be registered. Many possible strategies exist, depending on available resources and priorities. Normally a balance is sought between the importance of the speed of obtaining patent protection or the extension of time to determine the geographical scope of patent protection.



### 3. KNOWLEDGE COMMERCIALISATION

#### 3.1 Ways of knowledge commercialisation to the industry and innovation revenue

The approach to commercialisation strongly depends on the scope and technological maturity of a product or service that is protected by a patent. The Knowledge Transfer Office together with the inventors tries to find the optimal route of commercialization of the invention. „Technology Readiness Level“ (TRL) of the invention is an important factor in deciding which route to take. Being at a very early stage in the development of the invention is often the reason that the industry decides not to purchase a license. If, however, there is interest, opportunities for joint development cooperation are sought. It is highly recommended that with cutting edge innovations researchers put forth the extra effort and time to achieve a higher level of TRL. Such an approach increases the value of the patent and negotiating position, and often leads to strategic partnerships. In the event that the researcher is motivated to take the route of spin-out company formation, the NIC, through the Knowledge Transfer Office, can provide assistance in planning the further development of the technology and the preparation of a business plan to facilitate market entry.

##### **Development cooperation**

At the NIC, the most common way of transferring know-how and technology is through direct cooperation with industry, either within project consortia or through direct research and development contracts. This allows for joint development to reach a higher level of TRL. Development with constant industry input improves the potential for successful commercialization. The key ingredients in successful contracts are: a precise work programme; examining the achievement of time and development milestones; budget and financing; responsibilities of individual partners; the division of newly created intellectual property and priority rights in the commercialization of the invention; the right to publish scientific publications etc.

##### **License**

The most common way of commercializing an invention is the licensing of intellectual property rights - IPR, which is granted by the IPR holder to the end user, usually a company. The license holder may market an invention against the payment of royalties under terms normally determined as a percentage of the sales of a product or service containing licensed intellectual property. The license may be exclusive (the holder has exclusive rights of use) or non-exclusive; it may be limited to specific geographical areas or areas of application. Broad inventions, which represent a new technology platform, are often licensed in the form of non-exclusive licenses. On the other hand, for inventions containing new active ingredients in the field of pharmaceuticals, it is more common to conclude exclusive licensing contracts.

## Selling a patent

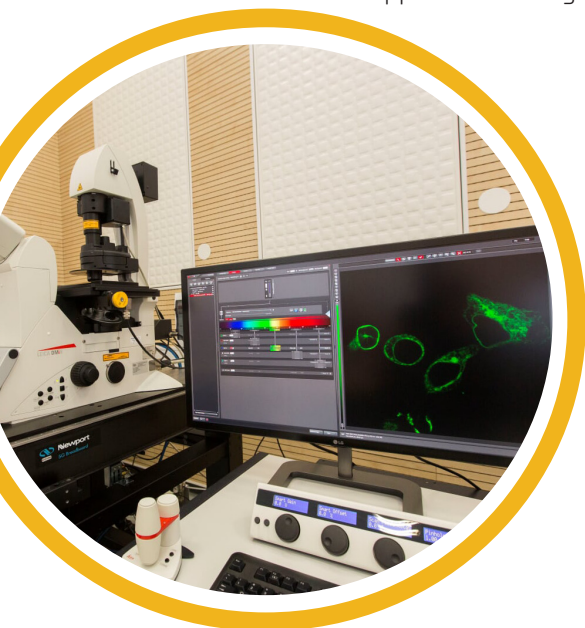
When selling a patent there is usually a higher value, one-time payment sum, since by selling the patent, the NIC loses the possibility of licensing to different partners. That strategy is particularly suitable in cases where the NIC has no strategic interest in further development and research on the patented technology.

## A spin-out company

In cases where there is an interest in developing an independent business path with own further development and marketing, it is possible to set up a spin out company. In such cases, the spin-out company acquires an individual licencing agreement to market the knowledge, which is the property of the Institute. When determining the terms of the license agreement, several aspects are considered (the inventor's role, the strategy of the Institute, available sources of financing, market characteristics, access to potential customers and the like). The NIC encourages and assists in the setting up of researchers' spin-out companies through the Knowledge Transfer Office. The forms of assistance are diverse and include, but are not limited to, consulting and creating a rough business plan, support for finding mentors and business partners.

### COMMON MISTAKES OF THE INVENTOR

**THE INVENTOR HAS AN UNREALISTIC IDEA OF THE VALUE OF HIS INVENTION**



### IMPORTANT!



*All information relating to innovation and their commercialization is protected as a trade secret - we must carefully protect this information from disclosure to third parties. In Slovenia, business secrets are defined by Article 39 of the Companies Act. In the case of sending samples or materials to potential partners, a Material Transfer Agreement (MTA) is required. Contract proposals can be obtained from the Knowledge Transfer Office.*

### 3. KNOWLEDGE COMMERCIALISATION

## 3.2 What is important to know when commercialising knowledge?

In negotiations with the industry and other strategic partners and in the preparation of technical documentation, researchers and inventors are always involved in the process. They help with a rough assessment of all technical and process needs, such as an estimation of implementation time, necessary human resources, required space, energy and reagent needs, and a rough estimate of the complexity of the technical implementation. In negotiations with potential buyers and strategic partners, the following people are involved: researchers and inventors who provide information on technical characteristics, time and equipment invested; the Knowledge Transfer Office and the Legal Department of the Institute. External legal and other experts may also be involved if necessary.

**Introductory questions that can be expected from industry and other partners when assessing market potential:**

- ❓ How is the invention protected?
- ❓ Who owns the invention and are there several owners?
- ❓ Do you already have a strategic partner from the industry?
- ❓ What are your main advantages over the competition (e.g. better characteristics, price, ecology, simplified procedure)?
- ❓ Will the further development of technology take place at the Institute?
- ❓ What is the overall process path to the final product, the result? (for the successful presentation of the new invention, potential investors will need effective demonstrations of the prototype performance)
- ❓ Has the system already been validated in the appropriate product environments outside the laboratory?
- ❓ What technologies, in addition to the invention, are still needed for the operation of the whole system? Who owns such technologies?
- ❓ Do we need additional cooperation with other research groups or companies?

#### COMMON MISTAKES OF THE INVENTOR

**THE INVENTION IS TOO  
COMPLEX THEN  
THE PROBLEM MERITS**



Research and development are often associated with large investments and the risks that the complex solution will not work for industrial purposes or that it will not achieve a sufficient market share. Market value is influenced by current trends in the industry (e.g. circular economy, waste recycling); the characteristics of direct competition; the type of market; and above all the strategic interests of the main players in individual segments of the market. The inventors do not need to deal with these issues directly, but it is useful if they are aware of all the facts and the many obstacles that lay on the path to successful commercialization and permanent cooperation agreements.

#### COMMON MISTAKES OF THE INVENTOR

**NO ONE WANTS  
THE INVENTION**

One of the key features that makes an invention commercially attractive is so-called Return On Investment (ROI). Will the investor recover their investment and if so, how many times will it be repaid?

Investors, such as companies, institutions, venture capital funds and individuals, are looking for products with added value. They want to know the advantages of the invention against existing solutions and why someone would pay for a product based on your invention.



#### Examples of added value

A smart IT screen that bends and therefore enriches the product in terms of practicality and design value for which users are willing to pay more money;

A smaller battery with the same characteristics as a larger one, which in turn reduces the weight of a vehicle and increases the mileage;

A new form of medicine delivery that is easier for the patient and can improve the quality of their life by ensuring that it is regularly taken. Consequently, treatment is improved and the product becomes economically justified.

## 4. Frequently asked questions and important links

### Why should I be concerned with the protection and commercialization of inventions, since I am a scientist?

1

Protecting an invention and commercialization in cooperation with industrial partners is the most proactive and effective way of transferring scientific discoveries into innovative products and services that improve the general quality of life. Since industrial technological development and marketing of finished products require relatively high investments, patent protection represents an important guarantee for companies that the funds invested will be repaid as it gives them legal monopoly of the market. Intellectual property is thus a currency in the commercialization of knowledge from public research organizations. If we actively market it, we can encourage and influence the commercial development of our invention to new products and services. Patent protection does not prevent the publication of scientific articles and the dissemination of knowledge to the public domain. The use of patented knowledge for research purposes is allowed without limitations.

### How long is the procedure from the registration of the invention to the granting of a patent?

2

In the Knowledge Transfer Office, we are aware that it is crucial for researchers to regularly publish scientific results in scientific papers, because they are the main indicator of the excellence of past scientific activity. We therefore strive to start preparing the patent applications together with researchers at the right time, before the publication of papers. For patent applications, less experimental evidence is usually required than in the case of a top scientific publication, so the researchers can start working on the patent application, while still doing experiments.

Since public disclosures of new technologies can only occur if a patent application is already filed, we try to make the whole process quick and effective. In exceptional cases, the minimum content of the patent application (which is fixed at each individual office) may be filed in order to secure the priority date, with the complete application filed within the prescribed period (usually from one to several months after the submission of the first application of the invention). The material that the researcher prepares for a patent application can be fully used later in the preparation of the scientific article. In this way, we try to ensure the on-going work of researchers without delaying the publication.



### 3

#### Who owns the invention that was created as part of a multi-partner project?

All provisions regarding the ownership of inventions and new technologies from multi-partner projects must be defined in a consortium agreement, prior to the commencement of project tasks. It is also very important that the prior intellectual property of individual partners is defined before the start of the project. In the case of new intellectual property, it is necessary to keep up to date on authorship agreements and ownership shares. The consortium agreement also defines the terms of exploitation of existing and new intellectual property, possible first buyer rights in licensing and the acquisition of intellectual property rights.

### 4

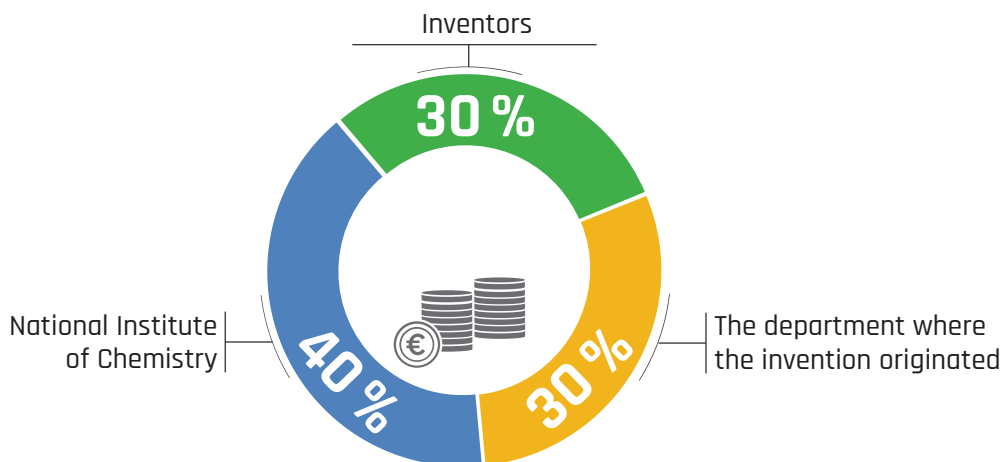
#### Who covers the costs of patenting?

The costs of patenting are usually borne by the patent owner, and in the case of employees' inventions, that is the NIC. If the invention arises in cooperation with external partners, it is necessary to sign an agreement on a common invention prior to submitting a patent application, where the shares of ownership and the obligations of individual owners are determined. Internal costs are allocated to the institute and participating departments according to the formula set out in the Innovations act.

### 5

#### How is the profit derived from the licensing or sale of intellectual property shared?

Innovation revenue that is generated from the commercialization of the invention, after deduction of management and commercialization costs, is divided as follows:



The Institute pays the share of the innovation revenue for the entire duration of the commercialization, but no longer than the duration of the patent, and for other forms of IPR for no longer than five years.

## Important links

### PUBLICATIONS

---

Employment Related Industrial Property Rights Act



EPO guide for inventors



### INTELLECTUAL PROPERTY OFFICES

---

URSIL  
(Slovenia)



EPO  
(European Patent Office)



WIPO  
(World Intellectual Property Organisation)



### FREELY ACCESSIBLE PATENT DATABASES

---

esp@cenet



Patentscope



lens.org



Google patents



Knowledge Transfer Office

---

National Institute of Chemistry  
Hajdrihova 19  
1000 Ljubljana

© 2019