Improving the efficiency of the electronic data monitoring of R&D system

Best Practices Manual

on law enforcement regarding employees' inventions

EXECUTIVE AGENCY FOR HIGHER EDUCATION, RESEARCH, DEVELOPMENT AND INNOVATION FUNDING

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Best Practices Manual on law enforcement regarding employees' inventions

EXECUTIVE AGENCY FOR HIGHER EDUCATION, RESEARCH, DEVELOPMENT AND INNOVATION FUNDING

AID ROMANIA
ASOCIAȚIA PENTRU IMPLEMENTAREA DEMOCRAȚIEI

Improving the efficiency of the electronic data monitoring of R&D system

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1 Preamble - need to draw up a best practices manual

The innovation, as a central factor of economic growth and development, of competitiveness and growth / stability of employment is the key that enables businesses to create added value and the process by which solutions are found to social and economic challenges.

The Best Practices Manual is addressed to employers, employees, investors, regulatory institutions and law enforcement institutions.

The manual implements the aspects agreed with the European Commission, the World Bank and the International Monetary Fund on June 2014, regarding the provision in the Memorandum of Understanding signed with the Government on July 2013 in connection with coming into force of Law no. 83/2014 on employees' inventions.

These guidelines are issued in response to a growing recognition of the importance and complexity of the relationships between the research development organizations of public law (e.g. Universities, INCD) and the economic environment and of the research-innovation-production relationships within the industrial units. These collaborations increase the competitiveness of products, services, units and exports.

The collaboration between research innovation units and enterprises can lead to benefits for both sides, in case there is a clear understanding of policies and procedures regarding the enforcement of industrial property rights and their exploitation for the benefit of their common and specific objectives that can be different but complementary.

The Best Practices Manual is based on internationally recognized best practices, which include, in addition to technical issues concerning procedures at the level of research development units with activities in the area of employees' inventions, the distribution of benefits arising from their commercial exploitation.

The Best Practices Manual secondarily addresses the need to change organizational culture in order to have a successful innovative organization with a focus on human resources - organizational innovation. The paper highlights both the importance of innovation resources within an organization as a determinant factor to have a *portfolio* of employees' inventions, as well as aspects regarding the motivation to innovate (through the employees' invention) of the organization (e.g. increasing market share / increased profit, widening the range of products / services improvements, enter on other markets, etc.) and, implicitly, the motivation of specialists to invent.

> *The Best Practices Manual has an informative, not normative purpose. It can be adapted to the needs identified at institutional and individual levels*

The principles underlying the development of this document are presented in **Annex 1**.

The task of this *manual* is to identify the best ways and the benefits obtained by applying the employees' invention, the methods of reducing the gap between research and innovation, by improving the skills and the cooperation between producers and users of knowledge, in order to meet the social challenges of common interest.

The foundation of a new relationship between employees who create inventions and their employers conducting invention is being placed, encouraging the inventive potential of highly qualified persons. The efforts are focused on the subject of strengthening cooperation in order to develop a "Common Knowledge and Innovation Space".

2.1. Normative References –legislation

The following legislative acts are considered as references:

- Law no. 83/2014 on employees' inventions, published in the Official Gazette no. 471/2014, which entered into force on 29 June 2014;
- Patent Law no. 64/1991, as amended and supplemented;
- GD no. 547/2008 approving the Implementing Regulation to the Patent Law no. 64/1991;
- Law no.350/2007 on utility models;
- Ordinance no.57 / 2002 on scientific research and technological development, approved by Law no.324/2003 as amended and supplemented;
- Law no.319/2003 regarding the status of research and development staff;
- ANCS Decision no.9685 / 2008 on the establishment and development of spin-offs by the research staff from the research - development units;
- GD no.929/21 October 2014 on the National Strategy for Research, Development and Innovation 2014-2020;
- Law no.206/2002 regarding the conduct in research;
- GD no. 406/2 April 2003 for approving the specific Methodological Norms concerning the establishment, operation, evaluation and accreditation of the bodies within the innovation and technology transfer, and a manner to their support;
- GO no. 14/24 January 2002 regarding the establishment and operation of science and technology parks, approved by Law no. 50 of 21 January 2003;
- GD no. 290 of 2 March 2006 for approving the strategy for stimulating the development of the national network of business incubators;
- SR ASRO Standard 13547-1-4 "Model of business development through innovation";
- Occupational Standard: "Technology Broker" COR Code: 241964;
- Occupational Standard: "Innovation Manager" COR Code: 241941;
- Law no. 187/2012 for the implementation of Law no. 286/2009 on the Criminal Code, published in the Official Gazette, Part I, no. 757 on 12th of November 2012, rectified in Gazette, Part I, no. 117 on 1st of March, 2013, as amended;
- Law no. 11/1991 regarding unfair competition, as amended and supplemented.

2.2. Scope

Law no. 83/2014 on employees' inventions **regulates the invention statute** created by an individual inventor or by a group of inventors where the individual inventor or at least one member of the group of inventors is an employee of a public or private law legal entity in Romania.

The law has a declared objective to stimulate technological innovation in Romania expressed directly by significantly increasing the number and quality of inventions made by employees innovators who following their support and stimulation offered by their employer on professional, administrative and financial level and, implicitly, by the capitalization made by their employers, both for their own benefit, and for the benefit of the national economy.

The *manual* substantiates a mechanism concerning the methods of encouraging creative environment within the research and development organizations, as well as SMEs and large enterprises, including through highlighting and sharing the benefits arising from employees' inventions. This provides a pro-

per incentive for all actors involved in the technological innovation, processes adequate to the realities and needs of the Romanian society that activates within the innovational technological environment.

The *manual* can be useful to both employers and employees, providing information to fairly, efficiently and legally capitalize the intellectual property resulting from professional activity.

> *In order to facilitate the application of the specific regulations of the employees' invention, this book highlights the best practices conducted in countries where there is a system of laws and practices of employees' inventions.*

2.3. Definitions, Terms and Abbreviations

The bellow terms and expressions have the following meaning:

Innovation is the process of converting the idea into an operational result, the successful exploitation of new ideas, the creativity and added value recognized by the market.

Creativity Space- Approach, Concepts and solutions

Concept of creativity is used in correlation with the term innovation, defined as the integrative way by which the human being manages to understand, reproduce and resolve numerous problems generated by life, profession and environment[1]. The concept should also express, that set of qualities enabling the mankind to reach new and original solution[2]. Typically, these new and effective solutions imply a creative component; therefore innovation is frequently accompanied by the manifestation of creativity.

The approach is a point of view, an attitude, the dependency on culture, mentality, aspiration, a way of thinking linked to the mood, and last but not least, to the personality.

The Axis of Approaches determines the space coordinates of creativity. A new approach induces a major change, generating new branches of economy, and even a different economic era.

The concept is a general representation of mind, a vision, a potential option, the outline of a new possibility.

The Concepts' Axis displays sources from where diverge numerous solutions. A new concept generates new solutions and represents a leap forward, generating a serious handicap for competitors. A new concept is a serious reason to set up a company and invest venture capital.

Technical solution is the possible projection of a concept, a vision, a project expressed in physical and operational components, in design or branding.

The axis of solutions is the projection line of concepts, illustrating the concrete implemented versions of a concept. A new solution or a new version of a concept is "translated" by creating a competitive market advantage. The sub-versions of solutions, the improvements and revisions are minimal survival activities when facing the competitors.

Invention is a new technical solution that directs the step by step conversion of technological innovation towards market use. These two terms are closely correlated. The technological innovation without patenting the underlying invention remains a process in which the novelty and inventiveness have not been certified worldwide, and is rather a routine process. Innovation can be technological, organizational, presentational or managerial.

Employees' inventions are inventions made during employment and developed either as a part of employee's activities or significantly based on company's experience.

Inventive mission sets the technology field that fits the problem or the technical problems for whose solutions the employee inventor has a contractual obligation or an obligation resulting from other acts that will make him to bring a creative contribution corresponding to his employment duties.

In order to understand this best practices manual and the legislation applicable to employees' inventions, **Annex 2** presents the terms and expressions used.

[1] Professor of Psychology at Harvard University, Gordon Alport, 1937
[2] Căpâlneanu, I. intelligence and creativity. Military Publishing House, Bucharest, 1978

Employees' invention framework[3]

The Law no. 83/2014 **on employees' inventions was published in the Official Gazette no. 471/2014 and entered into force on 29 June 2014.** *The Law no. 83/2014* shall be applicable to inventions created by an individual inventor or a group of inventors when the individual inventor or at least one member of the group of inventors is an employee of a legal person of public or private law (art. 1, para . 1).

Law no. 83/2014 shall be applicable to inventions that can be protected by a patents[4] or a registered utility model[5] (Article 1, para. 2).

Law no. 83/2014 establishes that the right on inventions created by employees belongs to the employer. For the inventions created by employees in situations other than those set by Law no. 83/2014 or unclaimed by the employer, the right to inventions belongs to the employee under the terms of Law no. 64/1991 with subsequent amendments, Article 3.

In addition, *Law no. 83/2014* allows employers to take ownership on inventions developed by employees as a result of the preparation and training of employees at the employer's diligence and expense.

Unlike the regulations of Law no.64/1991, as amended and supplemented, which allowed the inclusion of some contrary contractual clauses derogating from the provisions of the law, the current law does not provide for this possibility, with one exception. The exception refers to the situation where the employer meets the following conditions:

- the employer is a public law entity;
- the employer has research and development (concept defined in Ordinance no. 57/2002 on scientific research and technological development, as amended and supplemented) within its object of activity.

Under these circumstances, the employee and the employer may stipulate contractually that the right to inventions belongs to the employee.

By removing " the contrary contract clauses", the law does not allow the parties to provide that the patent right shall belong, depending on the contractual clause, to the employee or the employer (except legal persons of public law who have research development within their object of activity –where the invention made on the basis of inventive missions may belong to the inventor employee, if such a clause exist).

Unlike previous regulations, Law no. 83/2014 addresses the employees' invention according to the employer: Research Development institutions of public or private law legal entities (universities and research institutes) and private law legal entities from the economic environment.

3.1 Flowchart of the employees' invention in an organization

The flowchart takes into account the logic of procedural steps and doesn't always have a chronological significance.

The layout of specific activities and the processes map for employees' inventions are shown in the diagram from **Annex 3**.

3.2. Decision if an invention falls or not in the category of employees' inventions and it's claiming

The employer shall be competent to decide whether an invention made by an employee falls or not in the category of employee's inventions and also upon the type of employees' invention.

Employees' inventions are inventions created by an employee or a group of employees from an institution in the following circumstances (article 3, para. 1):

[3] What brings new the present law in the field of patent protection: what are employees' inventions; conditions met by inventions in order to fall in the category of employees' inventions; legal provisions on employee's and employer's rights and obligations regarding an employee's invention
[4] Patent law no. 64/1991
[5] Law no. 350/2007 on utility models

- resulted from the carrying out of inventor's duties, either specifically assigned to him within the employment contract and the job description, or set out by other legally binding documents providing for an inventive mission;
- were made during the individual employment contract, or during a period of 2 years, at the most, following the termination of this contract, as the case may be, having knowledge of and using the employer's expertise, using the employer's means, as a consequence of the professional training acquired by the employee-inventor due to the employer's care and on the employer's expenses or using information resulting from the employer's activity or made available by him.

According to Art. 4 of *Law no. 83/2014*, in both cases described in Art. 3 para 1 the employer must follow the procedure of assigning the invention as an employees' invention and claiming it. In other words, even when the right to inventions, obviously belongs to the employer (in the first category of inventions - Article 3, para. 1 (a)), the employer is required to evaluate the classification procedure of the invention as employees' invention.

The inclusion of the invention in the category of employees' inventions according to Art. 3, para. 1 let. (a) is strictly linked to the establishment of its technology field or the technical problem solved by the invention.

RECOMMENDATION:

Consulting the organizations of innovation and technology transfer, so as to place an invention in the technology field.

The employee performing an invention is required by law to immediately notify the employer in writing or in another manner agreed upon, on the technical solution, providing all the details, including the contribution of other inventors (if any), according to the structure established by employers' internal rules.

RECOMMENDATION:

The Framework Structure: a communication document of an invention to the employer: the employee-inventor's name, the whole group of inventors (if this is the case) the title of the invention, date, technical description (it must be comprehensive and to show how the invention works, the description should answer the question "what problem did the invention solve"), novelty and benefits (why the invention is innovative, the advantages of the invention compared with what already exist), potential commercial application, the degree of involvement of each member of the group of inventors. Each member of the group should give a brief description of his contribution, a document that must be signed and dated.

In the mandatory communication process provided by the law, and specifically to establish technical and legal details of communication, the inventor can request assistance from the employer's industrial property attorney.

If the inventors activate at different employers, they will inform their employers regarding the employees' invention and, where appropriate, declare that they haven't used / use their resources or their technical data.

RECOMMENDATION:

Solving by mutual agreement the legal situations associated with an employees' invention made by inventors with different employers.

Upon receiving the communication from the employee, the employer must decide whether the invention developed by an employee falls under the category of employees' inventions. In the absence of a longer term provided by the internal rules of the employer, he is required to notify the employee within 4 months after the receipt of the communication, regarding the invention's inclusion in the category of employees' inventions, and if he claims the right on it.

The regulation differs from the previous provisions of *Law no. 64/1991* as amended and supplemented, under which the patent right belongs to the employee, if the unit does not file a patent application with OSIM within 60 days from the date when he was informed regarding the invention's creation.

Thus, the 4 months term gives employers more time to decide whether they wish to claim the invention. In addition, *Law no. 83/2014* doesn't regulate the preferential right of the employer concerning the contract related to the employee's invention.

In the absence of a longer term provided in the internal regulations of the maximum 4 months from the receipt of the notification, the employer shall notify the inventor of the decision to classify the technical solution in the category of employees' inventions if he claims right over it.

The employer shall be competent (or may require external expertise on a contractual basis with the confidentiality clause) to decide on the inclusion of an invention made by an employee in the category of employees' invention and on the type of employees' invention. The inventor can challenge the classification of his invention by the employer no later than four months after receiving the notice on this classification, at the competent law court under the civil law or the law court where the employer has its establishment, according to Art. 95 pt. 1 of the Civil Procedure Code.

If the employer does not claim the invention within this period, the right belongs to the employee inventor.

3.3 Remuneration and compensation system

The remuneration, compensation and distribution of benefits system resulted from the exploitation of the employees' invention shall:

- ✓ be transparent in the relation employer - employee inventor (employers - trade union);
- ✓ be motivational in order to enhance the innovation process;
- ✓ have the capacity to be implemented in all areas of the national economy;
- ✓ contain clear methods for determining remuneration, compensations and distribution of benefits resulted from the exploitation of employees' inventions;
- ✓ be applicable to an inventor or a group of inventors.

The inventor employee according to *Law no.83/2014*, art. 3 para. (1) let. b) is entitled to a compensation / remuneration determined by the employer.

Remuneration is the payment right distributed to the individual / collective employee inventors, at the end of the patenting process, and obtaining a patent (for an employees' invention) by the employer, according to *Law no. 83/2014*.

The employer defines the criteria for determining said remuneration, by specific provisions in its internal regulations.

In the absence of specific provisions, the employer shall consider, depending on each case, one or several of the following criteria:

- the economic, commercial and / or social effects arising from the exploitation of that invention by the employer or by third parties with the employer's consent;
- the extent to which the employer is involved in carrying out the employees' invention, including the resources made available by the employer for its achievement;
- the creative contribution of the employee inventor, where the invention has been created by a plurality of inventors.

For **employees' inventions made by employer's employees - public law legal persons which have research and the development within their object of activity objects**, claimed by the employer under *Law no. 83/2014* or under a contract between the parties and used by the employer, the employee inventor is entitled to a percentage of the amount of income (net) made by the employer from the application of that invention. The percentage provided cannot be less than 30%.

> *"Remuneration inventor", according to art. 11 of Law no.83/2014, the expression "income realized by the employer" has the meaning of "profit earned by employees". This meaning is also applicable in case of obtaining royalties, as well as in case the employer is the producer of the invented product.*

In addressing this issue there are many models and successful formulas.

The best approach is the negotiated royalty share, with suspensive clauses based on the assessment of the invention and in particular on the effects of its implementation.

To stimulate creativity and innovation activity **individual bonuses**[6] for inventors of the research development organizations (OCD) might be considered. Prize funds may be made from internal sources at the level of OCD, supported by gains from the patent application (profit). Also, bonuses from internal funds may be accepted for the side effects of the patent: notoriety gain, scientific visibility and prestige a patented invention can bring.

Bonuses will not diminish or void the remuneration of inventors as provided by law.

3.4. A comparative analysis of regulation and the application of the employees' inventions in RO and EU

In Romania, there is an adequate legal framework to protect technical creation by patents that contributes to the development of national creative potential and ensures a level of protection similar to that existing in Member States of the European Patent Organization. The Romanian law on employees' inventions has an important source of inspiration: the specific framework as regulated in Germany and France.

The role of law on employees' invention is to encourage the specific tendency of industrial developed countries to patent in Romania the inventions resulting from research and production especially by those employers who facilitate the innovative process and less by the employee inventors who lack financial and logistical power. From a long term perspective, the purpose of the new legislation is to provide a tool for technology transfer and stimulate private investment in research, development and innovation.

At international level, there are differences especially concerning the compensation and the employees' rights compensation. These differences occur due to various related legislation, their complexity and the inconsistency of legislative harmonization at European level.

Thus, in countries such as the UK, Netherlands, France, Italy, Austria, Portugal, Spain, Hungary, the invention provides for the accounting registration of the employees' invention. Other countries such as Germany, Denmark, Finland, Norway and Poland have specific distinct laws for compensating the employees. Belgium does not have a specific legislation for compensating the employees, but has a legal system based on case law. Legislation in Ireland or Sweden does not contain any obligation of the employer to compensate the employee for employees' inventions[7].

A comparative analysis and description of the inventive enforcement service in various countries (including the US and Japan) are shown in **Annex 4**.

3.5. The role of employees' invention in the innovation process of an organization

If theoretically the research development organizations (universities and research institutes) can contribute significantly to the education of future managers and entrepreneurs, in practice there are significant obstacles in terms of collaboration between innovative companies and universities / research institutes. Among obstacles, the specialists list: the low level of interest of universities / research institutes regarding market needs; retention of entrepreneurs who believe that the possible participation of universities / research institutes has a strong theoretical character; the desire of entrepreneurs to act alone[8].

Most universities / research and development institutes, should interact more with the industry and with governmental and nongovernmental organizations, in terms of consulting, research contracts and marketing contracts of inventions and research results. Industry and other institutions realize as well that

[6] WIPO provides an example in this regard, at the Tsinghua University in China, by proposing to universities the merit recognition and compensations for researchers and students alike. The method should determine in this way the preservation of the confidentiality of inventions
[7] Employee's rights to compensation for inventions - a European perspective, www.practicallaw.com/lifescienceshandbook
[8] Slătineanu, Product and process innovation management L., Publisher Politehnium, Iasi, 2005

such collaboration may be a source of new technologies solutions to existing problems and expert support for their tasks related to product, process as well as of economic and innovative policy making[9].

Accepting and supporting a process of innovation within an organization must become a policy option. But this does not mean that managers should expect an easy acceptance of innovative processes as consequences of various processes are not always favorable and predictable.

Both the staff of an enterprise or of a university / research development institute should know the procedure associated to a materialization of the innovative process (to whom and how to address in order to give a clear and accurate form to the innovation proposal and what to expect when the implementation of the proposal will be effective).

An operational assessment of a useful proposal, followed by its implementation, can bring significant benefits to businesses or universities / research development institutes where the innovation process is encouraged and stimulated.

Universities / research development institutes should disseminate and exploit more effectively the results of publicly funded research in order to transpose them into new products, technologies and smart services. The means to achieve this strategic objective include, in particular, collaboration between industry and academia, such as collaborative research based on contracts or funded jointly with the private sector, patenting, creating spin-offs and start-ups[10].

The Law on employees' inventions[11] paves service so that the employer takes all measures and initiatives for market application employees' inventions, which can concretely contribute to increased competitiveness and create new jobs.

The law of employees' invention promotes the assignment of the invention to the employer with increased opportunities of capitalization rather than to the inventor, no matter how much he cares for his personal and professional reputation.

RECOMMENDATION:

The research and development organizations, especially universities, have to improve their concern on technology transfer; the humboldian model of the university should be completed with the entrepreneurial one, by which the innovative projects are market promoted at a higher rate.

For this mode of operation to become a fundamental preoccupation of universities in Romania, it is recommended the following:

- reviewing the assessment scales of the activity and individual performance of the professors, by increasing the scoring for creating inventions (for filing applications and especially for granting of patents), transfer of patents and especially direct involvement in the development of spin-offs and start-ups;
- differentiation of funding for universities by allocating additional resources to those universities with results in entrepreneurial activity (technology transfer, application of the invention on the market,....);
- reviewing and updating the university's institutional policy related to intellectual property.

In **Annex 5** can be found the General Framework of Operational Procedures regarding employees' inventions in universities and national research development institutes.

[9] Guidelines on Developing Intellectual Property Policy for Universities and R&D Organizations, WIPO, Geneva

[10] although the law does not expressly provides so, article 12 shall stimulate and facilitate the creation of spin-offs (micro-enterprises set up by universities using innovative projects or professor's inventions) evolving market capitalization of innovative projects generated by employees' inventions. This aspect is partially reinforced by the provisions of Article 9 (3), (4), equally provisions of Art. 12 facilitates the start-ups already established wishing to access non-refundable structural funds and where one of the eligibility conditions is the ownership or the exploitation license of a patent application or a patent (see POC programme, axis 1.2.1)

[11] Article 15 correlates with Article 12 in this respect.

3.6. Ownership of employees' inventions

In order to make a summary of the circumstances under which the right on employees' inventions is carried out according to *Law no. 83/2014*, the following shall be defined:

- **mission inventions-** inventions which under Art. 3, para. 1 let. (A) "resulted from the carrying out of inventor's duties, either specifically assigned to him within the employment contract and the job description, or set out by other legally binding documents providing for an inventive mission";
- **inventions is related to the employer** - inventions which under Art. 3, para. 1 let. (b) "were made during the individual employment contract, or during a period of 2 years, at the most, following the termination of this contract, as the case may be, having knowledge of and using the employer's expertise, using the employer's means, as a consequence of the professional training acquired by the employee-inventor due to the employer's care and on the employer's expenses or using information resulting from the employer's activity or made available by him".

Accordingly, based on art. 3 and Art. 5 of *Law no.83/2014*, the right in the invention belongs to:

➢ ***the employer***, in the following situations:
- the invention is a mission invention and the employer is a private law legal entity;
- the Invention is a mission invention and the employer is a public law legal entity without having research development among objects of activities;
- the invention is a mission invention, the employer is a public law legal entity with activities in research and development and there is no contrary contractual provision ;
- the invention is related to the employer and the employer has not claimed the invention in legal terms.

➢ ***the employee inventors***, in the following circumstances:
- the invention is a mission invention, the employer is a public law legal entity, having research - development among its object of activity and there is a contractual provision which grants the right on invention to the inventor;
- the invention is related to the employer and the employer has not claimed the invention in legal terms;
- Invention is not a mission invention and is not related to the employer.

Employee and employer rights and obligations

Employee rights and obligations, under Law no.83/2014:

- informs the employer of carrying out the invention;
- may request assistance from the employer's patent attorney for a detailed presentation of the invention;
- receives from the employer within four months (in the absence of a longer term provided in the internal regulations of the employer) the decision on the admission of the invention in the category of employees' inventions and if the employer claims the right on it;
- may challenge within 4 months, the way the employer has classified his invention, at the law court, according to the civil law;
- be informed in writing by the employer regarding a patent application or a utility model registration;
- at the employer's request, he shall provide assistance for protection and exploitation of the invention;
- the employee has the obligation not to disclose or publish the invention (considered as an employees' invention) without the employer's written consent;
- may apply for protection right, if the employer assigns the ownership of the invention, not wanting to proceed with the filing of the patent application;
- the employee is entitled to a remuneration determined by the employer where was made an employees' invention referred to in art. 3, para. 1 let. (b).

If the employee's inventions do not fall within the situations provided by *Law no. 83/2014*, and the right on the inventions created by employees belongs to the employee inventor, the latter is entitled to seek protection in Romania and / or in other countries, by claiming the priority right in Romania.

Employer rights and obligations under Law no.83/2014:

- is informed by the employee inventor by the existing invention and receives its detailed description;
- assists the employee through the industrial property attorney, for the detailed presentation of the invention;
- analyzes the invention and classifies it in the category of employees' inventions, and if it claim ownership, he will respect the deadlines;
- notifies the employee regarding the decision to classify the invention and its' ownership;
- may request employee's assistance for obtaining protection and capitalizing the invention;
- may apply for a patent or for the registration of an utility model;
- informs the employee of the filing of the patent application or registration of an utility model;
- ensures the necessary costs for obtaining a patent or the registration of an utility model, for a claimed employees' invention;
- remunerates the employee - inventor, in accordance with the law;
- assigned to the employee inventor, at his request, the right to protection, in case he no longer wishes to continue with the procedures subsequent to the patent application, or he's not interested to protect the invention in some countries.

If the right on the employees' invention belongs to the employer, he is entitled to apply for **a patent or for the registration of a utility model** in Romania and / or in other countries, by claiming the right of priority in our country.

The application for a patent or the registration of a utility model is accompanied by documents attesting the right on the invention.

The right to obtain a patent or a utility model and the rights deriving from these acts can be transmitted to third parties in whole or in part. The transfer can be made by exclusive or nonexclusive assignment or license, or by legal or testamentary succession. Transmission takes effect against third parties only from the publication date of the mention regarding the transfer registered with OSIM (*Patent Law no.64/1991 with subsequent amendments*).

After obtaining the patent / utility model, the holder is entitled to:

- ownership of the invention by patent / utility model entitles the holder to prohibit third parties from performing the following acts without his authorization:
  - ➢ for products: manufacturing, using, offering for sale, selling or importing for the purpose of using, offering for sale or selling;
  - ➢ for processes or methods: their use.
- exclusive right to exploit the invention;
- the right to publish the invention;
- entitlement to the payment of damages in case of infringing the protection conferred to the invention according to *Art. 56, para. 4 of the Patent Law no. 64/1991*;

The rights of the inventor who is not the holder of the patent / registered utility model are:

- entitlement to the mentioning of the name, first name and his capacity in claiming the employees' invention, in employment records and other documents and publications relating to said invention (at the specific request of the inventor, his full name shall not be published);
- entitlement to the duplication of the invention description;
- the right to be informed by the applicant of the examining stage of the patent / utility model application and the stage of the patent application

The registered utility model entitles the holder to prohibit unauthorized exploitation of the product which is the subject of a utility model similar to the product patent.

In the case of employees' inventions, the patent owner shall notify the inventor of his intention to renounce at the patent. At the inventor's request, the holder is obliged to give the inventor the patent rights and the related patent documents, provided that the employer grants to the employee a non-exclusive license for the patented invention. The conditions for granting exclusive licenses shall be determined by specific provisions of the internal regulation of the employer, and in the absence of such specific provisions, the conditions for granting are established by agreement, renunciation is possible only with the consent of the licensee (*Art. 34, Patent Law no. 64 / 1991 with subsequent amendments*).

The patent holder should take care of:

- Paying the patent maintenance fees. Failure to pay such fees shall cause the forfeiture of patent rights and its inclusion into the public domain, with the possibility of revalidation.
- invention exploitation[12].

RECOMMENDATION:

Research development organizations shall support the exploitation of the invention including by licensing, assignment and start-ups / spinoffs.

3.7. Clause of confidentiality and professional secrecy

The confidentiality clause applies as from the moment the inventor identifies it and notifies the employer until the publication of the patent application (at 18 months or 4 months) by OSIM in the BOPI Official Gazette.

The penalty applicable in case of failure to comply with the obligations assumed by either party is the payment of damages. This implies that the injured (employer or employee) shall notify a competent law court, prove the existence of the clause, the right infringement, the damage produced and infringer's offence. The infringement of contract obligations may determine a disciplinary liability for the guilty employee.

The confidentiality obligation is the obligation of the employee to comply the professional secrecy. Should be made a distinction between the obligation of incidental confidentiality, with limited character, and the obligation to respect the professional secrecy and the confidentiality clause.

The law regulates the following aspects of **trade secret**:

- inventions may be the subject matter of a trade secret, consisting **of obligation, both for the employee and for the employer not to disclose or publish the invention without the written consent of the other party**;
- the liability for disclosing of the invention is driven under the conditions of the employment contract, that provides the obligations of confidentiality;
- in the absence of an obligation of confidentiality regulated in the employment contract, and if there is a damage, the liability is coached under the common law for civil liability, under the rules of the Civil Code.

Unlike the professional secrecy that must be respected only for the duration of the individual employment contract, the confidentiality clause may have effects even after the termination of the individual employment contract, which unlike the non-compete clause, must necessarily exist prior this moment (during the execution of that contract)

RECOMMENDATION:

If the employer's legal representatives are also employees inventors of an employees' invention, the addendum to the Individual Employment Contract shall be signed by the persons delegated with this purpose.

By patenting procedure, the invention is published (at 18 months or 4-5 months with the payment of a doubled publication fee). After filing the patent application the invention may be published as an article

[12] The ineffective exploitation of the invention due to an insufficient supply is punishable by granting compulsory licensing. In fact, universities as "nonproductive" units, exploit these inventions only in limited number of cases

or as a scientific communication, the owner's agreement, namely the employer's agreement being necessary.

If the employees' invention is disclosed by employees, they can be held liable according to the Individual Employment Contract between the employee and the employer, when it contains a confidentiality clause. Since the individual employment contract does not contain a confidentiality clause, and the disclosure of the invention is made by employees and having as consequence an injury, it may attract civil liability, as regulated by the Civil Code.

Annex 6 presents details about the law applicable to the confidentiality clause.

In order to avoid occurrence of any of the above situations, we recommend that in the Individual Employment Contract with inventive mission, to be stipulated the firm indication obligation to:

- not disclose information related to intellectual property rights to third parties without the consent of the parties;
- use confidential information but only to fulfill the obligations arising from the performance of contracts;
- take measures to prevent disclosure of confidential information;
- announce immediately and without delay a possible imminent damage linked to the protection of confidential information and indicate specific remedial means to prevent or reduce the consequences of possible damages.

3.8. Examples of Good Practices

A successful example of good practice must clearly indicate the concrete steps to be taken by the inventor or the employer from initiating the invention to its capitalization or abandoning.

There are no major differences in behavior between universities, research development organizations and industrial units, but there are specific approaches for the management of intellectual property rights in universities and research development organizations.

Employees' invention in Germany:

German law of employees' inventions regulates the exploitation rights of employees' inventions, as well as the intellectual property rights related to them.

The employee's inventions that may not be related to company's activities without affecting or involving the employer's help, are considered free inventions. As in the case of employees' inventions, the employee must inform the employer of the invention. The employer evaluates the invention and decides if it is a free invention.

When there is a claim relating to an employees' invention and its use rights have been assigned to the employer, the employer is entitled to claim a reasonable compensation. The amount depends on the commercial use of the invention, the employee's duties and position in the company, and the extent to which the company was involved in carrying out the invention "..... (details in Annex 4)

3 Employees' invention framework

Employees' invention in France:

The relevant legislation for the regulation of employees' inventions is complex and is in the forefront "Intellectual Property Code" and "Decree on employees 'inventions'. Depending on the conditions in which was created the invention, the right to invention and therefore the possibility to file a patent application belongs either the employee or the employer. In the latter case, the employee is entitled to financial compensation and consequently it is the employee's obligation to declare to the employer any invention made by him, just to establish rights which allows him to estimate the rights derived from the patented invention. French law distinguishes three categories of employees' invention

- invention of mission;
- inventions in addition of an assigned task;
- Inventions in addition of an assigned mission ..... (details in Annex 4)

Employees' invention in Israel:

The Patent Law defines as "employees' invention" and invention created in the employer's field of activity and during the employment contract of an employee. In the absence of an agreement that provides something else, employees' inventions belong to the employer. The employee is entitled to a compensation established by the Committee for Fees and Compensations of the Israeli Patent Office. In taking a decision, the Committee must take into account the following aspects: the role and responsibility of the employee; the extent to which the invention is related to the employee's work; The employee's initiative in developing the invention; the possibility of using the invention ..... (details in Annex 4)

4.1. Innovation management in an organization

Increasing importance of knowledge as a driver of economic development has major implications for the innovation management; innovation is a major key of competitiveness in a knowledge-based economy.

Innovation management involves a stronger focus on the organization's mission, identification of opportunities, defining and determining the way these opportunities correspond to its strategic directions of development, defining the measures for ensuring success and a continuous (re)evaluation of opportunities. In the present economic context, economic growth should find its origin in increasing the productivity and assimilating knowledge.

The challenges of a knowledge-based economy can be classified into the following groups:

- **new features of the market** - pthe market is constantly changing, becoming more global, new competitors appear, in addition, the technology becomes more complex, the production cycle is shortened, and knowledge accumulates;
- **new types of innovation** – diversification of innovation; there are technological innovation, and innovation as new business models, new ways of organizing work, innovation in design and marketing; identifying new uses and new markets for existing products and services, because innovation occurs where the market offers the possibility of introducing new products and production methods, where people are willing to take risks and to experiment new ideas;
- **new needs of shareholders** - customers, owners and capital markets bring into the equation the value of the organization, its ability to obtain timely competitive products on the market;
- **new path to innovation management** - innovation management contains all the key areas that shall be acquired in order to obtain products and services that may ensure effective and continuous success;
- **evaluation methods of innovation abilities** - rapid development of new technologies encourages companies for a technology assessment and an optimal technology implementation, consistent with their need to maintain their competitiveness;
- **need for new tools of innovation management**[13] - developing knowledge-based innovation management requires and imposes, in the same time, an increased capacity to implement technical and relational tools.

In this context, it is therefore necessary to create/develop an innovation management department or, at least, to use an innovative manager who can "work" with specific techniques for orienting the creative inventive work towards competitiveness and benefits.

The Innovation Management Techniques (TMI) is a set of tools, techniques and methodologies that are developed to support companies in adapting to market dynamics and systematic challenges by increasing the capacity of firms to apply their knowledge and improve internal relations with external partners.

Types of existing TMI on the market[14]:

- TMI's that are sufficiently developed and standardized - implementation procedures and benefits for TMI are generally known and recognized in the market;
- - TMI's designed to improve the competitiveness of companies by focusing on knowledge as the most important benefit.

Having regard to the fact that TMI's usually do not act in a deterministic manner, under a variety of companies and the context in which business is conducted, we can say that there is no single model (standard) for evaluating innovation management, but only some principles of good practice. Consequently, the usefulness of TMI for evaluating innovation in a company or a business assessment is usually applied in combination with other instruments, this combination being adapted to the specificities of each case. Maximizing effects and indirect benefits for the company, especially for innovative companies, depends on the association (combination) of TMI's, by understanding the specific characteristics of the

[13] Erdyn Consultants,2000], Promoting Innovation Management Techniques în Europe- study for the EC.
[14] [CEC, 1998]

company and its business.

TMI's can be addressed as part of the incorporation of innovation management at the level of a company and can be identified as serving different objectives, such as: taking market information, competitive analysis, cost reduction, developing creativity, diagnosis, human resource management, business planning, knowledge management, quality management, etc.

When selecting the relevant TMI, it is envisaged covering mainly the steps shown in Figure 1.

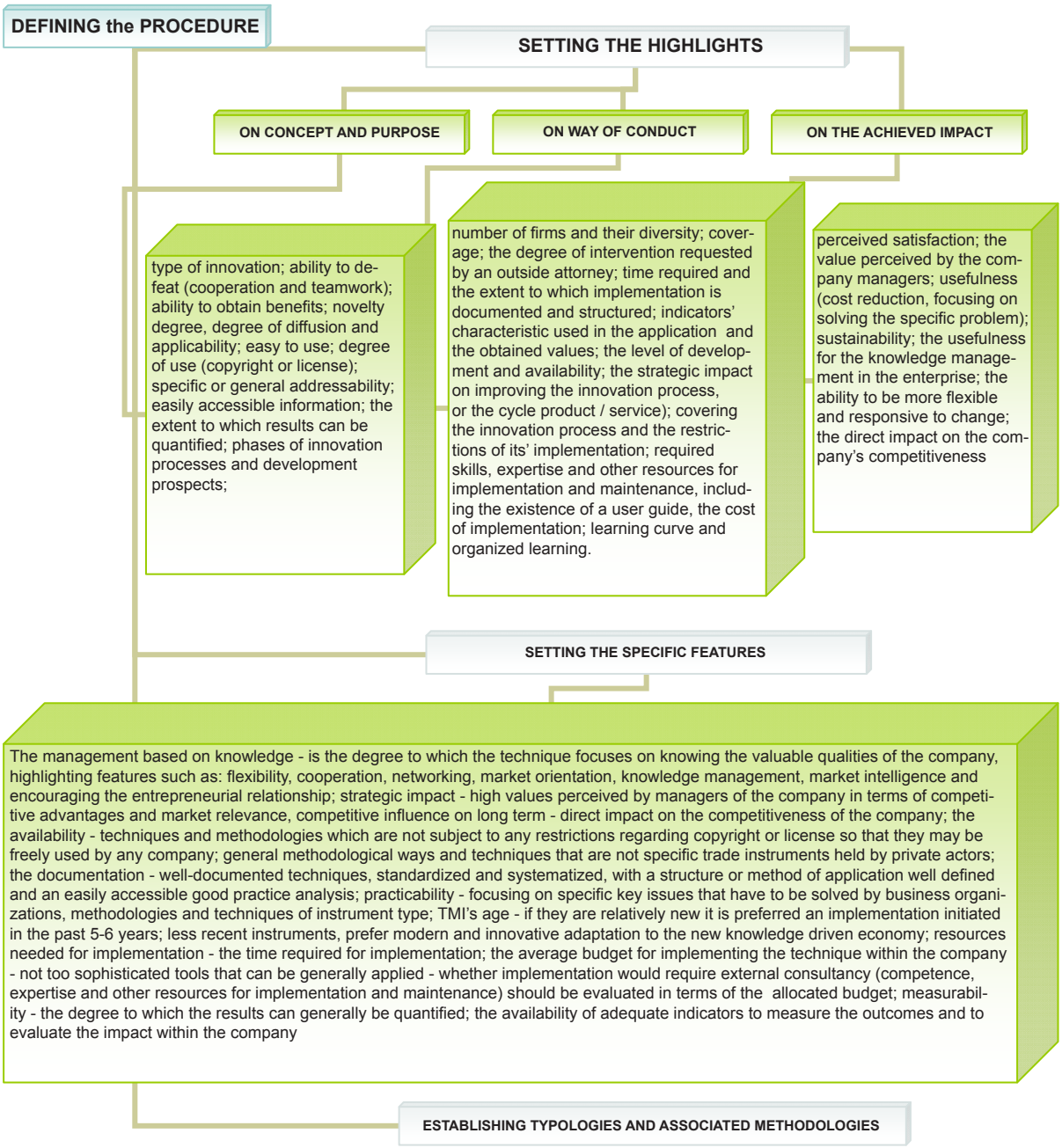

Figure 1. Steps of TMI selecting

Innovation Management Department (role of an innovation manager) by applying the TMI's proposes to the management of the research development, the capitalization of research results to maximize the added value at its level. Thus, based on the internal report, it is decided that:

1. The result of the research is patentable and proposes the steps that shall be taken for protecting it by a patent or a utility model:
   - in order to capitalize at the organization level;
   - with the purpose of a subsequent licensing;
   - with the purpose of a subsequent assignment;
   - to encourage the setting up of spin-offs;
2. The outcome of the research activity is (un)patentable or there are no expected benefits arising from patent (only costs for ensuring protection);
3. The result of the research can be disseminated through publication or presentation in conferences (in which case the information is set to be delivered);
4. Approves the plan regarding the coordination, integration and the monitoring of the innovative activities and processes across the organization.

4.2 Elements regarding the management of intellectual property

4.2.1. Trade secret

As a distinct object of intellectual property but whose protection is not based on an application for protection, its examination and the granting of protection by a national office, the trade secret is a form of information protection specific to the company, so it's of intellectual nature, if it falls into the hands of competition, they could endanger the advantage that the company has by its possession.

Any information that gives a company a competitive advantage may be considered a trade secret.

- *Unauthorized use of this information by persons other than the owner, are regarded as unfair practices and trade secret infringement.*
- *Depending on the legal system, the protection of trade secrets is part of the general concept of protection against unfair competition or is based on specific provisions or legal cases regarding protection of confidential information.*

Protection of trade secrets

Unlike patents or registered utility models, trade secrets are protected without registration - that is, without any procedural formalities. Consequently, a trade secret can be protected for an unlimited period of time, or as long as the information remains confidential. For these reasons, although perhaps they're more difficult and expensive, protection of trade secrets may appear to be attractive, particularly for SMEs.

Types of trade secrets:

- trade secrets that relate to inventions covering products or manufacturing processes which do not meet the patentability criteria and therefore can be protected only as trade secrets;
- inventions which, if protection would be required they would meet the patentability criteria and therefore could be protected by patents, but the company decides on managerial line to keep them as trade secret.

advantages and disadvantages regarding the information protection as trade secret	
advantages	**disadvantages**
▪ the trade secret protection, theoretically, is not limited in time, unlike patents, whose term is up to 20 years; ▪ does not involve direct procedural costs, although there may be high costs related to keeping the information confidential, including the introduction of technological protection measures; ▪ immediate effect; ▪ does not involve disclosure of information to a government authority.	▪ especially if that information meets the criteria for patentability, third parties may be able to inspect, dissect and analyze the product or process, to discover the secret and, thereafter entitled to use it without infringing any right that excludes the others from commercial use; ▪ Once the secret was made public, anyone can have access to it and can use it freely; ▪ trade secret is more difficult to implement than a patent. Level of protection of secrets is generally considered weak, particularly when compared with the protection granted by a patent; ▪ the third party who has received the relevant information by legitimate means, can patent that trade secret.

The strategy of the trade secret protection for a company

SThe trade secrets are widely used by SMEs. Most SMEs rely exclusively on trade secrets to protect intellectual property (although in most cases may not even be aware that trade secrets are protected legally). In this context, it is important that companies ensure necessary measures to protect their trade secrets effectively. These measures shall include:

- adopting methods of securing the information of confidential nature that might be interested in competition and of protection of the program within the company;
- educating the employees about the company's policies regarding the disclosure of confidential information, with clear definitions and guidelines on access, management, protection, distribution, cataloging (classification) and / or possible disclosure of any confidential information;
- identifying business secrets and establishing their priorities based on their value and impact;
- considering opportunities to protect a trade secret by a method such as patent registration;
- limiting the number of people who know or have access to confidential information of value in the company and making sure that they are aware that this information is confidential;
- including confidentiality clauses in the employment contracts, with the obligation to keep the confidentiality of the employer's secrets (at least for a time limit, even if the employee left its company);
- signing non-disclosure agreements with business partners, at every disclosure of confidential information;
- setting up an effective security system for managing digital information on the company's internal network, with technical measures, software and encryption in order to restrict the access to classified information, a monitoring system of communication and disclosure, and a system for preventing or tracking the access to confidential information.

In case the individual employment contract does not contain a confidentiality clause, and the disclosure of the employees' invention is done by persons (other than the inventor) who, by the nature of their duties, have been aware of the existence of this invention and that results in causing injury, it may attract civil liability, as regulated by art. 1349 par. (1) and (2) in conjunction with art. 1357 of the Civil Code.

4.2.2 Confidentiality. Professional secrecy

The employee inventor has an obligation not to disclose or publish the invention without the employer's written consent. The obligation not to disclose or publish invention belongs to the employer and persons other than the inventor who, by the nature of their duties, became aware of the invention.

Where the employees' invention is disclosed, those involved are liable according to the individual employment contract between the employee and the employer, when it contains a confidentiality clause. If the individual employment contract doesn't contain a confidentiality clause[15], and the disclosure of the invention results in causing injury, it may attract civil liability, as governed by the *Civil Code*[16].

***Confidentiality clause**, governed by art. 26 of Law no. 53/2003, the Labor Code, republished, shall be not confused with the legal obligation set out in Art. 39 para. 2 let. (f) the obligation to observe the trade secret[17].*

Confidentiality clause should not be confused with any obligation of fidelity[18] governed by art. 39 para. (2) d) of Law no. 53/2003, the Labor Code as republished, aimed at the stability / employee's commitment to the company / unit / organization where the employee will perform his duties.

***The non-compete clause** takes effect (payable for a maximum period of 2 years from the date of termination of Employment Contract)[19] only if the individual employment contract provides the monthly amount of non-competition indemnity[20].*

Professional secrecy is an obligation of the employee that aims for the information and the general data that should be observed by all employee of an employer, and the confidentiality clause covers a broader range of information than the one envisaged by professional secrecy and is applicable only to certain employees. The employer must specifically set all data and information having a secrecy character and then include them in the internal regulation of the unit, in the individual employment contract of each employee, mentioning only the general obligation to comply with the internal regulations. In the event that, a person has access to certain information through the work she carries not included as trade secret in the internal regulations, the employer should insert in her contract, a special obligation in the form of a confidentiality clause.

But as noted in the doctrine narrowly and specifically, the duty of confidentiality is also an obligation of the employee to observe secrecy; hence the need to distinguish between the duties of incidental confidentiality, with limited nature, seen as the duty to respect the secrecy and the confidentiality clause. Moreover, unlike the secrecy that shall be observed only during the term of the individual labor contract, the confidentiality clause takes effect after the termination of the individual employment contract, which unlike the non-compete clause, must necessarily exist before this moment (during the execution of that contract).

[15] According to art. 21 para. (2) of the Labor Code as republished, the non-compete clause takes effect only if the contents of the individual employment contract are laid down in particular activities forbidden to the employee at the termination date, the quantum of the monthly allowance, the period for which the non-compete clause takes effect, the third parties for whom the activity is forbidden and the geographical area where the employee may be in real competition with the employer.

[16] Any person shall have the duty to respect the rules of conduct that the law or local custom requires, and not to infringe, by actions or inactions, the legal rights or interests of others. Whoever, having discretion, violates this duty, shall be responsible for any damage and is obliged to repair it integrally. The author of the injury shall be responsible for any misconduct. "(Art. 1349 Art. 1357 New Civil Code, Conditions of Accountability, responsibility for own act, civil liability).

[17] for this type of information law establishes for the person who will perform an activity or in a job that requires access to classified information, the obligation to submit to the head of the unit a written undertaking of secrecy that must not to be confused with the confidentiality clause.

[18] by inserting the duty of loyalty in terms of an individual employment concerns the stability of the employee. Since the employee whose individual employment contract contains a loyalty clause is forbidden to initiate its' termination thereof for a period negotiated by the parties and consequently to accede to another job, he is compensated with additional benefits in cash or in kind, if necessary, and if this clause is infringed by either party, the guilty party shall pay damages.

[19] according to Article 19. 22 of the Labor Code

[20] that is negotiable and is at least 50% of the average gross wages of employees in the last 6 months preceding the date of termination of the individual employment contract or, if the duration of the individual employment contract was less than six months, of the average monthly wages gained during the contract.

4.3 Consultancy in industrial property

Once the approach on the "novelty" of the invention in relation to its protection by patents / secrecy is established, in case the patenting is addressed, the drafting of a research report is necessary[21], in which the inventor is assisted by an intellectual property attorney (an organization for technology transfer, intellectual property attorney, broker of technology, etc.).

Often, as a result of a documentary research, it is identified the possibility to improve the initial technical solution or a suggestion for finding a new technical solution ("invented around") or contrary, the possibility to infringe the third party rights, in which case the rational way is to abort the patenting procedure.

In principle, the industrial property rights are monopoly rights, they grant to the owner the exclusive right to use a product / process protected by patent or another act that gives legal protection and prohibits its use by third parties without the consent of the entitled persons. Therefore, obtaining, under the law, the protection of an employees' invention by a patent or a registered utility model, prevents the unauthorized exploitation of the products and / or processes specific to these objects of industrial property.

The activity of an industrial property attorney is to provide specialized assistance in industrial property and represent Romanian or foreign individuals and legal persons, depending on each case, before the State Office for Inventions and Trademarks, as well as to third parties during various procedures.

The industrial property attorney[22] assists the employee inventor, on his request, for the preparation of the communication[23] that he is obliged to transmit to the employer when realizing an employees' invention, as well as during all patenting procedures from its generation to its patenting. Subsequently, if the invention's protection is claimed through a patent or a utility model registration, the trade mark agent receives extended responsibilities stemming from assisting the right holder of the invention during all protection procedures before OSIM or other patent offices.

4.4 Litigation

Infringement of the *Law no.83/2014 on employees' inventions, of the Patent Law 64/1991, as republished with amendments and additions and other laws applicable to employees' inventions*, can attract the civil liability of the guilty person and / or, where appropriate, criminal liability. Disputes between employers and employees in relation to employees' inventions, the inventor, the right to claim the invention, are with the competence of the law courts.

An example of a possible litigation may be caused by the inventor employee dissatisfaction on how the employer classified the employees' invention. In this case, the inventor can challenge the employer's decision to classify the employees' invention, in the competent law court, under civil law, no later than four months from the notification of that decision *(Art. 4 para. 4 Law no.83/2014 on employees' inventions)*.

The employer develops and promotes policies and programs to enhance the innovation capacity for a greater competitiveness as well as for creating jobs.

[21] involves the identification in the existing data bases of all inventions that are similar to the inventor's technical solution. For that, it is recommended to use associated keywords and combined between them (subject - activity - effect) as well as the international classification.

[22] the industrial property attorney, employer's employee, is obliged to assist and represent before the State Office for Inventions and Trademarks, as well as third parties only the unit or the company where he/she is employed. (Art. 20, para. 3 of Ordinance no. 66 of August 17, 2000 (republished) regarding the organization and the profession of industrial property attorney); in case the employer does not have an employment contract with an authorized industrial property attorney, he can appeal to his services, based on a written mandate endorsed by both parties.

[23] must contain data for a sufficient clear understanding of innovative technical solution; shall be made in writing and personally addressed to the head of the unit, receiving a registration number or by a recommended letter, in order to constitute evidence of compliance to the deadlines and obligations; information must also comprises the following elements: objects, scope and conditions under which the invention was created, the positioning of the employee inventor within the provision of art. 5 of Law no.83/2014 on the employees' invention, and a description of it, where the enterprise has the claiming right.

The capitalization of intellectual property rights can be achieved as follows:

- own application (made within the economic operators, unlikely to be achieved in universities, but feasible as micro-production within research institutes);
- divestiture (in universities, research institutes and the economic operators);
- licensing (universities, research institutes and economic operators);
- spin-off (in universities and research institutes, with the possibility of transfer to the private sector);
- imaging and scientific prestige (universities and research institutes);
- competitive capacity (in universities and research institutes less feasible within economic operators).

5.1 Technology transfer (knowledge / technology)

Technology transfer is the systematic and independent examination of a technology offered by an industrial property rights holder for determining the characteristics, the benefits, the application way on the market, in order to find a partner interested in applying that technology.

Technology transfer is a crucial component of innovation that takes place in a legal relationship, on a contractual basis, the contracting parties becoming partners. In a technology transfer, the owner of a technology protected by intellectual property rights, as patent or know-how, sells the technology or grants licenses to use that technology or know-how to another individual or entity.

Technology transfer represents the transaction related to any transfer from the technology holder to the beneficiary holders, of technology knowledge concerning the method, the experience of producing a product, setting up factories, plants, etc., together with the associated equipment, whether patented or not, from a legal standpoint.

The transfer process with the purpose to capitalize the results of the research may involve different mechanisms. There can be concluded licensing agreements, *joint ventures* or partnerships, but there are also other means, e.g. the setting up of *spin-off*. A spin-off is a new organization or entity formed by detaching from a larger one, i.e. a new company formed by a group of research from a university or a business incubator, based on the findings of a research group. Often these approaches are associated with the formation of *risk capital* to finance the development process.

A new technology developed by a company is normally accompanied by protection of all intellectual property rights that define it:

- technology as such by patent, registered utility model, plant variety patent;
- its name through a brand name or trademark;
- appearance of the product obtained by using the new technology, including its packaging, by registered design;
- software used to design the product or to control the technological process, copyright and / or patent;
- technology related database, copyright and / or as a sui generis right.

Technology transfer takes place generally by an agreement legally binding under which the owner of a technology protected by one or more intellectual property rights, particularly patent or know-how, sells the technology or grants the license to use that technology or know-how, to another individual or entity. It is mainly based on the direct transfer of intellectual property rights, and secondarily on a technology transfer based on an indirect transfer.

These legal relationships are contractual in nature, which means that person who transfers the technology enables the transfer and the person who receives it agrees to accept the rights, permission or know-how. These different methods and legal arrangements by which technology can be transferred or acquired include:

a. **technology transfer based on direct transfer of intellectual property rights:**
   - the contract of assignment, of intellectual property rights;
   - the exclusive or nonexclusive, in part or in whole, license agreement, of the intellectual property rights;
   - *know-how* contract.

b. **technology transfer based on the indirect transfer of intellectual property rights:**
   - franchise contract;
   - sales contract and import of capital goods;
   - joint venture agreements;
   - Key project contracts;
   - consultancy contracts.

5.2. Licensing Agreements. Highlights

As previously indicated, **the licensing of technology transfer cannot be done without the transfer of intellectual property rights**. Consequently, a licensing agreement for a technology is really a license agreement concerning one or more intellectual property rights that have the following basic elements:

- **identify the parties** - allows the identification of persons or entities who will become parties in the contract, and will sign a license contract becoming legally responsible to observe its provisions;
- **subject matter** - describes the product to be made, used or sold or the process that will be applied in order to obtain a product, that will be used or sold; shall identify the invention or inventions contained in that product or process, referring to relevant patents or patent applications, shall describe the know-how to be provided, and the technological evolution (progress) provided by the parties and the conditions in which these technological improvements will be "made" available; shall consider any other intellectual property: trademarks, designs, computer programs, databases etc. contributing to the definition or identification of technical, aesthetic, creative, or the name of the technology in this case;
- **license and anticompetitive practices limitation** - license may have contractual restrictions on permissible activities (implementation, marketing, usage areas, etc.), or restrictions on a part of the requests, as well as territorial, temporal or quantitative restrictions or limitations of selling prices
- **exploitation** - it is presented the quality of the product as such, the volume of production, the realization of a part of the product by third parties authorized by that license, imports of products for meeting the local demand in the absence of sufficient work activities in the country and the use of distribution channels by the licensor; licensee may also be ensured that know-how will be appropriate to achieve the objective;
- c**ommercial and financial considerations** include mainly the value of the licensed technology. The parties will seek to reach a payment structure that reflects the nature and circumstances of the agreement and the agreed terms and conditions. Payments made by the licensee for the purchase and use of technology are usually classified into:
  - lump sums payable on the achievement of a specified event: for example, the commencement of the agreement, the realization of n products, a performance criterion etc.;
  - royalties that are regular payments to the licensor as a reflection of the gradual use of technology.
- **other considerations** that must be specified in the contract are:
  - financial management of the contract, which provides obligations on the licensee to have financial records, to report results and pay the due royalties;
  - provisions related to the infringement of intellectual property rights connected to that technology;
  - responsibility for the quality of products made under contract.

- **dispute resolution** – includes possible disputes and their resolution; settling disputes involving both law that should govern the agreement and the method and the appropriate method and forum to address them. The parties may decide the possible mediation or arbitration.
- **duration of the license agreement** - a licensed intellectual property right may be authorized for a maximum period of time while it is in force (for example, for patents - 20 years). May be agreed also shorter term agreements, the parties preserving their right to cancel the contract if certain circumstances are unfavorable for continuing it.

Models of contract

Scope of the *Law no.83/2014*, includes inventions created by employees of a legal person, whether public or private law, which can be protected by patent or by registered utility model. Regulation of employment relations between employers and employees is based on a contract suitable for the specific situation of the parties.

RECOMMENDATION:

The CIM will be sought insertion of specific clauses with regard to the inventive mission, according to the informative model below.
Art….
(1) The employee commits to the employer to achieve the goal of "....." representing a patentable invention under the Patent Law.
(2) The inventive mission will take place in accordance with the draft submitted in the annex to the contract with milestones and deadlines.
(3) The rights and obligations of contracting parties are those provided by the Law no.83 /2014 on employees' inventions and Internal Regulations of the employer.
(4) The employee undertakes: to achieve the target of achieving the contract's objective according to the terms set out in the attached draft and ensure the quality expressed by constructive technical and economic parameters in the annex to this agreement;

a. *To keep the confidentiality of the information received from the employer and of the results of his activity;*
b. *to provide specialized assistance for capitalizing the inventive mission carried out under the contract;*
c. *to ensure the training of the staff included in the inventive implementation of the results of the mission carried out under the contract;*
d. *to develop a feasibility study of the solutions and propose it to the employer for approval; the study will underpin consumption of material , human and comparative type resources to the performance of the invention transformed into value effects, thus substantiating the comparison, and the efficiency of the proposed solution.*

(5) The employer is obliged:

a. *To provide the necessary information to conduct work throughout the contract;*
b. *to ensure in due time the supply of the material base consisting of materials, access to the use of materials and access to premises;*
c. *to ensure the confidentiality on information received by the employee;*
d. *to fulfill the obligations arising from the recovery program of the invention, shown in the annex to this contract;*
e. *to attend to the reception of the work staggered on phases according to the annex to this contract;*
f. *to ensure the employee's payment according to the annex to this contract.*

Informative models for other type of contracts specific for industrial property domain (licensing / assignment contract, etc.) are shown in ASRO SR 13547-1-4 standard "model of business development through innovation"

RECOMMENDATION:

Choose consultancy and assistance in the negotiation, drafting and reviewing of license/and assignment agreements of industrial property rights.

5.3 Organizational framework

Scope of the law covers inventions created by employees of a legal person, whether public or private law, which can be protected by patent or utility model registration.

It is recommended the development of specific procedures within research development organizations, for determining, in accordance with national and European legislation, the internal rules in the field of registration and obtaining protection for intellectual property assets. These procedures shall establish the principles that underlie the innovation activity, in accordance with the principles of institutional policies and those provided within the national norms in this area.

5.4 Infrastructure to support innovation and technology transfer

Many countries have invested in efforts to create technology transfer entities, such as technology parks and business incubators. These entities aim to improve links between the technology developers and the users by physical proximity, allowing shared access to facilities and equipment, expertise and employees with specific technological competence.

ReNITT network entities

Infrastructure for innovation and technology transfer represents the assembly of entities set up according to the provisions of the Government Decision no. 406/2003 approving the Methodological Norms specific to the establishment, operation, evaluation and accreditation bodies within the innovation and technology transfer, as well as the method to support them in order to capitalize the results of research and technological development.

Types of entities:

1. liaison offices with industry[24];
2. technological information centers[25];
3. technology transfer centers[26];
4. business and technology incubators[27];
5. scientific and technological parks.

Entities within the innovation and technology transfer infrastructure, regardless of ownership, operate on the principles of economic management and financial autonomy and may be organized:

- as legal persons or as company or non-governmental organizations (associations or foundations);
- as unincorporated concerned, as department with financial autonomy within national research development institutes, universities or companies.

All entities receiving the title of "infrastructure entity" represent the National Network for Innovation and Technology Transfer (ReNITT) and have the role to support economic and social development by stimulating innovation and technology transfer by attracting investments for capitalization of results of the research development and innovation activity, and of human resources within the national research development system.

> *ReNITT functions as a point of reference at national level for the main actors in the field of knowledge and technology transfer with the purpose to promote the exchange of information, experiences, methodologies and practices appropriate at national level, to encourage the integration, the specialization and the service marketing innovation of SMEs and to facilitate access to financial resources.*

Qualified person to carry out technology transfer, person who links the supply with the demand, in compliance with the industrial property enforcement, is called **technology broker**.

Technology brokers, are technology transfer agents connect the bidders with the technology users and assist the two parties to adapt the technologies to the current use. In the EU, there are many tech-

[24] is defined as an entity whose main activity consists in establishing, maintaining and expanding links between suppliers research development results and the socio-economic (businesses) environment in order to facilitate the technology transfer.
[25] are organizations that provide technological assistance, such as fundamental research or application, certification or control, the dissemination of technological information, training and advice for groups of companies from the same sector
[26] is defined as an entity of infrastructure whose activity consists in stimulating the innovation and TT, in order to introduce into the economy the research results transformed into products and improved processes and services. CTT are widely spread structures, made in universities, science and technology parks, business incubators, government institutions or regional, local, or stand alone institutions.
[27] is a facility established to help young companies (start-up) during the first months or years (of running). It offers affordable rents, services and joint offices, management training, marketing support and often has access to some form of funding

nology brokers' organizations, such as technology brokers with intense activity, technology advisory centers, information brokers etc. Brokerage activities are conducted within technological business incubators and science parks.

5.5. Basic provisions on intellectual property rights within the research development and innovation contracts

Usually, the research development and innovation projects are initiated by the submission and the approval of a proposal funding proposal from an entity or a consortium of entities, able to provide the research-innovation activity and which, for the funding based on concluded agreement, undertake to achieve the results defined in the approved theme. For this reason, between the entities participating in the consortium as well as between the financier and the consortium should be a clearly defined relationship on:

- confidentiality of information relating to intellectual property rights;
- the structure of the results, the benefit associated with them, including the intellectual property rights that will be obtained.

Information which are or may be the subject of intellectual property rights

The exchange of information with other parties is a necessity and this is why it happens regularly in the joint research projects. In this respect, confidentiality is an important issue for participants in the project, regardless of its nature, from the initiation of such joint activities up to implementation and operation phase.

Confidentiality and non-disclosure agreements are targeted to ensure a person / organization that information that must be disclosed to another person / organization will not be used or disclosed to third parties without the parties' consent.

Confidentiality of information should be considered in the following situations:

- **at the proposal stage**, defining a project proposal requires:
  - **adequate ideas** for research activities in joint projects;
  - **finding suitable partners;**
  - **discussions and exchange of information** between potential partners in the project;
  - **providing written and oral information to third parties** to describe the idea of a project, knowledge that one side he holds before the project, materials submitted for the purpose of examination or defining the target, objectives and tasks of the proposal.

Copyright allows legal protection against illegal copying of works (e.g. project description), the parties must disclose information or specific documents within the (limited) confidentiality clauses for security[28] of technical solutions because, otherwise, information derived from them may be freely used by the other party / other parties.

- **Implementation phases, deployment and exploitation** - participants in a research project[29] must determine the level of confidentiality of technical and scientific information regarding the rights and obligations set out under intellectual property.
- By using[30] and disseminating the results - the confidentiality problem becomes significant in the context of obligation of participants to use and disseminate the research results including intellectual property rights obtained therefore; with reasonable justification, the participants may require their partners not to disclose certain research results or details regarding these results.

In certain circumstances, the participants should have the right to request their partners not to disclose certain research results (e.g. Keeping the research results as a trade secret and afterwards submitting the applications for industrial property protection).

[28] attention!! copyright protects the exact form that expresses the idea of the project, its reformulation shouldn't be a violation of copyright (although they do not exactly reproduce the document, so they do not violate copyright, by taking ideas and concepts might be infringed the rights on a patent or a utility model)

[29] in so far as they are public funds beneficiaries.

[30] as long as by utilization it is understood any method to use the research results in other research or industrial / commercial activity, without requiring necessarily, a disclosure of results, dissemination means the disclosure of research results (foreground) to the public by any appropriate way (i.e. publishing)

- through publication and dissemination activities (conferences, websites, etc.) – it is recommended special precautions for the project activities planned to be published and other activities involving the public disclosure of results (conferences, web sites, etc.).

> - *The most straightforward way to protect an outcome that can be applied to industrial or commercial is a patent; basic condition for its' granting is the novelty and in order to be susceptible for protection, the results under discussion should not be part of the so - called state of the art;*
> - *by disseminating information, novelty could be prejudiced and therefore its patent granting, and keeping the confidentiality of information is essential before requesting and obtaining protection.*

For a uniform approach by the project participants, the internal regulations should be defined, including the confidentiality clauses for the use and dissemination of the results. They can be incorporated into a consortium agreement, signed by all participants, but it can also be defined separately. There should be clauses that set the results exempted from disclosure and the knowledge base that can be used and disseminated.

> - *Participants may define rules for the use of a particular confidentiality agreement, the procedure and the reporting mechanism for negotiating with third parties.*
> - *The period of validity of clauses could be established to cover the initial research that is conducted prior to the project, or to exceed the end of the project, but equally, for example, to protect the participants who withdraw from the project.*

Confidentiality agreements offer guarantee to a person / organization that information or know-how they are preparing to present other persons / organizations will not be disclosed to third parties. They are used by both the inventors and the companies when exchanging business plans, prototypes, innovative products or other confidential information with third parties. Once the recipient has signed a confidentiality agreement, the owner of intellectual property is free from problems related to confidential information.

Basic elements of a confidentiality agreement are:

- **Parties identification** - allow unambiguous identification of the parties relating to the confidentiality clause;
- **statement of reasons** - although optional, it includes what expects each party (holder or recipient of information) from the contract and in case of dispute, it will allow the proper prosecution of the case;
- **definitions** - contains definitions of terms used in the contract; facilitates to clarify the contract and intentions of the parties and resolve any disputes;
- **purpose** - necessary to establish the framework to define methods of dissemination and disclosure (method of transmitting the information, describing the safety procedures that will be analyzed etc);
- **disclosed information** - in some cases, information or know-how that will be subject to the confidentiality obligation are not (or at least not yet) protected by intellectual property rights; in such cases, to allow disclosure of an invention, a know-how, ideas or unprotected concept etc. by third parties could often cancel the owner's effort to obtain such protection.

> *It is necessary to identify the know - how type information covered by the confidentiality agreement.*

Definition of confidential information shall be followed by exceptions to confidentiality - a list of events that can transfer the secrecy into public domain so that the beneficiary is not obliged to comply with the confidentiality agreement.

At least two hypothetical situations could be encountered:

a. **specific disclosure of information**[31] - a reference to the list of information and documents could be envisaged;
b. **full disclosure of information**[32] - it is the case of a medium or long term partnership or as part of a project of research and technological development, where parties may not determine in ad-

[31] information make reference to a specific project (e.g. description of an invention)
[32] information will be revealed gradually in an extended collaboration between the parties (i.e. the duration of the project CTD)

vance information and documents to be disclosed, in which case:

- it is indicated to establish a system[33] of "classified" information which will be later disclosed and at various periods of time, to take advantage of protection offered by confidential contracts;
- clauses regarding the interdiction in achieving duplicates; restriction of access to documents between staff recipient and subcontractors; the obligation to return the original and any copies of documents at the end of collaboration; define several degrees of confidentiality in accordance with the document's sensitivity and planning various ways of protection depending on the category of the document[34];
- **exceptions** - determines the information not covered by the duty of confidentiality (i.e. information that are in, or will enter the public domain, information available to the recipient by a third party in good faith and without breaching the duty of confidentiality, information known to the recipient before the conclusion of the contract; information obtained independently by recipient[35]; information determined by the parties (in writing) that are not subject to confidentiality agreement);
- **use of information** - the parties may define the conditions of cooperation to enable verification of the disclosed information, such as the use for research purposes, technical and commercial assessment of an invention or a product;
- **miscellaneous provisions**, with reference to specific clauses for organizing the exchange of confidential information, security plans, procedures, etc;
- **admissibility to disclose confidential information** – cincludes agreement of the parties regarding persons who have access to information through their appointment or by designating one or more recipients of services, possible subcontractors, subsidiary companies, companies that coordinate more companies and partners (in these cases, might be useful to those people to sign confidentiality clauses);
- benefit **disclaimer** - owner may renounce on claiming damage, resulting from the use of this information or wrong or incomplete data;
- **reservation of intellectual property rights**[36] - to avoid possible ambiguities it can be useful to indicate that no intellectual property right shall be granted to the recipient;
- **duration of the contract** - must be shown either as a fixed date for a period of time (ex. 10 years after the conclusion of privacy) or a limited period (e.g. 5 years starting at any time the project ends);
- **any other clauses**:
  - *damage clause*[37], by introducing a contractual provision which sets the compensating amount that the owner will be able to require if the recipient does not fulfill a particular obligation;
  - *applicable jurisdiction clause*, which requires the appointment of a court in the case of a dispute and the designation of national laws that will apply under the contract;
  - *Confidentiality clause*, if the parties wish that the very existence of the contract remains a secret and accept the obligation that the agreement shall not be disclosed to third parties.

The role of a research project director in the identification, protection and exploitation of intellectual property rights

Based on the correlation between applied research and industrial property, a director of the research project must consider the following:

- the existence in the Partnership Agreement of clear and unambiguous clauses related to whom holds the intellectual property rights that may result from the research results and alongside related to the rights of inventors and / or where appropriate, to the researchers involved in the project;

[33] system makes the recipient be informed about the sensitivity of the document in question and enables it to determine all the documents covered by confidentiality.
[34] for example: - a first degree of confidentiality can be offered for documents relating to the design or business information which could be distributed to the recipient's specific services and / or possible subcontractors; - a second degree of the most sensitive issues (research results, formulas, algorithms, etc.) may prohibit the copy or the total distribution of documents (excepts for the recipient, for example).
[35] such as by the research conducted by an employee or a subcontractor who has access to the information submitted by the holder.
[36] information disclosure does not lead to the offering or approval of legal rights, unless there are provisions that specify it.
[37] Legislation and regulations on these clauses may vary among the Member States of the EU.

- a careful analysis of the state of the art from the patent literature, industrial designs, trademarks, software, etc, and the area in which these rights are protected;
- decision on the form of protection of intellectual property rights resulting from the research;
- applying for protection with *OSIM* that ensures a national protection.
- using consultancy and expertise services done by experts in the field of intellectual property protection (*innovation manager, technology broker, industrial property attorney, lawyers, etc.*), who are able to apply for and pursue appropriate national or international protection;
- adequate evaluation of the research and development results, including by intellectual property rights applied to the technology transfer to productive units from the country and abroad;
- appropriate compensation of those inventors[38] that contributed to the success of the applied research, commensurate with the effort and contribution made in a manner that would motivate further research and improvements.

5.6 Support and development of start-ups and spin-offs

SMEs represent the driving force of innovation and of creating jobs that have the ability to respond flexibly to a highly competitive market, to adapt quickly to structural and cyclical changes in the global economy, contributing to macro-economic stability and growth.

Given the fact that in the research development organizations there are researchers with entrepreneurial spirit who, in addition to research activities, want to launch their own business for capitalization of research results, supportive policy for spin-offs, has to be a priority. Stimulation of spin-offs from the public research organizations or from the organizations of public law is made on the basis of their own regulations that ensure transparency, uniform criteria and non-discriminatory research staff with entrepreneurial skills for:

a. capitalization in the form of products, technologies and services of the results obtained by the research organization within research activity;
b. prospects and entrepreneurial skills development of the research staff;
c. maintenance, development and extension of specialized contacts with emphasis on small and medium enterprises;
d. transferring some research - development activities and best practices from research organizations to the set up SMEs ;
e. transferring knowledge on requirements and market trends and the practical arrangements for the exploitation of research results, from SMEs to research organizations and the diversification of the research activities;
f. orientation of research - development activities towards meeting the immediate needs of the economic operators oriented towards high technology products and products with high added value.

Research development organizations provide the employees, schemes and ways to support the setting up of spin-offs and develop a package of measures in the areas of consulting and cooperation services, and personnel services that shall be used to support the setting up of spin-offs.

Research development organizations will take into account that the activity and the objectives of the spinoff are correlated and complementary to the organization's objectives, that they pursue products/technologies/services and provide marketing and/or their distribution on the market. Also, the organization will make sure that the originators of a spin-off have specific technical knowledge, have entrepreneurial skills and provide spin-off management on commercial principles.

> *Services and products made by spin-offs must be based on the know-how and on the research results developed within research development organization.*

Periodically, the spin-off must submit for information, an activity report, economic-financial documents and planning for the following year. Research organization's management, usually annually, must carry out an assessment of its participation within the spin-off.

[38] in conformitate cu reglementările în vigoare, inclusiv regulamentele interne ale organizaţiei

5.7 Rating of the employees' invention. Book recording mode

Rating of the employees' invention

In order to increase the chances of capitalizing the innovative ideas and accelerate their practical application, there must be a fair system of assessment or a realistic strategy for industrial property management service on employees' inventions.

Immediately after filing the patent or utility model application with OSIM, the employer in association with the inventor, will begin exploring opportunities for capitalization of the invention under patenting or registration as a utility model procedure.

To ensure realistic steps to exploit the invention it is essential that the assessment of the invention is professional. Out of the evaluation procedures multitude, we recommend the following:

- cost method (i.e. historical costs, recreation costs);
- market comparison method (comparison with the prices obtained from the similar transactions of intellectual property)
- current net value method (cash flow updated (DFC) and the method of avoiding payment of royalties (RFR);
- IPScore 2.2[39] (recommended by the European Patent Office).

Rating of the employees' invention should be based on an operational procedure prior established within the institution. The assessment criteria must consider the following aspects:

- economic, commercial and / or social effects that will result from exploitation of the invention by the employer or by the third parties with the employer's consent;
- the extent to which the employer is involved in carrying out the employees' invention, including resources made available by the employer for its achievement;
- creative contribution of the employee inventor.

The remuneration due to the employee inventor for the employees' inventions claimed by the employer shall be established on these criteria.

ÎIn some EU countries, the assessment of an invention is performed by specialized and independent bodies, on the basis of realistic procedures and scientific data, thus, providing a basis for negotiations between the rightful owner of the invention and the potential owner who would be willing to implement that invention.
Currently, in Romania there is no such practice.

Accounting registration[40] of the employees' invention

According to IVSC[41] „Intellectual property is a special class of intangible assets, because, usually, they are protected by law in order not to be used by unauthorized persons. Such examples are, among others: trademarks, copyrights, patents, trade secrets or know-how."

According to MFP[42] Order no. 1802/2014 for approving the Accounting Regulations on the annual individual and consolidated financial statements, *an intangible asset is an identifiable non-monetary asset without physical form*.

Research and development activities are directed mainly towards the development of knowledge. Some intangible assets may be contained in or on physical media such as a compact disc (in the case of computer software), legal documentation (in the case of a license or patent) or on film.

The cost of internally generated intangible assets is the sum of the costs incurred from the date when the intangible asset first met the criteria for recognition as intangible assets. The cost of internally generated intangible assets comprises all the directly attributable costs, necessary to create, produce and prepare that asset, in order to be able of operating in the manner intended by management. E-

[39] www.osim.ro; www.ip4inno.eu
[40] At the institution level, accounting registration of the employees' invention is performed according to the institution's accounting policies in accordance with the Accounting Law no. 82/1991, as republished, and OMFP1802 / 2014 regarding the approval of accounting regulations regarding consolidated financial statements
[41] International Valuation Standards, the seventh edition, 2005, published by ENAR, Bucharest, 2005
[42] entered into force on 01.01.2015, issued by the Ministry of Finance published in the Official Gazette no. 963 of 30 December 2014

xamples of directly attributable costs are:

- costs with materials and services, used or consumed in generating the intangible asset;
- costs with the staff arising from generating the intangible asset;
- fees to register a legal right;
- patents and licenses depreciation that are used to generate the intangible asset.

Concessions, patents, licenses, trademarks, similar rights and assets representing contribution, that were purchased or acquired in other ways, are recorded in accounts of intangible assets at acquisition cost or contribution value, as applicable. Patents, licenses, trademarks, rights and other assets are amortized over the expected duration of their use by the entity holding them.

In accounting, bookkeeping of the concessions recognized as intangible assets, patents, licenses, trademarks and other similar rights and assets contribution, purchased or acquired by other ways, is kept in account 205 "*Concessions, patents, licenses, trademarks, rights and similar activities*." In the debit of account 205 "Concessions, patents, licenses, trademarks, similar rights and assets" are recorded:

- patents, licenses, trademarks and other similar values acquired, representing contributions in kind received as government subsidies or free of charge, as well as the findings plus inventory (404, 456, 475);
- patents, licenses, trademarks and other similar values acquired from related parties or associates and jointly controlled entities (451, 453);
- the amount of the received concessions (167);
- intangible of the nature of development costs, patents and licenses (203).

In the credit of account 205 "Concessions, patents, licenses, trademarks, similar rights and assets" are recorded:

- unamortized value of concessions, patents, licenses, trademarks and other similar amounts taken out of evidence (658)
- the amortization of concessions, patents, licenses, trademarks and other similar values (280);
- the value of patents, licenses and other similar rights and assets pledged as capital contribution of other entities, in exchange for acquiring of holdings in their capital (261, 262, 263, 265).

Account balance represents concessions recognized as intangible assets, patents, licenses, trademarks and other similar rights and available assets.

The capitalization of the results of a research development activity conducted under service obligations (employees' invention) is presented in **Annex 7**. Based on the assessment results, will begin taking steps for one of the forms of capitalization convenient to the holder of the invention. These steps must be continuous in order to bring the invention from TRL 1-2 to at least TRL 5-6. (TRL - Technology Readiness Level).

It is important that the efforts to capitalize give results within maximum **24 months** ("24 months" rule), during which, besides the preliminary assessment, there will also be accessible a search report with an opinion on patentability (OSIM - 8 months) or a Report of International Assessment (ISA PCT procedure in 16 months). If these steps do not work, and these Reports are not favorable, the owner will decide to abandon patenting procedure or its continuation only in special cases that could justify expenses to follow with examination and certification fees, and which will become prohibitive especially in the international patenting phase.

Depending on the economic interests of the holder, within 12 months of registration filing with OSIM, he may decide to extend the patenting abroad (EPO or PCT). Also, the holder may choose other forms of capitalization in the maturity level 3-4 (TRL3-4): publishing / communications of technical solution, the envelope, achievement of an experimental model+experiments, assignment / licensing to industry, setting up of spin-off (start-up).

On the basis of the assessment, there will be made steps to one of the forms of capitalization convenient to the holder of the patent or registered utility model protecting that employees' invention. These

steps must be continuous and persevering to bring the invention from TRL 1-2 to at least TRL 5-6.
Solutions to exploit the employees' invention:

1. own application;
2. assignment;
3. licensing;
4. spin-off;
5. image, scientific prestige;
6. competitive capacity.

In universities and research institutions, where the interest of academics and researchers is directed to a capitalization by publishing, it is desirable *to seek the publication of the patent application invention within 4 months*, which allows a simultaneous publication - which may begin immediately after the registration - of the CBI with the technical solution (the presentation from CBI is not appropriate for the elaboration of a legal article on the same topic, because they are formally different).

Last stage of maturity 5-6 (TRL5-6) is the successful invention, materialized as a patent, the setting up of spin-offs, and the implementation in production, assigning and getting royalties.

6.1 General principles

Transposition of the benefits of intellectual property brought by employees' inventions implies a system of remuneration, compensation and distribution of benefits that result from commercial exploitation.

According to *Law no.83/2014*, to legislative documents of other European countries and literature on employees' inventions, one can distinguish three general principles underlying the benefits of intellectual property:

- the employee inventor is entitled to a compensation / remuneration determined by the employees' inventions provided by Law 83/2014, art. 3 para. (1) b) which were claimed by the employer;
- the employer may define by specific provisions, criteria for compensation / remuneration;
- for inventions referred to in Law no. 83/2014, art. 3 para. (1) let. b) and claimed by employer, the employee inventor is entitled to a percentage share of the amount of income realized by the employer who applied the invention.

The amount of remuneration and the method of payment thereof may be stipulated in the individual employment contract under chapter "Inventive Mission".

The employer sets the criteria for the remuneration taking into account the economic, commercial and / or social effects arising from the exploitation of the employees' invention, either directly by the employer or by another applicant (license, assignment) agreed by the employer, as well as the evaluation / measurement of the contribution of the employee inventor.

In a situation in which initial conditions for establishing the level of remuneration changes, both employer and employee inventor may renegotiate this level.

The system of compensation and distribution of benefits resulted from the exploitation of employees' invention is given by all the material revenues and benefits determined directly or indirectly by the employment quality and the degree of fulfillment of inventive mission. This system is essential for motivating employees to achieve the performance conditions.

General scheme of remuneration, compensation system is shown in Figure 2.

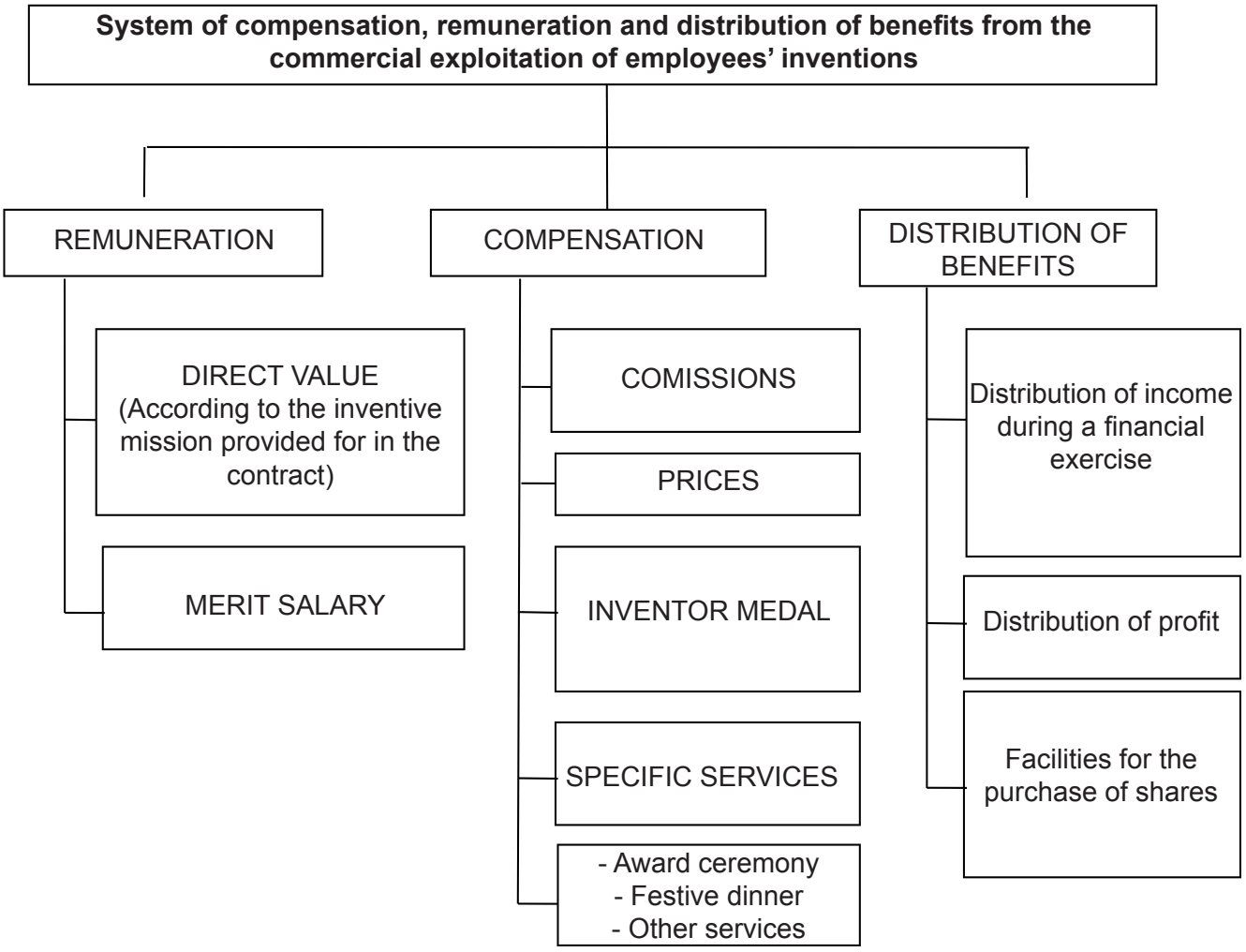

Figure 2-General scheme of remuneration, compensation and distribution of benefits system

According to the Code of Practice for universities and other public research organizations concerning the management of intellectual property in knowledge transfer proposed by the European Commission[43], one of the main principles of the intellectual property is "*Providing incentives to ensure that all relevant staff plays an active role in the implementation of intellectual property policy. Such incentives should not be only financial, but should also promote the career progression, by evaluation procedures and academic criteria"*.

6.2 Guidelines

According to Article 6, the employees' inventions provided in Art. 3, paragraph 1, letter (b) which were claimed by the employer, the employee inventor is entitled to a remuneration determined by the employer, as provided in Art. 7. The law specifies that when the invention belongs entirely to the employer, be the possibility to remunerate the inventor.

Existence of remuneration can lead to increased interest in research and innovation. Thus, a series of guidelines on applying these principles, drawn from the experience of other countries (**Annex 8.1**) may be an example of good practice for employers in Romania.

[43] COMMISSION RECOMMENDATION on the management of intellectual property in knowledge transfer activities and Code of Practice for universities and other public research organisations, http://ec.europa.eu/invest-in-research/pdf/ip_recommendation_en.pdf

According to the Code of Practice for the management of intellectual property in knowledge transfer, proposed by the European Commission, public research organizations need to monitor the protection of intellectual property and knowledge transfer activities and related achievements, and publish regularly the results of the monitoring. The research results of public research organization, any expertise and related intellectual property rights should be more visible to the private sector in order to promote their exploitation.

6.3 Criteria for the determination of remuneration

According to Art. 7 of *Law 83/2014*, the employer defines by specific provisions within their internal regulations, the criteria for determining the said remuneration. In the absence of specific provisions, the employer is considering, depending on each case, one or more of the following criteria:

- the economic, commercial and / or social effects arising from the exploitation of the invention by the employer or by third parties with the employer's consent;
- the extent to which the employer is involved in carrying out the employees' invention, including resources made available by the employer for its achievement;
- the creative contribution of the employee inventor when the invention was created by a plurality of inventors.

Given that this law is not sufficiently explicit on these criteria; the manual presents a series of experiences of other countries.

In the United Kingdom, the criteria for determining remuneration are[44]:

- the duties of the employee, the employee's remuneration and other benefits which the employee has acquired during his employment or for elaborating the invention;
- the efforts and the skills which employees dedicated to achieve the invention;
- the efforts invested by co-inventors and other personnel;
- employer's contribution, such as providing:
  - advice;
  - facilities;
  - opportunities;
  - competences and administrative and commercial skills;
  - any other assistance.

A key factor in determining compensation is the relative degree of risk accepted by the employee for the project. The inventors from universities practice the equivalent payment of approximately one third of the revenue obtained from exploitation.

Among factors that may increase "fair share" could be included:

- creation of a completely new product and a source of income for employer without a substantial contribution from the employer;
- the fact that the employee plays a significant role in developing the market, that it grants a license for his invention or that he sells it in other forms.

"Fair shares" to be grants in future cases are difficult to estimate, given the complexity of the current approach.

In the Netherlands, as in Britain, additional compensation assessment involves several factors, such as:

- function and the position of the employee within the employer's organization;
- employee's remuneration and other terms of employment;
- the financial nature and the significance of the invention;
- the contribution degree of the employee to achieve the invention;
- role of other employees in carrying out the invention;
- extent to which the employer:
  - provided necessary facilities and research opportunities;
  - contributed to exploit the invention.

[44] Employees' rights to compensation for inventions - a European perspective, Morag Peberdy and Alain Strowel, Covington & Burling LLP *, Life Science 2009

In Germany, there are four important factors for calculating compensation:

- veconomic value of the invention;
- allocation of the task, specifically if the task which leads to the creation of invention was the initiative of the employee or the company;
- solving task, i.e. if the employee has solved this task in terms of job-specific knowledge, labor and company's specific knowledge, and with the company's support;
- employee's position in the company.

Ministerial guidelines on compensation of employees for inventions in the private sector provide different methods of determining the economic value of the invention; the most frequently used being the license analogy. If the turnover exceeds EUR 1.5 million, ministerial guidelines provide for a gradual reduction from 10% to 80% of the hypothetical license fee.

In France, "fair compensation" ("right price") is based on:

- economic value of the invention;
- Employee contribution levels to achieve the invention;
- any other relevant circumstances relating to the invention.

6.4 Methods for the determination of remuneration

The only clarification of the law on the method for determination of remuneration, relates to employees' inventions made by employers' employees - public law entities, whose objects of activities are the research and development, claimed by the employer under Law or under a contract between the parties and used by the employer (Article 11). Under this clarification, the employee-inventor is entitled to a percentage of the amount of income (net) made by the employer while applying the inventions. Law no.83/2014 provides in article 11, par. 2 that said percentage shall not be less than 30%. Provided share of 30% is inspired by a practice called *"a third for all" - i.e. 1/3 for university, 1/3 for the inventor's department, 1/3 for inventor"*, frequently used in universities and research institutes with noticeable results in the process of capitalization and marketing of inventions.

The share of 30% is commonly used and not binding. One can be used varying percentages, depending on income and timing of business growth related to each invention. There are situations when, within a short time as from the transfer, the remuneration being relatively large, covering for the employer, with normal profit, the percentage for the inventor to rise even to 80% (80% inventor - 20% university). In this way the innovation is stimulated.

In public institutions, income consists of royalties arising from divestiture, licensing to industrial partners or creating spin-offs.

Income can be obtained from exploitation of patents within experimental stations that have certain INCD pilot plants, in the activity of micro production and services.

Income from royalties of public research institutions is not relevant for the invention because the net profit is the only one that can be really redistributed. Net profit may decrease considerably or insignificantly, depending on the expenditure of the public made to exploit the invention. These take into account the costs with patenting fees, the documentation of execution of the invention, the costs with the experimentation of an inventive concept (TRL1 - TRL2), costs of internal evaluation procedures, marketing costs, possible costs of a prototype (TRL 2 - TRL 4) . Thus, what public institution may redistribute under usage "1/3 for all is in fact the net profit. On the other hand, **income** from royalties of public research institutions is only a part of the net profit of the industrial partner that applies and exploits that invention. As a part of the profit is reinvested (otherwise organization stagnates), a part returns to shareholders or members, therefore, the royalties granted to public research institutions that transferred invention by assignment or license, lies usually between 5 and 25% of profit, depending of the real value of invention on the market, the hiring and risks taken by the applicant and represents the result of negotiations.

In some cases, to avoid reporting royalty payments to profit, it is taken into consideration the estimated

turnover for invention. In such cases, the value of royalties lies usually between 1 and 5%.

Furthermore, it is provided that, at the request of the inventor, a higher education institution may grant the inventor at no costs, the right to exploit the invention in his field of teaching and research activity, based on a non-exclusive license agreement, even if the inventor is not an employee.

> *This provision might envisage the setting up of spin-offs. It would have been helpful if this was explicitly mentioned in the law. Moreover, as recommended by the Code of Practice for the management of intellectual property in knowledge transfer, the public research organizations need to develop and publish a policy for setting up of spin-offs, allowing encouragement of research staff to engage in entrepreneurial activity and clarifying long-term relations between spin-offs and public research organizations.*

In the case of National Institutes for Research and Development, the system of remuneration is regulated by Government Ordinance 57/2002 with subsequent amendments and supplements; Art.25 mentions how the accounting profit is distributed. According to this article, **up to 20% of accounting profit may be used for staff incentives**.

> *According to the principles of knowledge transfer specified in the Code of Practice on the management of intellectual property of the European Commission, universities and research institutes should establish clear rules on the allocation of financial benefits obtained from the transfer of knowledge, between organizations, departments and inventors.*

Since the law does not cover private law legal entities and does not presents to public law legal entities methods of determining the percentage for the inventor of the amount of income realized by the employer in **Annex 8.2** presents a number of practices in the EU and the US.

6.5 European perspective on compensation system for employees' inventions

CMS[45], Europe's largest legal services firm, has released the results of its second annual Employee Inventor Rewards Survey, an analysis of employee[46], reward schemes and policies in Europe, for exploitation and compensation of the employees' inventions. At this study participated European companies, as well as their departments.

One of the key questions asked by this survey addressed the positive and negative consequences of existing contractual arrangements between employers and employed inventors. In some cases, these compensation systems don't encourage the personnel to engage in independent research and development. One third of the companies surveyed indicated that they had been involved in disputes with employees concerning the compensations for inventions (compared with 40% in last year's survey), indicating that the policies in force do not function as settlement for the disputes for which they were developed.

Of the companies surveyed, 78% indicated that they were inventions under the rules of the contract (for work). CMS believes this is the best practice for companies involved in research and development. But, surprisingly, the study indicated that several multinational companies do not have schemes to compensation inventors employees.

> *The survey highlights the importance that cultural factors can play in the ways in which employees are rewarded. Company and regional cultural attitudes can determine whether employees regard monetary or non-monetary awards, for example a commemorative plaque or celebratory dinner, more highly.*

Most respondents offer voluntary compensations to the employees, in order to stimulate the whole staff to innovate for their employer. Most companies also offer non-financial compensations such as invention plaques and ceremonies. The most common annual costs related to compensations for inventors are between € 5,000 and € 25,000, while 18% of companies spend 100,000 € for all employees who were engaged in inventing activities.

There are various stages at which companies may choose to reward employees. As was found in last year's survey, most companies (92%) offer a reward upon the filing of patent applications, while 68% offer rewards on the granting of the patent. 16% of respondents offered inventor rewards of over

[45] http://www.cmslegal.com/Pages/default.aspx
[46] http://www.cms-hs.com/PR_CMS_Employee_Inventor_Awards_Survey_04_08_2014_en

€1,000 at patent filing, the most lucrative stage for inventors, a reduction on the 35% of respondents offering this level of reward as concluded in the 2013 CMS survey. €500-€1,000 was the most common monetary reward across all stages.

Of the surveyed companies, 44% offer compensations when the invention is used in the business. The amount of remuneration at this stage can sometimes be linked directly to the relevant percentage of turnover. The most important source of "raw material" for any Patent Department is the community of inventors and therefore increasing the quantity and quality of ideas coming from this community should be the top priority for any department of this kind. Someone needs to invent!

Traditionally, inventions derived from research and development, but the community of inventors is much higher and includes people from the entire company.

RECOMMENDATION:

Department of patents must be familiar and understand the community of inventors, it needs to understand how they see the patenting and their opinions in this regard, as it allows the launch or modification of activities in order to achieve the desired result of obtaining the inventions . The factors that hinder the objectives and the patent targets must be treated and controlled.

7 Final recommendations

Recommendation 1: Although by its nature, this Best practices guide has not an imperative character because it cannot add to *Law no.83/2014*, its' application to all persons to whom it is addressed as defined in the preamble of & 1, such as "employers, employee inventors, investors, regulators and law institutions", is essential for the implementation in Romania of a real policy to stimulate employees' inventions and their unitary treatment, as an essential step in the development of technological innovation. Only in this way, it might be considered defining conclusions on possible amendments of the *Law no.83/2014* and particularly the definition and development of a new active policy of implementation of the legislative, administrative and economic framework in the area of employees' inventions.

Recommendation 2: The only clarification regarding the method of determining the remuneration relates to employees' inventions made by employees of employers - public law legal entities, which have as objects of activity the research and development, claimed by the employer according to the Law or according to a contract between the parties and used by the employer (Article 11). Under this clarification, the employee-inventor is entitled to a percentage of the amount of income realized by the employer while applying these inventions. The law establishes in Art.11 par. 2, that percentage shall not be less than 30%. In those circumstances, should be analyzed possibility of reviewing or supplementing this article of the law because:

- fee income from public research institutions is not relevant for the inventor because what really can be redistributed is actually net profit. Net profit may drop considerably or insignificantly depending on the expenditure of the public institution that exploits the invention. These take into account the costs of patenting fees, execution documentation of the invention, costs with experimentation of inventive concept, costs of the internal evaluation procedures, marketing costs, and possible costs of the prototype. Therefore, what public institution may redistribute, under usage "1/3 for all" is actually net profit;
- National Institute for Research and Development remuneration scheme is regulated by Government Ordinance 57/2002 amended and supplemented, Art.25 mentioning how to distribute the net profit. According to this article, up to 20% of the accounting profit may be used for staff incentives.

Recommendation 3: According to art. 7 of Law no. 83/2014, the employer defines by specific provisions of its internal regulations, criteria for determining remuneration. In the absence of specific provisions, the employer is considering, depending on each case, one or more of the following criteria:

a. The economic, commercial and / or social effects arising from the exploitation by the employer or by third parties with the employer's consent;
b. the extent to which the employer is involved in carrying out the employees' invention, including resources made available by the employer for its achievement;
c. the creative contribution of the employee inventor, where the invention was created by a plurality of inventors.

It is recommended to explain these criteria and how they can be implemented in development research organizations (public or private). It is also recommended to define criteria and methods for assessing their unitary implementation within organizations, in order to define a synergic, consistent and stimulating approach on national level, of a compensation policy for created employees' inventions. Prerequisite is that without a stimulating framework for compensating Romanian inventors in legal situations where companies have or claim the employees' inventions, strategic orientation proposed by *Law no.83/2014* will not be achieved or will achieve in a small measure the stated purpose of stimulating innovation in Romania.

Recommendation 4: assessment is made by the employer based on his own procedures, method IPScore2.2 being recommended as basic support.

Recommendation 5**:** The employer must have the necessary time to decide the classification of invention not only upon the information made by the inventor, but also on the basis of its internal assessment and even on the basis of the description presented in the patent application made by the inventor assisted by the industrial property attorney.

Recommendation 6: Since the filing of the patent or utility model application with OSIM, the employer, together with the employee inventor, must make joint efforts for the implementation of that invention. If after 24 months of procedural steps, the results are not conclusive, it is raised the question, at least for a public institution or an institution of public law (e.g. university, INCD) if the patenting procedures should be continued or not.

Recommendation 7: It is not advisable to maintain a portfolio of unimplemented or unused patents in a non-productive unit, as it leads to considerable expenditure of public funds fees.

Recommendation 8: In order to deepen and extend specific elements for the implementation of employees' inventions in Romania, it is useful to develop specific procedures for universities and INCD, in order to integrate more pronounced and in practical manner, experience of similar systems and units from developed EU countries.

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Annex 1

Principles

The **Best Practices Manual** is based on three important sets of principles:

- **Principles of internal policy of Intellectual Property** (hereinafter designated by letters "IP") contain all the principles that should be applied by the public research organizations, in order to effectively manage the issues related to the intellectual property resulting from their research and development activities, their own or in collaboration.
- **Principles of** knowledge **transfer policy** (hereinafter designated by the letters "TC") complement the policy principles of intellectual property and treat more effectively the transfer and effective exploitation of intellectual property, whether or not protected by intellectual property rights.
- **Principles of collaborative and based on contract research**, applicable to all types of research activities conducted or funded jointly by a public organization and by the private sector, including in particular collaborative research (where all parties undertake research tasks) and research based on contract (where activity research is subcontracted to a private company by a public organization research).

Thus, a research development organization (**OCD**) should represent:

1. OCD, an environment open to collaboration with industry:

a) research activities within OCD, including research funded by industry, pursue the free exchange of ideas and the dissemination of research results within informal meetings, and their impact on beneficiary;
b) The OCD shall impose the necessary measures of appropriate rules, to ensure that the commercial pressures from industry do not impede the communication on the progress or the conclusions of research results, to avoid an accentuation of the competitive and contradictory relations among the OCD staff;
c) OCD encourages the financial interest of economic operator which ensures the economic research funding, if he shows that interest and if it converges to that of the OCD.

2. OCD, a permissive framework to the publication and dissemination of results of research, development and innovation (CDI):

a) freedom to publish and disseminate the results of the CDI is an important criterion in carrying out a research/educational project, an opportunity in transferring knowledge to industry and society;
b) freedom (the right) to publish results of CDI doesn't represent the obligation of the OCD staff to publish, with the exception of some internal rules approved by the OCD;
c) each employee of OCD by signing individual employment contract (CIM) accepts the obligation to exercise self-discipline and critical analysis while using, expanding and transmitting the knowledge acquired in OCD, from a scientific point of view;
d) according to the internal regulations of OCD, it provides for the right to take the final decision regarding the results that are to be published or on what can be published;
e) the management of OCD, after analyzing the capitalization opportunities of the results within CDI activities, may require a short delay (approximately between 30-90 days) of publication, in order to analyze and review the contents of the presentation results in the form of an article, to ensure that is not disclosed information related to intellectual property or which may be a potential source of patentable inventions;
f) OCD staff involvement in professional activities outside the organization, empowering each member to ensure that such activities do not interfere with carrying out tasks within the organization, especially with its policy on employees' inventions and other intellectual property rights, but with the presentation of an annual report on them;
g) internal regulations of OCD must protect academic freedom of young researchers (MA, PhD) to choose research topics for educational/training purposes, avoiding the need to advance the investigation of direct interest to a particular company, such as to protect the "premature" transmission of the results of research activities.

3. OCD, a Code of conduct for researchers and professors:

a) senior professors and researchers foster a conducive and open environment for research and education activities within OCD, in accordance with the research and educational standards accepted by the organization;
b) senior professors and researchers act with respect and understanding assuming their role of adviser and mentor for their new colleagues and make reasonable efforts to promote an honest academic conduct that reflects the merits and the contribution of each member of OCD;
c) OCD, through internal regulations, must not allow/encourage professional activities outside its' interests, that may adversely affect employees' responsibilities.

4. OCD, a permissive framework for the staff employed in cooperation with the business environment:

a) OCD employees can be involved in CDI activities at the request and with the support of business environment, based on research contracts financed from public funds, whose property rights belong proportionally to the participants;
b) employees may be involved in research contracts held by companies, these retaining their ownership on the research results;
c) in the case of companies that have research development department, employees work on research themes arising from the needs of firms and based on employees' competence, and thus their compensation will be determined based on factors other than those stipulated by the law of employees' inventions, taking into account that employees provide a paid employment for carrying out the invention deriving from a social order.

5. OCD, a code of professional ethics and conflicts of interest avoidance:

a) employees OCD should avoid the conflict of interest[1] respecting the confidentiality of employment, rights, and duties of the OCD;
b) the OCD management by its internal regulations, is a guarantor of observing the framework that avoids the conflicts of interest with emphasis on the integrity of staff, without unjustifiably introducing restrictive provisions, but it must create the administrative framework for consultation, in order for a member of OCD to be able to consult on some possible situation interpreted as a conflict of interest;
c) organizational structures of OCD cannot engage themselves in activities that may put them in a possible conflict of interest with duties or official activities of OCD.

6. OCD, a copyright code:

a) copyright for scientific or artistic works[2] or works that are prepared by independent academic effort and not as part of a mission from OCD, belong to the author;
b) OCD employees and other people who use the funds or other resources/logistics of OCD, should adhere to the policy regarding copyright;
c) copyright arising under the OCD, following the work of the paid staff or using its resources, belong to OCD;
d) copyright which resulted from a contract with an economic operator normally belongs to OCD or a trader, if it is so provided by the financing agreement.

7. OCD, an employees' inventions code:

a) OCD recognize the need to encourage the practical application of research results for ensuring public benefit;
b) OCD develops an active program for identifying and patenting the inventions with utilization potential and for licensing or selling them to companies that have the ability to develop, produce and commercialize them;
c) OCD employees must present all inventions (potentially patentable) designed or developed while they are under employment contract, which are connected with the area of activity where they exercise their duties, meaning that all employees and all other people using OCD funds or facilities, must sign agreements by which they accept the industrial property policy of the organization;
d) OCD, by internal regulation, manage also inventions resulted from activities of consulting, without the use of OCD funds or facilities;

[1] A situation in which an employee has the opportunity to influence a decision which could lead to a personal financial advantage or which involves other official obligations conflicting with OCD.
[2] Academic papers which include, but are not limited to, books, articles, conferences and software, resulting in independent academic study or artistic works such as novels, videos and musical compositions.

e) OCD seeks to strike a balance between several objectives: 1) to facilitate the prompt development of industrially applicable inventions; 2) prevention of the misuse of public funds for private gain; 3) maintaining good relations with industry to make better use of research opportunities; 4) obtain appropriate income to OCD from licensing;
f) IPR Policy provides: 1) mandatory information of specialized departments of OCD on potentially patentable inventions; 2) assignment of rights to inventions made during employment or use of funds or research facilities; 3) exchange of rights to inventors; 4) capitalization of DPI by industry for the public benefit;
g) OCD policy on licensing and use of technologies resulted from the research activity should pursue the following objectives:
   - ✓ establish a mechanism for diffusion and dissemination of research results and development for the benefit of society;
   - ✓ establish a mechanism for commercialization of research results and setting negotiating terms, in financial terms, for economic operators;
h) terms and conditions for licensing agreements should take into account the nature of technology, the development stage of the invention, the effect on research areas that are a priority for OCD, the social and market impact, royalty payments etc., without interfering the principle of dissemination of research results;
i) OCD internal regulations specify the regime of tangible assets[3] that may result from the research activities; they may confer a commercial advantage to the research result, both by using as demonstrative means, and by the possibility of granting marketing rights and other intangible assets[4];
j) The OCD may allow conclusion of agreements for commercialization of research results as long as there are no restrictions on the publication and dissemination of research results, in which case there shall be taken necessary steps to protect them, whenever is possible.

8. OCD, a stimulating framework for the development of start-ups and spin-offs:

a) OCD shall establish, by internal regulations, if it is appropriate for the organization, the implementation of a policy of direct investments in companies (start-up or spin-off), when such investment is linked to the commercial development of new ideas created or advanced through their own research departments;
b) OCD policy to encourage start-ups is also considering the approach in the context ensuring compatibility with the policy of developing relations with industry, which provides a part of research funding;
c) OCD should avoid situations where, by supporting researchers, and participating in equity organization, in activity of setting up/developing of a start-up, be not considered as a favor granted to them, a fact that could be inconsistent with the role of supporting competition and of allocating institutional resources in an impartial manner;
d) OCD, by policies to encourage start-ups, shall avoid the occurrence of situations conflictual relationships with those companies that finance research at the OCD and, thus, regard the start-up as a possible competitor.

9. OCD, a facility for research activity:

a) OCD infrastructure and know-how are used for activities that correspond with the mission, goals and objectives of its development, according to the guidelines defining the areas of research activities;
b) internal regulations of OCD govern the way it provides research/training services (or others) to economic operators or individuals (especially inventors), the way of using the devices/ equipment/research facilities;
c) OCD defines (limits) situations where it doesn't allow the use of facilities (infrastructure research, logistics) by the industry, based on a service contract, if it was procured under contracts with public financing, that are subject to competition rules;
d) by internal regulations, OCD determines the way and framework of their participation in experiments, testing and validation of solutions and it is limited to activities that expand scientific or technical knowledge to improve the educational process;

[3] Equipment, chemical compounds, biological materials, electrical charts and diagrams; drawings and project execution etc.
[4] Detailed descriptions or compilations of laboratory procedures, methods of analysis or other such "know-how".

e) OCD, by internal regulations shall not encourage the development of routine activities[5] in areas of activities that require the use of premises and research equipment for tests, studies or purely commercial experiments, except when it is demonstrated that the facilities for such services don't exist elsewhere;
f) OCD allocates resources and facilities for activities that come to support the research and training activities, leading to the progress of knowledge;
g) OCD, through internal regulations, should avoid the use of public funds for ensuring the "private" income;
h) OCD contracts with economic operators should provide a value that might allow a full recovery of direct and indirect costs on the market (of competitors on the market of these services);
i) by internal regulations, OCD should consider distinctly, the use of funds for research, depending on their source (sponsorship, subsidies, grants etc).

[5] Analysis of minerals, assessment of the properties of materials, analysis of machinery and equipment's' characteristics and performances, analysis of soil, water, pesticides, insecticides, fertilizers, fuels, statistical analysis and calculations

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Glossary of terms and abbreviations

Glossary of terms:

For a complete understanding of this Manual on good practices and of the applicable legislation in the field of employees' inventions, the terms and expressions as used shall have the following meaning:

a) **employer**- any natural person who carries out a paid activity, based on an individual employment contract, for and under the authority of a private or public or law legal entity (Law no. 83/2014 on employees' inventions);
b) **inventor**- the person who created the invention (Law no 64/1991);
c) **research - development activity** - fundamental research, applicative research and technology development. The research development activity is integral part of the innovation processes (Ordinance no 57/2002 on scientific research and technological development);
d) **fundamental research** - the activity mainly developed to get new knowledge on phenomena and processes, and also to formulate and verify hypothesis, conceptual models and theories (Ordinance no 57/2002 on scientific research and technological development);
e) **applicative research** - the activity mainly targeted to the use of the technical knowledge for improvement or achievement of new products, technologies and services (Ordinance no 57/2002 on scientific research and technological development);
f) **technological development** - built up from the activities of system engineering and technological engineering, by which it is achieved the application and the transfer of the research results towards economic undertakings, as well as on social plan, aiming at introducing and materialising new technologies, products, systems and services, and improving of the existing ones, which comprises:
   - ✓ **precompetitive research** as activity oriented towards the transformation of the research results into plans, schemes or documentations for new products, processes or services, including the fabrication of the experimental model or of the first prototype, which cannot be used for commercial purposes;
   - ✓ **competitive research** as activity oriented towards the transformation of the research results into products, processes or services which can directly answer to the market demand, including also the activities of system's engineering, of technological engineering and design (Ordinance no 57/2002 on scientific research and technological development);
g) **innovation** - the activity oriented towards the generation, assimilation and capitalisation of the research development results on economic and social sphere;
h) **capitalisation** - the process by which the results of the competitive research come to be used, according to the requirements of the industrial and commercial activity, in social and cultural life (Ordinance no 57/2002 on scientific research and technological development);
i) **dissemination** - the providing of information, experience and good practices, as well as the cooperation for the promoting of innovation, for the support of those aiming to create innovative undertakings and for the support of innovative projects (Ordinance no 57/2002 on scientific research and technological development);
j) **technology transfer** - putting on the economic circulation of specific technologies, devices, equipment and installations resulting from research, in order to obtain new or improved processes, products or services, requested by market or by which it is adopted an innovative behaviour, including the activity of disseminating information, to explain, to transfer knowledge, to advice and to communicate with persons who are not experts in the field about the results of the fundamental, applicative and precompetitive research in such a way to increase the chances to implement such results, subject to the condition to exist a proprietor of the results[1];

[1] Intellectual property in Romania and other EU countries, D. Savescu

k) **competitiveness** - defines the capacity of persons, companies, economies, regions to maintain themselves within the competition performed at national and/or especially international level, and to obtain economic advantages (novelty, quality/price, innovative characteristics, etc.) with a specific business environment;
l) **European patent** - the patent granted by the EPO (European Patent Office) under the European Patent Convention;
m) **international application** - the application for the protection of an invention, filed under the Patent Cooperation Treaty (PCT);
n) **utility model**- new technical invention, which exceeds the framework of mere professional skill and it is susceptible of industrial application; the registration of utility model is in principle requested where a patent of invention couldn't be granted because it does not meet one or more of the patentability conditions provided by the Patent law no. 64/1991 or where, because of the too long patentability procedure or because of the higher costs of the patenting procedure, the applicant prefers to apply for a utility model registration and gives up to get a patent;
o) **patent of invention**- title of protection, granted by the national or regional competent authority (OSIM - in Romania, EPO in Europe), by which the rights in inventions shall be recognised and protected on the territory of Romania;
p) **employer's industrial property attorney-** the natural person, qualified and paid, who acts under the provisions of the Government Ordinance No 66/2000 on organizing and practicing the profession of industrial property attorney, as republished
q) **description**- the canonical form of presentation of the invention in writing
r) **professional representative** - patent attorney who may also undertake representation in proceedings before the State Office for Inventions and Trademarks;
s) **publication**- dissemination of information in a manner accessible to the public;
t) **applicant**- the natural or legal person applying for the grant of a patent;
u) **successor in title**- any legal or natural person to whom either the right to the grant of the patent or the rights arising from the granted patent was transferred;
v) **claim**- that part of the patent specification comprising the subject matter of the requested protection and which contents determine the scope of protection.
w) **patent owner**- the natural or legal person to whom the right conferred by the patent belongs;
x) **unity** – legal person which is legally functioning;
y) **person exploiting the invention**- natural or legal person who legally applies the invention. The person exploiting the invention may be the same person as the patent owner;
z) **patent assignment contract**- the contract by which the patent owner, as assignor, transfers to the assignee, wholly or in part, for a consideration or free, the right on the patent.

Abbreviations:
CDI - Research development innovation
IP - Industrial Property
IPR - Industrial Property Rights
CIM - Individual Employment Contract
CCM - Employment Collective Contract
OCD - Research development Organisation (university, INCD, undertakings, etc.)
SME – Small Medium Enterprise
INCD - National Institute for Research and Development
EU - European Union
EPO - European Patent Office
PCT - Patent Cooperation Treaty
ISA - International Accounting Standard
OSIM - State Office for Inventions and Trademarks
ReNITT - National Network of Innovation and Technology Transfer
MO - Official Gazette of Romania
CPI - industrial property attorney
ST - technical solution
CBI - patent application
TRL - Technology Readiness Level

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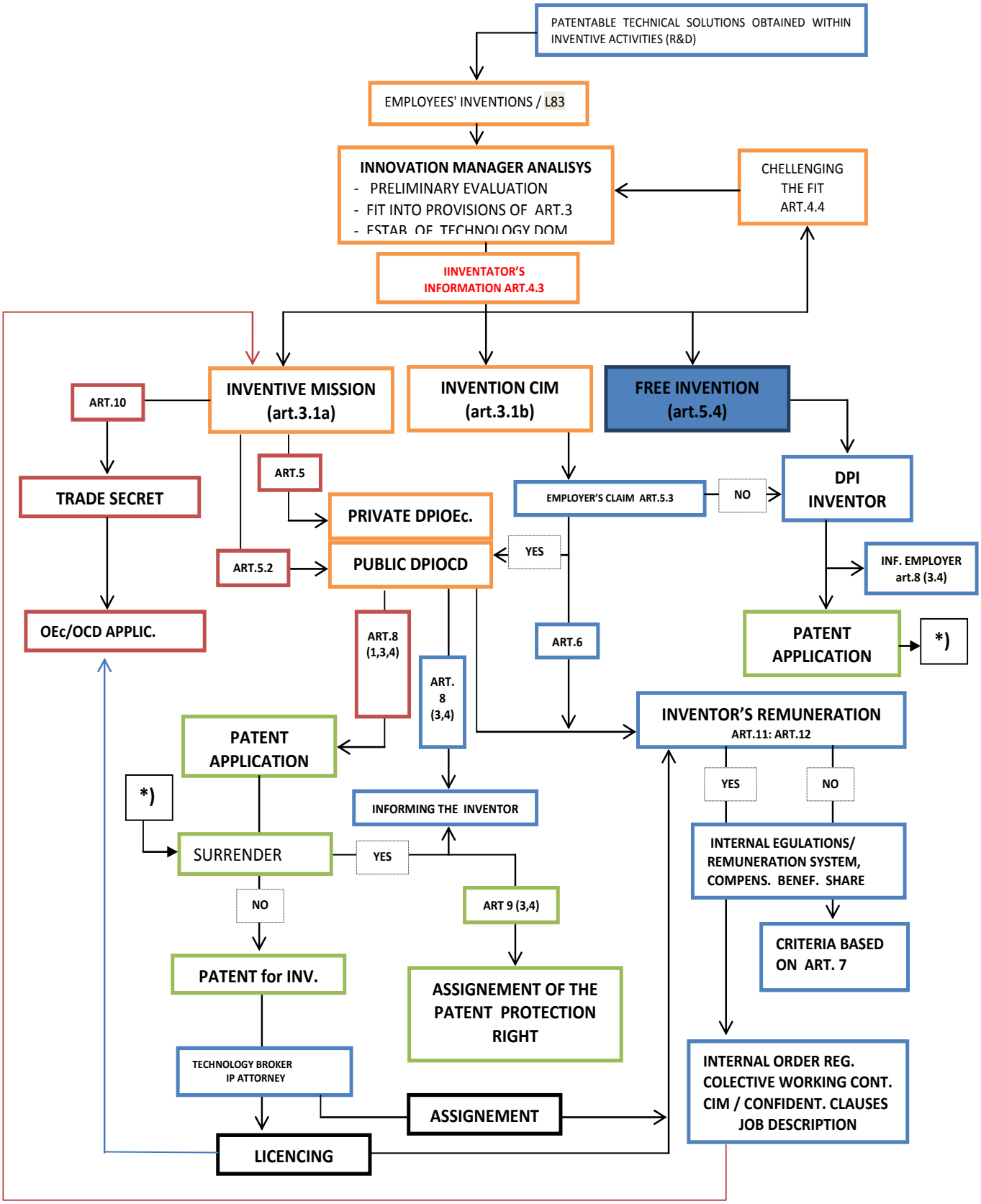
Flowchart of the procedure of an employees'invention in an organisation and the mapping of the processes associated to an employees'invention resulted from an inventive mission



No.	Process	ACTVITIES and RESPONSIBILITIES		Legal background
		EMPLOYER	EMPLOYEE	
1	Identification of the patentable technical solution	- competent to decide whether an invention falls or not in the category of employees' invention; - provides in its Internal regulations and Collective Employment Contracts (CCM) the confidentiality and non-disclosure clauses, and the remuneration criteria - specifies and regulates the right to claim the employees' invention	- identifies the novelty, inventive step and applicability of technical solution; - under obligation to communicate immediately to the employer the status of invention	Law no. 83/2014 Art. 4(1), Art. 4(2)
2	Search and documentary analysis	- provides technical means and information resulted in local institutional process to performed searches on the state of the art- tests on novelty and inventive step criteria; - applies for an OSIM Search report ; - pays the legal fees for the Search report drafting	- identifies all similar inventions within national and international documentary fund, enabling to perform a novelty check and eventually to improve the technical solution	Law no. 83/2014, Art. 3 Law no. 64/1991 as republished in 2014, Art. 23 and Art. 41
3	Improvement of the technical solution	- lends technical and legal assistance by his industrial property attorney; - settles the individual creative contribution, where the employees' invention was created by a group of employees	- identifies methods to improve the technical solution when the search result leads to such outcome	Law no. 83/2014, Art. 8, Art. 9 Art. 10 Law no. 64/1991 as republished in 2014, Art. 13(5)
4	Drawing up the regular filing at OSIM	-draws up the regular national filing, by registration with OSIM of the patent application, claiming the priority right and filing the explanatory drawings; - informs the employee inventor on the patent application; -pledge himself to not disclose/publish the invention; - pays the legal fees due to the drawing up of the regular filing with OSIM; - settles the confidentiality and non-disclosure clauses, in relation with individual employment contract and with the percentage due to employee, in the case of invention capitalisation	- pledge himself to not disclose/publish the invention, without written agreement of the employer	Law no. 83/2014 Art. 8, Art. 9, Art. 10, Law no. 64/1991 as republished in 2014 Art. 13(5)
5	Preliminary valuation with a view to capitalisation	- develops with the employee inventor the invention capitalisation opportunities;	- lends assistance for invention capitalisation and grant of the protection	Law no. 83/2014 Art. 9, Art. 11
6	Employees' invention capitalisation by implementation and technology transfer	- settles the value of the patented employees' invention; - settles the percentage of the net income due to inventor resulting from the invention's capitalisation; - settles the confidentiality framework of the know-how, which the employee inventor should comply with.	- has the right to be recognised as the invention's author; - has the right to get the percentage of the net income due to him, resulting from the invention's capitalisation	Law no. 83/2014 Art. 11(2),
7	Technology watch	- performs periodic evaluations to determine the concrete results obtained by the employees' invention capitalisation; - checks the way the employees' invention is used, as a result of its exploitation on the market, by fabrication, commercialisation, licence agreements; - implements an operational procedure with indicators implying costs and economic results as a result of its capitalisation, in order to identify the economic effects on employer	- lends assistance and consulting, as the case may be, to draw up guidelines and users' manuals; - assistance the implementation, according to particular expertise (confidentiality agreement on know-how information)	Law no. 319/2003 Art. 4, Art. 36 Law no. 83/2014 Art. 10

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Aspects regarding specific regulations of employee's inventions- comparative analysis in Europe

Many life science companies rely on their employees' inventiveness to fuel their research and development efforts and generate patents. The most successful inventions can generate billions of euros of sales annually. In some circumstances, the employees who created the patentable inventions may be entitled to compensation. However, the laws in this area vary significantly across European jurisdictions.

A number of substantial compensation awards have been made recently. For example, the UK Patents Court awarded compensation for the first time in 2009, in the case of *Kelly v GE Healthcare [2009] EWHC 181*. Between them, the two inventors were awarded GB£1.5 million. A former employee of French National Railways (*Société Nationale des Chemins de fer français (SNCF)*) received more than EUR503, 000 from a court of first instance in Paris for inventing a system that allowed SNCF to save EUR14.8 million annually (*X c. Société Nationale des Chemins de Fer Français et Vape Rail International SAS (VRI), Tribunal de grande instance of Paris, 3rd chamber, 1st section, 19 May 2009*).

However, despite companies' potentially significant exposure, there is much uncertainty regarding employees' rights to compensation. The Netherlands, France, Italy, Austria, Portugal, Spain and Hungary include employee inventor compensation provisions in their national patent legislation. Others, such as Germany, Denmark, Finland, Norway and Poland, have enacted specific employee compensation laws. Belgium does not provide a statutory right to compensation, although a right has developed through case law. Irish or Swedish laws, however, do not contain any obligation on employers to compensate employees for employees' inventions.

There are a number of different approaches to compensation. For example, in some countries, the right to compensation is linked to whether the employee is "employed to invent". In others, the right to compensation is the same for any inventions owned by the employer. There are also differences relating to:

- Eligibility for compensation.
- The basis for assessing of the compensation level.
- The time period in which claim for compensation must be brought.
- The frequency of awards.
- The treatment of employees working in the private sector and universities.

Contractual amendments of compensation rights

Employers can seek to alter statutory provisions for compensation through:

- Entering into contractual arrangements with the employee;
- Providing voluntary invention compensation schemes with pre-determined lump sums or royalty payments for any commercialized inventions.

These arrangements are designed to reduce the number of disputes regarding compensation, and provide more financial certainty for employers and employees.

However, the enforceability of contractual arrangements and their ability to override effectively the relevant statutory provisions varies between member states. In some countries, employee compensation can be effectively managed through contractual arrangements with employees.

The issue of employee compensation is important both to inventors and to industry. However, this chapter has demonstrated that the disparities in the laws of different jurisdictions are significant.

At one end, in the UK, claims are rarely granted, but are likely to be significant. At the other, in France, compensation is routine, but typically at a much lower level. Those countries, such as Germany, which assess compensation at the time when the invention was made, typically award lower amounts of compensation than those countries, such as the UK, which calculate compensation after the invention has been exploited. Criticism has been made of a number of national systems, particularly the German and the Dutch, on the basis that existing laws:

- Act as a deterrent in innovative industries.
- May lead to relocation of R&D facilities to countries where compensation is less frequently awarded.

Considerations for potential litigants

- Which national law applies?
- Does the invention belong to the employer or the employee?
- What type of invention is it (for jurisdictions which recognize different invention categories)?
- Has the employee already received compensation under the employment contract or otherwise? If so:
  - ✓ was this expressed to fulfil the entire entitlement to compensation?
  - ✓ has the employer made any other attempts to contract out of, or vary, the statutory provisions?
  - ✓ what is the timing of these arrangements relative to the creation of the invention?
  - ✓ who can bring a claim? Is it only the named inventor(s), those who have notified their employer of the invention in writing, or all persons who have contributed to the invention?
- Which entity must the claim is brought against? This can be particularly difficult to assess, both as a matter of law and of fact, where there have been corporate reorganizations and/or patent assignments.
- Is there a limitation period for bringing a claim?
- What are the procedural requirements for bringing a claim?
- What are the surrounding circumstances of the invention, in particular, the relative contributions of employer and employee to the development and exploitation of the invention?

The effectiveness of employer's attempts to use contracts to avoid national compensation provisions is questionable. Therefore, employers with employees located across Europe have little choice but to become familiar with the various regimes within various national contexts.

Statutory provisions

More than 80% of inventions are made by employees and it is therefore important that the company knows its own rights with regard to an invention, as well as the rights of his employees. The general rule is that where an employee creates an invention in the course of his employment, this invention and any patent will belong to his employer. However, there are statutory provisions in place to ensure that the employee does not go unrewarded. Japan and Germany are two examples of jurisdictions where employee compensation is common, but there are others.

Employees' compensation policy						
Feature	**Romania**	**UK**	**Belgium**	**France**	**Germany**	**The Netherlands**
Relevant legislation	Law 83/2014 on employees' inventions Published in *Official Gazette, Part I no. 471 of 26 June 2014*	Sections 40 to 42, Patents Act 1977.	There are no statutory Rules regarding employees' inventions.	Patent Act 1978, as codified by the Intellectual Property Code 1992.	Employees Inventions Act 1957 and guidelines issued by the Minister of Labour. (ArbnErfG)	Article 12, Patent Act 1995
Criteria for compensation award	The employer shall specially provide within its internal regulations the criteria for establishing the said remuneration. In the absence of such special provisions, the employer shall take into account, depending on each case, one or several of the following criteria: a) the economic, commercial and/or social effects arising from the exploitation of the invention by the employer or by third parties, with the employer's consent; b) the extent to which the employer is involved in carrying out the employee's invention, the employer's resources made available therefor included; c) the creative contribution of the employee-inventor, where the invention is created by a plurality of inventors.	Compensating inventors in exceptional circumstances if both: • The patent (and/ or, for patents filed in 2005 or later, the invention) has been of outstanding benefit to the Employer. • There is a real disparity between the benefits received by the employer and the employee.	Compensation can be awarded by the courts in rather exceptional cases.	Compensation must be awarded for all employees' inventions that the employer owns.	Compensation must be awarded for all employees' inventions claimed by the employer.	Compensation should only be awarded if the inventor has not already been compensated for the patent in his salary, pecuniary 2llowance or any other extra remuneration.

Requirements for entitlement	The right in the inventions referred to under Art. 3(1) a) shall belong to the employer.	The patent (and/ or, for patents filed in 2005 or later, the invention) is of outstanding benefit to the employer, and it is "just" for the employer to pay compensation.	No entitlement to compensation for "employees' inventions" (made within the scope of the employment contract). Possible entitlement to compensation for "mixed inventions" (made outside the scope of the employment but with a connection to it).	Entitlement to additional remuneration for inventions made within the scope of employment. Entitlement to fair compensation for inventions outside employee's normal duties if the employer claims ownership.	Automatic entitlement to reasonable compensation if the employer has exercised its right to take ownership of a employees' invention.	Entitlement to equitable remuneration if the existing contractual remuneration is deemed insufficient. Courts have been reluctant to find this, particularly in relation to large, industrial employers.
Valuation and capitalization of the benefit	The criteria for establishing the remuneration provided in the Law 84/2014 have a guidance character, and within internal regulations the undertakings may supplement, specify or redefine the whole set of criteria to be taken into consideration for the establishment of the employee's remuneration. The benefit evaluation can be based only on certain economic effects and the compensation level shall be negotiated in accordance with the employer's customs and availability. A compensation value of 10-30% from net income or 1-5% from the invention business value seems reasonable and feasible.	The value is calculated after the patent has been exploited, by considering all available evidence.		Compensation for inventions within the scope of employment is often pre-determined. Compensation for inventions outside the employee's normal duties is determined when the invention is disclosed to the employer	Various valuation methods are permitted but the license analogy is most commonly used. The valuation is done shortly after the invention is patented.	

Compensation determination	The establishment of the remuneration shall take into account the principle of 'fair recognition" of the contribution brought by employee to invention. The calculation base may be offered only by preliminary evaluations with suspensive clauses based negotiations or with post-factum evaluations, with establishment of certain but negotiated royalties.	The employee is entitled to a fair share of the benefit which the employer has derived, or may reasonably be expected to derive. Determining a fair share is complex, and involves assessing a large number of factors.	The courts will assess compensation taking into accounts all circumstances of the case.	Remuneration of between 1 to 3 times the employee's monthly salaries is common for inventions within the scope of employment. (Some court awards have been higher.) Compensation for inventions outside employee's normal duties must be "fair compensation" based on factors, such as the invention's economic value and the employee's contribution	The starting point is the economic value of the invention. It is then reduced by a share factor to reflect the employee's role, assigned tasks and role of the employee in the company. In the private sector, compensation is normally between 10% and 20% of the economic value.	The employee is entitled to an equitable remuneration related to the financial importance of the invention and the circumstances in which it was made. Determining a fair share is complex. It involves an assessment of a large number of factors.
Time limits for claim	The active life duration in the invention application is usually proportionally with annual return generated by it.	Any time from the date of the grant of the patent until 1 year after the patent has expired.	The claim must be brought within 10 years of the invention.	The right to compensation is automatic. In case of a dispute, the claim must be made within 5 years.	The right to compensation is automatic, and does not need to be specifically claimed.	The claim must be brought within 3 years of the grant of the patent.

Austrian law

Foreign employers hiring Austrian staff tend to disregard the fact that employers do not have a statutory right to the transfer and use of inventions by employees if no employee inventor rewards contract has been entered into. And even if such contracts exist, disputes can arise if employers misinterpret their employees' invention reports or fail to respond to inventions reported by their staff in a timely manner. Despite contractual agreements, disputes regarding the remuneration for inventions, often linked to the exit of key staff, frequently result in court proceedings. Especially companies with intensive R&D activities are thus well advised to establish an employees' invention management system including a specification of contract clauses, which unfortunately are often, phrased too vaguely, standardized reviews of employees' invention reports and timely utilization statements.

Belgium law

Patent Act does not provide guidance in respect to entitlement to inventions in the employee-employer relationship. In the absence of (strongly preferred) contractual arrangements, a distinction is made between (i) employees' inventions, (ii) dependent inventions and (iii) free or independent inventions.

Employees' inventions are those the employee has invented or developed in the course of his contractual duties or pursuant to a specific assignment of the employer. The rights to these inventions are generally considered to vest in the employer. Dependent inventions are those which are somehow connected to the employment. Said connection may consist of a (substantial) active or passive input by the employer, but it will equally be established where the employee has made use of company resources or know-how. The entitlement to these inventions gives rise to much debate.

Free or independent inventions are those which do not fall in either of the aforementioned categories, i.e. those where the inventor's capacity of employee has in no way affected the inventive process. The rights to these inventions are vested in the employee.

Transfer of copyrights to works created by the employee in the framework of his employment requires explicit and unambiguous contractual arrangements in that respect. (Article 3 §3 Copyright Act). Moral rights, such as the right to maintain the integrity of the works, cannot be transferred, licensed or assigned according to Belgian law. (Article 1§2 Copyright Act)

Copyrights to software created by the employee during the exercise of his tasks or in accordance with the employer's instructions are, by presumption of law and absent contractual provisions to the contrary, acquired by the employer. (Article 3 Software Protection Act).

In universities in the Flemish Community (thus including Dutch-language universities in the Brussels area), the Decree on Universities in the Flemish Community applies. Article 168 of that Decree provides that exploitation rights to inventions resulting from research activities performed by payed staff vest in the university. Inventions are broadly defined to include patentable inventions, plant breeds, models and designs, computer programs, databases and semiconductor topographies insofar these can be commercially exploited. Copyrights are not covered by the Decree.

Denmark law

In Denmark the law relating to the ownership of patents is governed by the Patent Act, the Act on Utility Patents and the Act on Employees' Inventions. Further, the Act on Inventions at Public Research Institutions regulates the ownership of inventions of, among others, university employees as the Act on Employees' Inventions does not apply to university employees.

Creative works, including software, are governed by the Copyright Act r the Design Act.

According to Section 1 of the Patent Act, the inventor has the right to register ownership of the IP rights to his invention. As a general rule, this also applies in the event that employees generate inventions during or in connection with an employment relationship. Thus, under section 3 of the Act on Employees' Inventions an employee owns the right to patent any invention he makes during his employment.

However, if the invention is created as part of and in the course of the employee's work, and the use of the invention falls within the scope of the employer's business, the employee must notify the employer of the invention. The same applies if the invention is the result of a specific task given by the employer to the employee. Following notification from the employee, the employer then has four months during which it may decide to apply for a patent in whole or in part for the invention in the employer's name. Those parts of the invention that have not been claimed by the employer are free for the employee with the employee being entitled to apply for a patent in his own name.

The employer must compensate the employee for the creation of the invention. Under Section 8 of the Act on Employees' Inventions the compensation must be "reasonable" and take into account the nature of the invention and the efforts expended in order to make the invention. This, however, does not apply if the value of the invention does not exceed what the employee could reasonably be expected to perform during the course of his work.

The parties are free to derogate from many of the above rules through an employment contract or other agreement, e.g. setting out that any invention created during the course of the employee's work will automatically be transferred to the employer. However, the rule requiring payment of reasonable compensation to the employee cannot be derogated.

With respect to university employees, the Act on Inventions at Public Research Institutions applies to any invention made by employees of public research institutions after 1 January 2000.

According to the Act, research institutions (public universities, hospitals, etc.) have the right to have the IP rights to any invention made by their employees transferred to the institution. Transfer of the IP rights from an employee to the institution must follow the procedure set out in the Act. In short the employee must without undue delay report any invention to the institution. The institution then has two months (extendable by mutual agreement) to evaluate the invention. Before the end of the two months or any extended deadline the institution must notify the employee of its intention to claim the invention. If the institution wishes to claim the invention, the employee has a right to reasonable compensation.

In projects involving more than one research institution, the institutions must agree on the ownership of any invention or result beforehand. In collaborative R&D projects with private companies the research institution may transfer or license any IP rights to the private company prior to any results being generated or subsequently.

As regards software, Section 59 the Copyright Act contains a specific derogation from the general principle of employee ownership. According to this provision, the employer will always be the sole holder of the copyright to software created by an employee (a programmer) during the course of his normal work or software created by request according to the employer's specifications.

Finland law

In Finland, inventions made by an employee under contract to an employer are covered by the Act Concerning Rights to Employees' inventions. The Act only covers inventions that can be patented in Finland. It outlines the employer's right to such inventions, and the inventor's right to reasonable compensation.

This Act is discretionary, that is, many of the statutes only apply if the employer and the employee have not reached a separate, individual agreement on the issue. It should, however, be noted that an employee's right to reasonable compensation for an invention cannot be disregarded in favour of an agreement entered into prior to the invention being made. What is intended by "reasonable compensation" is not defined more fully in the Act.

It is important that a company planning to adopt the code of practice considers the code in depth with their own organizations' particular features in mind before implementing it. In this connection it is advisable to call in outside expertise for assistance. It is important that companies appoint a person and his/her deputy with special responsibility for matters involving employees' inventions. These duties could be undertaken alongside the appointees' main duties.

A good basis for implementing the employees' invention code of practice is to include in the contract of employment terms and conditions stating that the employee will adhere to the company's code of practice. A copy of the code of practice should be attached to each party's copy of the contract of employment. The employees' invention code of practice, and documentation stating that the code of practice is to apply to the contract of employment, should also be attached to the documentation of the personnel administration.

If an invention has ensued from an employee's activity in the performance of his duties or essentially as a result of using his experiences gained in the enterprise or institution of his employer or in an enterprise or an institution belonging to the same consolidated corporation, the employer may acquire the right in the invention, in whole or in part, if the use of the invention falls within the field of activity of the employer's enterprise or of an enterprise belonging to the same consolidated corporation. If the invention is the result of a task assigned to him more specifically, the employer may acquire the right even if the use of the invention is not within the field of activity of the employer's enterprise or of an enterprise belonging to the same consolidated corporation.

If an invention the use of which falls within the field of activity of the employer's enterprise or of an enterprise belonging to the same consolidated corporation but which has been conceived in connection with the employment other than those referred to in the first subsection, the employer is entitled to acquire the right to use the invention.

Should the employer wish to acquire a more comprehensive right in an invention referred to in the second subsection than that provided for therein or should he wish to acquire the right in an invention which has been conceived without any connection to the employment but the use of which falls within the field of activity of the employer's enterprise or of an enterprise belonging to the same consolidated corporation, the employer shall have priority to acquire such a right by agreement with the employee.

France law

It is estimated that in France, approx. 90% from the patentable inventions are in fact employees' inventions. The relevant legislation on employees' inventions is complex and has in foreground "Code of Intellectual Property" (subsection 1- Employees' inventions) and also "Decree on employees' inventions no. 79-997/1979 as amended in 1984. Depending on the conditions in

which an invention was created, the right to the invention and thus the possibility to apply for a patent belongs either to the employee or to the employer.

In this last situation, the employee is entitled to a financial counterpart, and consequently this has a duty to report his employer any invention made by him, just enabling him to establish the rights he estimates to obtain from the exploitation of patented invention.

According to Article L611-7(1), inventions made by a salaried person in the execution of a work contract comprising an inventive mission corresponding to his effective functions or of studies and research which have been explicitly entrusted to him, will belong to the employer. The employer is obliged to pay an additional remuneration for the invention; the amount of additional remuneration was in the past in the range of one to three times the monthly wage.

However, in December 2000, the Paris *Cour de Cassation* awarded an inventor an additional remuneration of 4,000,000 French francs (approximately $830,000) based on the exploitation of a patent relating to a pharmaceutical composition for the treatment of prostate cancer. French patent law also requires legal persons residing in France to file the application in France prior to foreign filing. A breach of these provisions can incur sanctions including imprisonment and a fine.

The Patent Act 1978 lists three types of inventions:

- Inventions in the course of the employee's normal duties (*Inventions de mission attribuables*);
- Inventions outside the employee's normal duties (*Inventions hors mission attribuables*);
- Inventions owned by the employee (*Inventions hors mission non attribuables*).

The category of the invention determines both the ownership of the IP rights and the compensation type, in the absence of a contractual clause that is more favourable to the employee. The categories differentiate inventions according to the extent of the employee's "mission" (or duty) to invent.

Inventions in the course of the employee's normal duties. These are inventions that employees create either:

- In the course of an inventive mission defined in their employment contract;
- During studies or research tasks expressly assigned to them in the course of their employment.

They arise if the employee creates the invention acting in accordance with his or her job description, which the courts interpret widely. These inventions belong to the employer. However, an employee is entitled to "additional remuneration" (*rémunération supplémentaire*) for the invention. The statutory provisions do not specify the method for calculation of such remuneration. Additional remuneration can be calculated on the basis of:

- Collective agreements (that is, agreements governing all employees working in a particular industrial sector);
- Company agreements (that is, agreements between the company and its unions, applicable to all company employees);
- Individual employment contracts.

Typically additional remuneration is determined under a contractual arrangement. Remuneration of between one and three times the employee's monthly wage is common. The award by France's Supreme Court (*Cour de Cassation*) of EUR557,000) to the inventor of a patent in relation to a pharmaceutical treatment of prostate cancer can only be viewed as exceptional (*Hoechst Marion Roussel/Raynaud, La Cour de Cassation, Chambre Commerciale, November 21, 2000; Arrêt no 2086.Rejet.; Pourvoi no 98- 11.900; and GRUR Int. 2001, 785*).

A survey conducted by the French Intellectual Property Institute (*Institut national de la propriété industrielle (INPI)*) in 2008 revealed that additional remuneration tends to be higher when granted during the exploitation phase:

- Remuneration granted after the exploitation of the invention has begun is generally between EUR 1,000 and EUR 12,000;
- Remuneration granted at the time when the invention is made is typically between EUR 500 and EUR 2,010).

Additional remuneration is usually payable on filing a patent. The right to compensation is automatic but in the event of a dispute, the claim must be made within five years. Depending on the circumstances, the starting point of this period can be when:

- The employee learns (or could have learned) about the commercial exploitation of the patent;
- The employer notifies the employee that additional remuneration will be paid;
- Exploitation of the invention begins.

Inventions outside the employee's normal duties. This category covers inventions created while the employee is employed and which do not fall into the first category, but that were created using knowledge, techniques, or methods specific to the employer or data provided by the employer.

If the invention relates to the employer's activities, the employer can request a compulsory transfer of the invention and the associated patent rights within four months from the date it became aware of the invention.

If the employer acquires ownership, the employee is entitled to "fair compensation", to be calculated when the invention is disclosed to the employer. Fair compensation is based on:

- The invention's economic value;
- The level of the employee's contribution to the invention;
- Any other relevant circumstances relating to the invention.

The compensation can be a lump sum, staged payments or a royalty arrangement.

Inventions owned by the employee belong to the employee, who is free to exploit the invention directly, through the employer or any third party. In this situation we are discussing on inventions done outside any mission entrusted by employer and which has no connexion with his undertaking. The ownership belongs exclusively to the employee who has no benefit and consequently by no compensation right and the employee is free to use his invention and consequently takes the whole benefit arising from his invention.

For each category of employees' invention, a distinct regime is applicable which establishes:

- property on invention;
- nature of the financial counterparty granted to the inventor, if invention belongs to the employer.

Employee's obligation to report the invention

Each employee who achieved an invention has the obligation to report it to his/her employer. The obligation refers to all employees and any invention created by them, irrespective of the future classification as mission based invention or inventions outside mission.

With the reporting of the invention to the employer, the employee proposes him/her the category in which that invention enters according to his/her opinion. If there are more inventors, they may have a common reporting.

By example, at ONERA company, when an invention is reported, an Inventor's Statute is activated, which represents a Company Agreement, signed by the President of ONERA and trade unions. This provides that depending on the invention's quality (settled by a Commission of local experts, plus directors and chosen staff representatives), to grant an invention bonus up to 6000 EUR, shared among authors (with an agreed and copyright percentage and initialled by the Association Agreement registered by national body). In case of challenges, situation might be arbitrated by an arbitration board, having in mind that by law, the President of ONERA orders in respect to industrial property, and that in of the virtue of the labour contract, researchers are authors assigning the industrial property rights to the employer.

Instead, the employer compensates them (this is the legal framework which leaves the details' adjustments at the companies' and laboratories'' discretion as Company Agreement, negotiated between top management and staff representatives).

If ONERA Company gets royalties after exploitation industrial undertaking, 25% of this royalty is distributed yearly among authors. No deduction with industrial property expenses is made.

In other units, like CEA or CNRS, 50% of the royalty is annually redistributed, but prior deduction with industrial property expenses is made.

German law

German law, particularly the so-called "Law Relating to Inventions Made by Employees", requires that inventions made by employees belong first of all to them, and can only by a special act, and with special remuneration, become the property of the employer.

German law regulates matters of employee ownership of inventions and the compensation to which they are entitled by statute.

Where inventions are made in the course of the employee's duties, they may be claimed by the employer. The employee must give notice to the employer of the making of an invention and allow them the choice to make either a limited or unlimited claim to the invention.

In the case of the latter the employer is entitled to an assignment but must pay 'reasonable compensation' for this. Similar compensation is due where the employer makes a limited claim, the only difference being that he derives his rights to the invention from a non-exclusive license.

Inventions, in the sense of The Law, are only technical inventions which in principle can be protected under German Law by a patent or by a utility model.

Germany has had a separate Employees Inventions Act (*Gesetz über Arbeitnehmererfindungen (ArbnErfG)*) since 1957, which is accompanied by Ministerial guidelines on the employees' compensation for inventions in the private sector (*Vergütungsrichtlinien für Arbeitnehmererfindungen*) (Guidelines). The ArbnErfG follows on from previous legislation and case law that recognizes the inventors' right to receive compensation for their inventions from their employers. The ArbnErfG covers all inventions made during the term of an employment

contract, and applies not only to patentable inventions, but also to utility models and suggestions for technical improvements which are not registrable.

The ArbnErfG seeks to strike a balance between:

- Section 6 of the Patent Act (*Patentgesetz*), which gives inventors rights in their inventions;
- The basic principles of labour law, which provide that an employee's work belongs to the employer.

As a result of the balancing exercise, the Act provides a set of rules, which classify inventions into various categories, and make it compulsory to notify the employer of all inventions. The employer can claim rights in the invention within certain time limits if it complies with certain duties. These duties include paying compensation to the inventor. The ArbnErfG was amended with effect from 1 October 2009. These amendments made some limited changes to the existing laws on ownership of the employees' inventions and employee compensation. Many, however, had been seeking wider-reaching changes, criticizing the system for being overly complex and bureaucratic.

Classification of inventions. Inventions are categorized as either:

- Employees' inventions. These inventions are either made in connection with employment, public service-related activities or based, to a significant degree, on the employer's expertise or activities;
- Free inventions. These are all other inventions.

Employees' inventions that may not be related to the company's activities made by an employee, without affecting or involving the employer's means are to be considered as ***free inventions.*** As in the case of employees' inventions, employee must inform immediately in written form his employer on its free invention.

Before that the employee, during his employment, may use elsewhere a free invention, he must first offer to his employer, on reasonable conditions, the exclusive right to use his free invention, where his invention might interfere with the application area or current or planned business operations of his employer. This privilege shall expire if the employer does not accept his offer within three months.

Once the invention is complete, the employee must immediately send to his employer a written report on that. This report must be designated as invention report and be mailed confidentially, by internal mail. The employer must send immediately a written confirmation that his report was received.

Ownership. When created, both types of invention belong to the employee.

The employee must notify the employer of every patentable invention (free or service) made. The employer can claim ownership of the invention within four months from the notification date. Until the recent amendments to the ArbnErfG (*see above, Overview*), the employer had to actively claim the invention. However, the default situation has now been reversed. The employer is deemed to claim the invention, unless it specifically releases the invention to the employee in writing within four months from the notification.

The employer has no right to own free inventions. However, if the invention falls within its field of activity, the inventor must offer the employer a non-exclusive exploitation right before he or she

exploits the invention. If the employer does not take up the offer within three months, its right is extinguished.

Compensation. If the employer claims ownership of a employees' invention, it must both:

- Pay "reasonable compensation" to the employee, which is determined in accordance with the Guidelines;
- Ensure the invention is properly protected in Germany.

If the employer and the employee cannot agree the terms and conditions of the compensation within a reasonable time frame, the employer must calculate the level of compensation in a written declaration that includes reasons. This declaration must be made within three months from the patent grant. If the employee disagrees with the proposed compensation, he or she can start arbitration proceedings. Four factors are particularly important for calculation of the compensation:

- The economic value of the invention;
- Task assignment, that is, whether the task that led to the invention was based on the initiative of the employee or the company;
- Task solution, that is, whether or not the employee solved this task by using job-specific knowledge, company-specific work and knowledge, and the support of the company;
- The position of the employee in the company.

The Guidelines provide various methods to determine the economic value of the invention, of which the license analogy is most commonly used. If the turnover exceeds EUR1.5 million, the Guidelines provide for a progressive reduction of between 10% and 80% of the hypothetical license fee.

Releasing an employees' invention and free inventions

An employees' invention is considered as "released" when the employer releases it in a declaration in text form. The employee is then free to use a employees' invention that has been released.

The same applies to so-called "free inventions" which an employee has created and which have not affected the employer's sphere from the outset. As a matter of principle, as in the case of employees' inventions, the employee must immediately notify the employer of the free invention in written.

The notification must contain sufficient details about the invention (and also, where necessary, about how it was developed) for the employer to be able to judge whether it really is a free invention. If within three months of receiving the employee's written declaration the employer does not dispute that the invention notified to him is actually a free invention, he loses the right to claim it as a employees' invention.

There is however no obligation to notify employers about free inventions if the invention clearly cannot be utilized in the employer's company's field of business activities.

Before the employee can utilize a free invention elsewhere during the term of his employment, he must first of all at least offer his employer a non-exclusive right to use the invention on reasonable conditions if, at the time of the offer, the invention comes within the scope of the employer's current or planned business operations. This privilege expires if the employer does not accept the offer within a period of three months.

Claiming of the employees‘ invention

If the employer does not explicitly waive his claim to the invention within 4 months of receiving the report, the invention and all the rights and obligations associated with it belong to the employer. In this case, all the property rights to the employees' invention pass to the employer.

In particular, the employer then has the right to utilize the invention commercially, to apply for a patent for it, to license it or to sell it. If the employees' invention is free, then the employer delivers a written statement accordingly. The employee is then free to use it as it considers.

The employer's rights and obligations in respect of claiming an invention

When a claim to a employees' invention is made and the associated utilization rights have passed to the employer, the employee is entitled to claim reasonable compensation in return. The amount depends on the employer's commercial utilization of the invention, the employee's tasks and position in the company, and the extent to which the company was involved in creating the invention. In addition, the employer is obliged to apply immediately for a patent or, if more expedient a utility model. Furthermore, he has the right to apply for a patent for the invention in any other country. Should he not exercise this right, he must release the invention to the employee for this purpose and allow the employee to acquire intellectual property rights in other countries at the latter's request.

The release should take place early enough for the employee to be able to take advantage of the priority periods of international agreements in the field of industrial property law. The release must therefore take place within the priority year. Once the invention is released abroad the employer can reserve a non-exclusive right to use the invention in the foreign countries concerned on payment of reasonable compensation. The employer is additionally obliged to handover copies of his patent application to the employee and to keep him informed of the progress of the application process. At the employee's request, the employer must allow him to inspect all correspondence with the patent offices.

At the employer's request, the employee must in turn support him in acquiring intellectual property rights and provides the necessary declarations. The employer is also free to discontinue the process of applying for a patent for the employees' invention, or to cease maintaining an intellectual property right after it has been granted.

In such instances however, he must notify the inventor and, at the latter's request and cost,

transfer the rights and hand over the necessary documents to him. At the same time however, the employer can reserve a non-exclusive right to use the employees' invention on payment of reasonable compensation. Furthermore, both the employer and the employee

have an obligation of secrecy in respect of the reported invention.

The employer must keep secret the invention which the employee has reported to him or notified him of for as long as the employee has justifiable interests in this respect. For example, the employer must keep the invention secret until he has applied for a patent. The employee must keep a employees' invention secret until it has been released or becomes public knowledge when a patent application is published.

A special situation appears where the invention is made by a student, because the student is neither employee, nor external inventor. His creation, within curricular tasks, might be associated with the employees' task, but between him and University there is no prevailing contract to regulate the rights and obligations connected to his inventions. Being matriculated, he is part of the university body but not his employee. During his curricular tasks, a student

enjoys the guidance of the professors, employees of university. Thus, the results of his work are similar to those of an employee status. A special case is the PhD or MA thesis, which is supposed to be an extracurricular work, meaning an independent one.

These cases are considered in Germany as external inventions. Consequently, they are not entering under the law on employees' inventions.

Within the scenario university- employee, there are two distinct situations:

1. Professors' invention, which falls within the framework of the employees of the research institutes;
2. Students' invention, which differentiates itself:
    - Independent creations (M.A, PhD) –which are NOT employees' inventions, but free inventions, independently regulated;
    - Creations made under curricula, thus assisted by professors. In this situation, the professor is remunerated as in situation 1, and the student is considered as assistant of professor, being remunerated at his discretion, depending on the contribution brought by that student.

Hungary law

An ***employee' invention*** is the invention of a person, who develops an invention *without* an incumbent duty to do so arising from the employment relationship. The patent claim belongs from the outset to the inventor; the employer, however, is entitled *ex legis* to utilize the invention. The employer's right of utilization is not exclusive. Due to its greater practical importance, it is the nature of the employee' invention that will be explored in the balance of this paper.

The inventor is required to report the employee' invention to the employer immediately following its creation. The employer has ninety days following receipt of such notification to make a declaration signalling his intention to claim the employee' invention. Absent this declaration in the prescribed time period, the inventor employee may freely dispose of the rights in the employees' invention. The same is true if the employer consents to such an outcome. In the event the employer chooses to claim the invention, he is obliged to file a patent application within a reasonable time following receipt of notification regarding the existence of the invention.

The Patent Act imposes an additional duty on the employer to act with the level of care generally expected in acquiring a patent. Moreover, if the employer omits or commits an act that would result in the rejection of the patent application, the employer must offer a free assignment of the patent claim to the inventor.

If the employer considers the invention to be utilized as a trade secret, he will not file a patent application or withdraw it if it has already been submitted and has not been publicized. Under these circumstances, the employer must acknowledge that absent its trade secret characterization, the employee' invention would otherwise be eligible for patent protection. The employee must be notified of this decision and in case of dispute, the burden of proof is on the employer to demonstrate that the invention was ineligible for patent protection.

The Patent Act of Hungary provides equitable remuneration for the employee inventor related to the pecuniary importance of the invention. In Hungary, the amount of the remuneration must be equal to that which would be payable by the employer for a patent license.

There are two possibilities for the remuneration of inventors: (i) payment through a license analogy or (ii) a lump sum amount. The inventor's right to remuneration arises upon the utilization of the invention. As outlined in greater detail below, the concept of utilization is broadly interpreted. The Patent Act includes a number of provisions in connection with the statutory claim of remuneration that is due to inventors.

Israel law

" Employee's inventions," according to the Israeli Patents Law are inventions that meet two conditions: (a) they were created as a consequence of the service provided by the employee to the employer; and (b) during employment. According to the Patents Law an employee's invention is the property of the employer unless the parties agreed otherwise. In the event that there is an agreement between the parties, the provisions of the agreement will prevail over the statutory arrangement. The law further provides that an employee is entitled to royalties for a employees' invention that has become the property of the employer.

Section 134 of the Israeli Patents Law provides that if there is no agreement that prescribes whether, to what extent and on what conditions the employee is entitled to remuneration for an employee's invention, then the matter shall be decided by the Compensation and royalties committee

As in other countries, the inventors and entrepreneurs who are contributing to the Israeli technological development are usually compensated with shares of the company.

Section 135 of the Patents Law, states the implementation methodology which should govern the decisions taken by the Committees in this respect: (i) the role and responsibility of the employee; (ii) the connection between the invention and the work of the employee; (iii) the entrepreneurship of the employee in the invention; (iv) the possibilities of utilizing the invention and its actual utilization; (v) the reasonable expenses, expended by the employee in order to obtain protection for the invention in Israel.

In the beginning of February 2010, the Compensation and royalties committee, appointed according to the Israeli Patents Law, 5727-1967, has taken a decision in a new species, in the case Actelis Networks vs. Yishai Ilani ("the Decision") on the employees' rights to receive compensation for the exploitation of the employees' invention by employers.

The Decision deals with a situation where the employee signed an agreement whereby the title to any invention he made is transferred to the employer. In the Decision, a doubt was cast as to whether a provision in an agreement, whereby the employee waives its right to receive royalties, is enforceable.

In a decision that could have a wide-ranging impact on Israel's booming high-tech sector, the Israeli Supreme Court has ruled that an employee who created a patentable invention during the course of his employment may claim compensation for it – even if his contract says otherwise.

The Israeli Supreme Court held that a contract that ruled out the right to royalties and other compensation for inventions didn't eliminate the possibility of arbitration by the Justice Ministry committee on compensation, as the right to arbitration could not be waived under Israeli labour law.

As a general practice, and specifically in IT domain, in the Employment Contract of any employee, shall be introduced a standard confidentiality and property guaranty clause, such as:

“The undersigned, I warrant as follows…all property rights, intellectual property, development and commercialization rights belongs legitimate only to the undertaking, without restrictions and reservations… The undersigned, I assign and transfer in whole, all rights that I have already or I will get on any invention or development developed by my undertaking during my employment and I warrantee to sign and to declare any document, authorization or

Assignment necessary to registration of all intellectual property rights in my name or at recommendation of the undertaking.

Italy law

In Italy, an employee’ invention belongs to the employer, but the employee is entitled to equitable remuneration, to be defined depending on the importance of the invention.

The Italian Patent Law requires under Article 27 that persons residing in Italy file the patent application first in Italy or obtain authorization for foreign filing. Any violation of Article 27 attracts penalties of a fine of not less than €30,000 or imprisonment. If the violation was committed after denial of the authorization, imprisonment for not less than one year will be imposed. There is indeed a well-defined regulation, but its interpretation is not always uniform.

On 19 March 2005 the Legislative Decree n. 30 dated 10 February 2005, bearing the new Italian Codice della Proprieta Industriale ("Intellectual Property Code", and hereinafter referred to as "code" or "i.p.c.") came into force, except for a set of "procedure rules" that, pursuant to art. 245 i.p.c. will come into force only afterwards.

Article 64 CPI (Industrial Property Code) reads as follows:

1. When an industrial invention is made in performance or in execution of a contract or of an employment relationship, whereby the inventive activity is provided for as the object of the contract or of the relationship and for such purpose an employee receives compensation, the rights deriving from such invention are the employer’s, subject to the inventor’s right to be recognized as the author thereof.

2. If no compensation for the inventive activity is provided for and established, and the invention was made in the execution or fulfilment of a contract or of an employment relationship, the rights deriving from the invention are the employer’s, but the inventor, in addition to his right to be recognized as the author thereof, has the right, if the employer or his successors in title obtain the patent or use the invention in conditions of industrial secrecy, to a fair reward, the amount of which shall be quantified taking into consideration the importance of the invention, the tasks performed and the compensation received by the inventor, as well as the contribution that he has received from the employer’s organization.

In order to ensure the speedy conclusion of the acquisition of the patent, and the consequent attribution of the fair reward to the inventor, an early examination of the application may be granted, upon a request from the employer concerned, for an early grant of the patent.

Both the conditions are necessary:

a) that the inventive activity is provided as an object of the contract;

b) that activity is “paid for that purpose”.

The Netherlands law

Under Article 12, Patent Act 1995, employers are automatically entitled to their employee's patents if either:

- The employee was hired to use his special knowledge to make the sort of inventions to which the patent relates;
- The inventor works for a university, college or other research establishment.

However, employment contracts often go beyond the statutory provisions and provide that all inventions belong to the employer.

If a patent belongs to the employer, equitable remuneration (compensation) can be awarded if the inventor is not deemed to have been compensated for the patent "in the salary he earns or the pecuniary allowance that he receives or in any extra remuneration he receives" (*Article 12(6), Patents Act 1995*). The inventor's right to claim compensation lapses three years after the date of the grant of the patent.

There are no details in the Patent Act of how the principle of compensation is to be applied, and only limited guidance in the case law. The approach that the Supreme Court (*Hoge Raad*) took in the leading case (*IEPT19940527, HR, Hupkens v Van Ginneken*) in relation to large, sophisticated companies was that the employee inventor will typically have been compensated in the regular salary earned. This is particularly the case if the employee was specifically hired to do R&D. It is less clear if the regular salary includes sufficient compensation for employees who carry out R&D only occasionally. Additional compensation is awarded reluctantly and in very exceptional circumstances. Awards have been relatively low. As in the UK, the assessment of the additional compensation involves many factors. In *TNO v Ter Meulen*, the Supreme Court confirmed that it was necessary to consider various circumstances, such as:

- The employee's position and function within the employer's organization;
- The employee's remuneration and other terms of employment;
- The nature and the financial significance of the invention;
- The extent of the employee's contribution to the invention.

The lack of a specific salary component representing compensation or the employer's ownership of the patent was neither sufficient nor required for the additional compensation to be awarded. The lower courts have also considered other factors to be relevant such as:

- The role played by other employees in the invention
- The extent to which the employer has provided the necessary facilities and research opportunities and he assisted with the exploitation of the invention.
- In practice, the right to compensation is rarely litigated and requests for compensation are not frequently granted.

The Dutch system has been criticized for being counterproductive and treating its inventors unfairly. The German model has been suggested as a replacement. However, the Minister of Economic Affairs had little sympathy for this suggestion in 2006, when the matter reached Parliament.

Portugal law

In Portugal intellectual property rights are generally regulated by the Industrial Property Code, and the Copyright Code, both establishing as general rule that the intellectual property rights belong to its creator. However, specific dispositions may be found in both Codes whenever the creative activity is based on a labour agreement or a services provider agreement.

In face of the above, Copyright Code and Industrial Property Code have different rules concerning the granting of the authorship and ownership right, on which the Copyright Code emphasizes the contractual determination of ownership in opposition to the Industrial Property Code which establishes mandatory rules on this subject.

Decree-law 252/94 of October 20th which transposed Directive EEC/91/250 on computer programs establishes that, expressly otherwise agreed, the rights on the computer program created on the execution of a labour agreement or service provider agreement belong to the employer or to the person or company that requested the service to be provided.

In what concerns the designated industrial property rights, the Portuguese Industrial Property Code foresees that the right to the invention made during the performance of a labour agreement or service provider agreement that provides for the inventive step and the special remuneration thereof shall belong to the employer company. Moreover, the Code foresees that if the special remuneration of the inventive step is not provided for, the inventor shall be entitled to remuneration according to the value of the invention. In any event, the author of the creation, if so wishes, has the right to be mentioned as the inventor in the correspondent invention (patent, etc.) application and certificate.

The inventor should inform the company of the invention created within a maximum term of three months as of the date of its conclusion, and the company may exercise its right of option within three months as of the date of the notification by the employee. The lack of compliance with the above-mentioned duty of notification by the employee generates civil and labour responsibility. In case the company opts to exercise its right of option the employee is entitled to be remunerated by the invention, and company will lose the right to claim the correspondent title in case of non-payment of said remuneration.

Slovenia law

In Slovenia, intellectual property rights are regulated by the Job Related Inventions Act of 25 July 1995, as last amended in 2006.

This Act governs the rights and obligations of employers and employees resulting from inventions made in the course of employment. For the purposes of this Act, “invention” shall mean any invention which by virtue of regulations governing industrial property satisfies the requirements for patent protection or for protection by a short-term patent. The inventions made by employees may be either job-related inventions or independent inventions. A job-related invention is an invention made in the course of employment. Other inventions made in the course of employment shall be independent inventions. An employee’s invention may be:

(a) A direct job-related invention made in the course of implementation of the employment contract, at the employer's explicit request, or on the basis of a special contract concluded between the employer and the employee;

(b) An indirect job-related invention made in the course of exercise of an occupation if the invention is mainly the result of the experience gained by the employee at his workplace, or of the assets made available to him by the employer.

The employee who has made an invention shall with no delay and in writing notify the employer thereof, stating clearly that the notification of an invention is involved. If the invention was made by several employees, they can submit the notification thereof jointly.

With the receipt of notification of an employee's invention, the employer can assert either unlimited or limited claim to such invention. Not later than within three months from receipt of the notification relating to an invention, the employer shall notify the employee which claim the employer will assert and whether he agrees with the classification of the invention.

The employer shall preserve in secrecy the invention notified to him by the employee as long as necessary for the employee's interests.

The employee shall preserve in secrecy the employee's invention until the disposition thereof has become free.

Spain law

The applicable legislation in Spain regarding the research and development works carried out under the scope of a labour relationship, is in one hand, the Law 11/1986, Patents Act and, on the other hand, the Law on Intellectual Property RD 1/1996 (Copyright Act).

The Law 17/2001, Trade mark Law and the Law 20/2003, Industrial Design Act will be also applicable to several specific cases. As an exception to article 16, article 17 states that "if the employee made an invention related to his professional activity in the company and the knowledge acquired into the company had influenced predominantly his invention or he had utilized company's means to achieve it, the employer would have the right to the invention's ownership or to reserve a right to use the invention for himself".

When the employer assumes the invention ownership or reserves a utilization right of the invention, the worker will have the right to a fair economic compensation, calculated in accordance with the industrial and commercial importance of the invention and taking into account the value of the means and knowledge provided by the company and the worker's personal contribution.

United Kingdom law

The UK Patent Act specifically provides guidance on the rights to employees' inventions. According to Section 39 of the act, an invention made by an employee belongs to his or her employer if made in the course of the normal duties. In most circumstances, inventions created by UK employees will belong to the employer. The employer owns the invention if it was made in the course of the employee's normal duties (or duties specifically assigned to the employee), provided that the invention might reasonably be expected to result from carrying out such duties.

Employers also own any inventions made during the course of duties by employees with a special obligation to further the employer's interests because of the nature of their duties and the responsibilities arising from those duties. This can cover executive employees whose seniority gives rise to an obligation to further the employer's interests, even though their normal duties do not include making inventions.

When the employer owns the invention, the employee may be entitled to compensation from the employer. However, a characteristic of the UK regime is that awards are unusual. Compensation is awarded only in exceptional circumstances.

The UK Patents Act which contains radical provisions on the remuneration of employee inventors who are now under certain conditions entitled to a share of the benefits flowing from any outstanding inventions they may make. In 2009, two researchers were awarded £1.5 million under this little-used section of patent law which allows employees extra compensation for inventions which are of "outstanding benefit" to employers.

Companies which hire employees to invent things for them generally retain the patents and other intellectual property for those inventions. By owning those rights the companies in turn control the earnings that result from the inventions. But a clause of the Patents Act allows for extra payments to be made in exceptional circumstances. The High Court made the first public award of such a payment to two scientists from Amersham International, now a subsidiary of GE Healthcare.

For patents filed before 1 January 2005, compensation is available if both:

- The patent is of an outstanding benefit to the employer. Benefits from foreign patents can be taken into account. The process used to determine whether there has been an outstanding benefit is:
  - showing a causal link between the patent and the benefit. There is no requirement that the patent be the only cause of the benefit;
  - assessing the level of relevant benefit. For pre-2005 patents, only the benefit attributable to the patent is assessed. The actual benefits derived from the patented invention are compared with the hypothetical benefits which might have accrued if the product or process had been sold in the absence of patent protection;
  - determining whether the benefit is "outstanding". The courts have resisted defining "outstanding", beyond agreeing that it means "something special" or "out of the ordinary", and more than "substantial", "significant" or "good". The benefit must go beyond what one would normally expect to arise from the employee's duties. The benefit itself must be "in money or money's worth", and so does not extend to reputational benefit. In assessing the benefit, all relevant factors must be considered, particularly the employer's size and nature.
- It is "just" (that is, fair) to award compensation. The award is discretionary, and the court considers all factual issues. However, it is a low hurdle and this requirement will commonly be met if an outstanding benefit to the employer has been proved. In *Kelly*, an award was just even though only two of the three inventors had made a claim, the limitation period had nearly expired, and the claimants had waited a number of years after leaving employment before making a claim (*see box, Kelly v GE Healthcare*). It is possible that an award of further compensation may be unjust if the employer has already paid an incentive or a bonus payment to the employee for the invention, although this issue was not considered in *Kelly.*

Calculation of the employee's compensation is a two-step process:

- The employer's benefit is quantified. This calculation is made on the basis of the patent's actual profitability, considering all available evidence, including the future profits that can be reasonably expected. It should not be based on a hypothetical royalty that would have been obtained if the patent had been licensed early in its life. Instead, it must be based on the

amount by which the total profits for the product would have been reduced if the patent did not exist. For post-2005 patents, the value of the invention, in addition to the patent, can be considered.

- The fair share for the employee is calculated. The aim is to award the employee "a fair share (having regard to all the circumstances) of the benefit which the employer has derived, or may reasonably be expected to derive" from the patent (or the invention for patents granted post-2004). The amount is not limited to a remedy for loss, so it can exceed compensation for inadequate remuneration for the employment.

United States law

In the United States of America (USA), the US Patent and Trademark Office is the body in charge with patents granting and trademark registration. It represents an agency in the US Department of Commerce. This state agency serves the interests of inventors and businesses with respect to their inventions and also offer consultancy.

There are three types of patents:

1) Utility patents may be granted to anyone who invents or discovers any new and useful process, machine, article of manufacture, or composition of matter, or any new and useful improvement thereof;

2) Design patents may be granted to anyone who invents a new, original, and ornamental design for an article of manufacture;

3) Plant patents may be granted to anyone who invents or discovers and asexually reproduces any distinct and new variety of plant.

The Constitution of the United States gives Congress the power to enact laws relating to patent,

The first patent law was enacted in 1790. The patent laws underwent a general revision which was enacted in 1952. Additionally, in 1999, Congress enacted the American Inventors Protection Act (AIPA). The patent law specifies the subject matter for which a patent may be obtained and the conditions for patentability. The law establishes the United States Patent and Trademark Office to administer the law relating to the granting of patents and contains various other provisions relating to patents.

Many companies engage in business which includes a program of research and development, production, or marketing, all or some part of which may enjoy protection as intellectual property pursuant to copyright and/or patent law, trade secret rights, mask work rights, rights of priority, or other intellectual property rights. To protect these intellectual property rights and to prevent an inadvertent violation of the intellectual property rights of others, employer's often require employees (and especially independent contractors) to enter into an "Inventions Assignment and Confidentiality Agreement," often colloquially known as Non-Disclosure Agreements (NDAs) as a condition of interview and/or employment.

Such an agreement may require employees to give prompt notice to management of *all* inventions, whenever developed, even if the employee feels the inventions may not be protected as intellectual property. Within the bounds of the intellectual property laws and any applicable state legislation, the agreement ideally would require all workers to assign all inventions developed during his or her service to the company (and include a Power of Attorney to allow the company to assign a recalcitrant inventor employee's invention to the company). Finally, such agreements commonly require the employee to keep confidential any proprietary

and/or trade secret information of the company which the employee may learn during the course of his or her employment.

The agreement should include a provision reiterating that the agreement is *not* a contract of employment, does not obligate the company to employ the employee for any stated period of time, and does not affect the employee's status as an at-will employee. Many prudent employers also include “choice of law” and “severability” clauses as well as clauses which require the employee to assist the company to obtain any legal protections for inventions which the company may seek, authorize the company to notify others of the terms of the agreement, and allow the company to seek an injunction (including costs and attorney's 16 fees) for violation of the agreement.

Under U.S. law, individuals own their inventions, except where there is an express agreement providing for assignment of ownership of inventions to an employer or where an implied agreement to assign is found because the employee was hired or assigned to invent or solve a specific problem or served the employer in a fiduciary capacity.

Japanese law

In Japan, employees are the owners of all inventions they make including those in the course of their duties. Employment contracts are often used by employers in order to entitle them to ownership over the invention or at the very least an exclusive license.

Where an employee assigns his invention or grants an exclusive license to the employer, Japanese Patent Law entitles the employee to reasonable remuneration. This is calculated on the basis of the resulting profits made by the employer from the invention and the contribution to the invention made by the employee. Large Japanese companies often have preset scales of remuneration for employee’s inventions.

In Japan, an employee inventor shall have the right to a reasonable remuneration for enabling the patent right to pass to the employer. However, there is no requirement in Japan to obtain a foreign filing license.

In Japan, the innovation process is supported by performing undertakings which have the capacity to improve collectively and continuously their activity, by making “small steps” of progress, thus differentiating themselves of European performing undertakings, which promote “by leaps” innovation, with big investments and risks.

This type of promoting of innovation is called by Japanese “kaizen”[1], i.e. and process of improvements, which never ends and which generates the following advantages:

- easily manageable over the course;
- reduced use of the capital, with short capital depreciation.

[1] “Kaizen” philosophy- A step forward taken by 100 people is most precious than 100 steps forward taken by one leader”

Russian law

Supplementary remuneration for an employee' invention is :

1. 30% of the inventor's monthly salary, regardless of the fact that this invention is the subject matter of a patent application or not. Thus, for a monthly salary of 5000EUR, the lump sum is 1500EUR ;
2. In case of industrial/commercial exploitation of this invention, the inventor gets 100% of its yearly salary, supplementary to his normal salary, during the industrial exploitation of this invention.

Where, the inventor has a net monthly salary of 5000 EUR, he gets 5.000 X 12 = 60.000 EUR for each year of commercial/industrial exploitation of his invention. If invention is industrially exploited during 10 years, the inventor is entitled to 600.000 EUR of net global supplementary remuneration for his invention. In reality, it is a bigger amount, having in mind a normal increase of his salary in each year and/or bonuses!

Indeed, these extremely advantageous measures for Russian inventors have also the simplicity advantage. These should stimulate significantly Russian industrial research and to accelerate the competitiveness of Russian companies, if they are faithfully implemented.

Some final thoughts

Some will argue that financial reward programs should not be considered at all, as it is the role of research and development engineers to invent. However, benchmark data suggests that a number of companies are rewarding their inventors well. Financial awards as well as annual patent ceremonies and such items as plaques for inventors are good well established practices in many companies. Increasingly company wide recognition of the top inventors, for example based on exceeding some threshold for the number of granted patents, is becoming the norm.

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Operational procedures on employees' invention in universities and national institutes for R&D

A. Operational procedure in universities

1. Object

The Law no. 83/2014 on employees' inventions, as published in Official Gazette no. 471/2014 and entered into force as from 29 of June 2014, has as declared objective, the stimulation of the technology innovation in Romania, directly expressed by a significant increase in the number and quality of inventions created by the employees inventors as a result of the professional, administrative and financial employers' support and stimulation and consequently, by the capitalization made by employers for the personal benefit as well as for the benefit of national economy.

In the sense of the maximisation for the results leading to the fulfilment of the mentioned objective, the following operational procedure is formulated, by which is established:

1. The way in which the inventions created according to the Law no. 83/2014 on employees inventions are analysed, supported, evaluated and capitalized the inventions created according to the Law no. 83/2014 on employees' inventions;
2. The way in which is defined the procedural quality of the employees-inventors, in accordance with the provisions of the law;
3. The content and form of the documents which are defining the contractual relationship between employer and employee-inventor.

The declared purpose of this Operational Procedure was defined in accordance with the objectives established at global level by the National Strategy for Research and Development 2014-2002 namely:

- to encourage the employed staff to take into consideration the potential of the Intellectual property generated by their individual activity and university institutional activity;
- to promote an innovative and entrepreneurial culture within university, which should promote the development of commercial potential of intellectual property, and in particular of the patent granted for an employees' invention;
- to clarify the rights, obligations and procedures regarding intellectual property, and in particular regarding the patent granted for an employees' invention
- to describe the activity programme and process and activity regarding intellectual property simulation , in particular the patent granted for the employees' invention;
- to offer an efficient project of the evaluation of intellectual property commercial potential, in particular for the patent granted for the employees' invention, done by an entity and its patent attorneys, which should ensure their achievement in due time;
- to emphasise functional departments of the university relevant for intellectual property, and in particular for patents grated for the employees' invention;
- to encourage commercialisations and technology transfer strategies, aimed at maximising the university's benefits, with impact on national economy and which are sustaining the developments and continuous improvements of the long term strategies, which are in connexion with the policies on intellectual property matters, namely to encourage the patenting process of the employees' inventions, by maintaining high level of educational standards;

- to spread the creation of new knowledge and intellectual property, in particular patents granted for employees‘ inventions, in a way which respects the traditions of academic liberty and which are promoting the university’s mission to stimulate economic, social and cultural development.;
- to describe the entity’s approach regarding intellectual property, in particular the patent grated for the employees’ invention, in an easy understandable manner by entity staff and its academic and industrial contributors, in order to offer concrete orientations in a practical framework and with sufficient clarity to settle the bounds of the tasks and responsibilities, rights and obligations and to avoid possible misunderstandings.
- to define clearly the specific processes within university, to develop the intellectual property and in particular the patents grated for the employees’ inventions, the programme to stimulate and reward the persons responsible for the generation of the intellectual property commercial value, including patents granted for the employees’ inventions and to put into order the supporting functions, by underlying he engagement toward its role in the economic life of community, by encouraging the staff hired to be proactive within this role and to make efforts to maintain the absolute rights to use the intellectual property, patents granted for employees’ invention included, within didactic and research activities;
- to imply the university staff in intellectual property, including patents granted for the employees’ inventions, within research programmes financed from national and international projects, from programmes developed with traders and by using internal resources;
- to accomplish the legal requirements to ensure that intellectual property, patents granted for employees’ inventions included, will be developed in the benefit of all, of entities and users of intellectual property, patents grated for employees’ inventions included.

This procedure establishes principles underlying the research activity, in accordance with the policies provided by the Governmental Ordinance no. 57/2002, regarding scientific research and technology development, with subsequent amendments, namely:

- **principle of dignity** - professors, students, MA’s and PhD’s shall develop their activities, by respecting life and in particular human beings;
- **principle of autonomy** - professors, students, MA’s and PhD’s have the liberty to exercise their research activity by enforcing the law;
- **principle of integrity -** professors, students, MA’s and PhD’s shall exercise their activity with honesty, fairness and collegiality;
- **principle of welfare -** professors, students, MA’s and PhD’s, shall promote their R&D activities which produce social benefits by weighing benefits, damages and risks in order to obtain optimal results;
- **Principle of caution -** professors, students, MA’s and PhD’s shall analyse the risk degree implied in R&D results. In running the R&D activities, shall be taken into consideration all consequences which might be forecasted on the basis of scientific data, and to eliminate these researches leading to baleful consequences.

2. FIELDS OF APPLICATION

2.1 This procedure applies to all activities regarding registration and management of the documents and activities within universities, for products and objects of intellectual property rights protection, as defined by law.

2.2 This procedure applies to all unclassified documents and to all public information associated with the object of university activity, in relation with internal and external partners, with OSIM and other national and international bodies in charge with certification and authentication of the products and intellectual property rights protection.

2.3 All rights on this procedure belong to Universities. No part of this procedure can be reproduced or transmitted by no form and by no electronic or mechanic mean without written permission of the copyright owner, subject to exceptions provided by the law.

3. LEGISLATION

- Law of National Education no. 1/2011, published in M.O. nr. 18/10 January 2011, as republished with subsequent amendments;
- Governmental Decision no. 573/1998 on organisation and functioning of OSIM, as republished with subsequent amendments;
- the Patent Law no. 64/1991, as republished with subsequent amendments;
- the Trademark Law no. 84/1998, as republished with subsequent amendments;
- the Designs Law no. 129/1992 as republished with subsequent amendments;
- Law no. 76/2012 for the application of the Law no 134/2010 on the Civil Procedure Code, published in the Official Gazette of Romania, Part I, no. 365 of 30 May 2012 with subsequent amendments;
- Law no. 187/2012 for the application of the Law 286/2009 on the Criminal Code, published in the Official Gazette of Romania, Part I, no. 757 of 12 November 2012 and rectified in the Official Gazette of Romania, Part I, no 117 of 1 March 2013, with the subsequent amendments
- Law no.84/1998 on trademarks and geographical indications, as republished in the Official Gazette of Romania no. 350 of 27/05/2010;
- Regulation EC no. 40/94 on community trademark;
- Designs Law no. 129/1992, as republished in 2007;
- Law on utility models no. 350/2007;
- Law on copyright and neighbouring rights no. 8/1996, with amendments brought by Law nr. 285 of 23 June 2004 and by Government Ordinance no. 123 from 1 September 2005;
- OSIM decision nr.63/2008 on approval of Instruction regarding the establishment of the special service Envelope soleau;
- Government Ordinance no. 41/1998 on the fees in the industrial protection property field and the conditions for using the same, with all subsequent amendments;
- Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society
- Council Directive 93/98/EEC of 29 October 1993 harmonizing the term of protection of copyright and certain related rights;
- Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights
- Law no. 206/2004 on good conduct in scientific research, technological development and innovation;
- Government Ordinance no. 57/2002 updated, on scientific research and technological development;
- Law no. 83/2014 on Employees' Inventions, published in the Official Gazette of Romania, no 471/2014, entered into force at 29 June 2014.

4. DEFINITIONS

To be correlated with *Annex 2 of the Best Practices Manual*

5. RESPONSIBILITY AND AUTHORITY

The management of the Universities authorises all activities promoted under the provisions of this procedure, checks all documents and documentation involved in running the activities of intellectual property protection, and sent out.

The management of the Universities shall sign and approve all documents containing elements of the strategy, development and organisation of the activity foreseen in this procedure, all documents delivered to OSIM necessary to obtain protection in the field of industrial property.

The implementation, the procedure management and the procedure observance falls under the responsibility of the structures specialised in IP promoting and protection, and the management of the mentioned institutions is equally responsible for decisions taken for the approval of the agreements, licenses, spin-offs and other agreements on exploitation of intellectual property, patents granted for employees' inventions included.

6. PROCESS PROPRIETOR-RIGHTS AND OBLIGATIONS OF THE PARTIES

To be correlated with *chapter 3.6 of the Best Practices Manual*

7. PROCEDURE. PROCESS DESCRIPTION. ACTIVITIES DESCRIPTION. VERIFICATION

The management of Universities shall take the necessary measures to implement this procedure and together with structures specialised in IP promoting and protection from these institutions, shall discuss and agree on:

- internal documents relating to employees' inventions, the contents and manner to manage them;
- the way in which the employees' inventions created within the provisions of the Law no. 83/2014 are analysed, evaluated and capitalized;
- bringing in line the existing documents with the General Procedure.

In order to achieve the goals and objectives of this procedure, the management for Universities shall elaborate and promote policies and programmes to increase the innovative capacity for a greater competitiveness and creation of new jobs.

Description of the activities

The structures specialised in IP promoting and protection from these institutions shall conclude with employees-inventors contracts, agreements and other partnership documents with a view to create inventions.

After the patent application filing for the employees' invention, the employer shall inform the employee-inventor on the progress of the proceedings for obtaining protection.

Upon the employer request, the employee-inventor shall lend him technical assistance for acquiring protection and exploiting the invention.

Where the employer does not want to continue the proceedings subsequent to the filing of the application for the protection of the employees' invention or in case he is not interested in the protection of the invention in certain States, other than Romania, the employer shall assign the right to protection to the employee, subject to a non-exclusive license to be granted by the employee to the employer, in respect of the patented invention. The conditions for granting the above-mentioned non-exclusive license shall be specially stipulated in the employer's internal regulations concerning this matter. In the absence of such special provisions, the conditions for granting the license shall be agreed upon by the parties. The employer shall also transmit in due time the documents needed for resuming the procedure.

Upon request by the employee, in respect of the States for which the employer declared his lack of interest in acquiring industrial property rights, the employer shall assign the right to apply for the protection of the employee's invention to the employee, within a time limit sufficient for him to enjoy the priority periods provided for by the international industrial property conventions and treaties to which Romania is a party.

For the inventions resulting from research development or didactic activities carried out in a university-level institution which owns the protection right, this institution shall grant to the inventor, upon request and free of charge, a right to exploit the invention in the respective field of didactic

and research activity, based on a non-exclusive license contract, even if the inventor is not an employee.

Confidentiality policy

The documents concluded between the management of the University and the employees-inventors, shall include confidentiality provisions in accordance with the Labour Code and the legislation in force regarding service secret and trade secret.

To be correlated with *Annex 6 from Best Practices Manual*

Setting remuneration

To stimulate the creativity and innovation activity we are proposing individual bonuses for the inventors in Universities. The bonuses funds could be set up from internal resources at University level or could be set up governmental funds.

To stimulate the innovation activity, Law no. 83/2014 provides the right of the employees-inventors from the R&D public institutions to a percentage of the income made by the employer based on that invention.

In respect of the **employees' inventions made by employees whose employers are public law legal entities having research development among their objects of activity** and claimed by the employer, according to the provisions of this Law or according to a contract concluded between the parties, and exploited by the employer, the inventor-employee is entitled to a percentage of the income made by the employer based on the said inventions. The percentage previously referred to, cannot be lower than 30% and shall be negotiated with the creators of the inventions.

The method of setting remuneration should be correlated with *Annex 8.2 of the Best Practices Manual*

8. INTEGRATION INTO THE UNIVERSITY RESEARCH SYSTEM

This procedure is opposable to all structures having responsibilities in the research development innovation process of the University. For its implementation and observance, the University management and the structures having responsibilities in the field of industrial field, shall present and debate the content of this procedure.

9. ORGANISATION. DEPARTMENTS IMPLIED. RESPONSIBILITIES

The obligation to adopt this procedure is under the responsibility of the Universities.

Shall be set up internal structures (if they don't exist) in charge with the implementation of this procedure, the observance of its enforcement, preparation and application of the documentation, keeping the correspondence with national and international bodies having responsibility and authorisation to certify and authenticate the products and objects of the Intellectual property rights.

The above mentioned authorities shall proceed to the appointment of the persons in charge with the running of the procedures and processes which involves the implementation of the procedure.

10. ACTIONS AIMING AT CONTINUOUS IMPROVEMENT OF THE PROCESS PERFORMANCES

The management of the Universities and the structures having responsibilities in the field of industrial property within their institutions, shall analyse periodically the internal procedure, shall adapt it to the amended legislation and shall submit to public debate any provision which might lead to its improvement.

11. RESOURCES

The task to allocate funds to sustain the activities of research development innovation and to ensure the amounts necessary for the protection of inventions, is under the responsibility of the universities.

12. OUTPUTS

- employment contract with inventive mission;
- collaboration contract;
- patent application which includes all documentation provided by the law;
- agreement of confidentiality of relevant data on invention;
- contracts on capitalization of the invention;
- any other document relevant for the implementing procedure.

B. OPERATIONAL PROCEDURE WITHIN NATIONAL R&D INSTITUTES (INCD)

1. Object

This procedure establishes the methodology for the management, implementation and capitalization of the employees 'inventions within INCD, under the coordination of the National Authority for Scientific Research and Innovation from Romania.

2. Integration in the research system of INCD

The employees' inventions are those inventions which are fulfilling the following conditions, as provided by the Law no. 83/2014:

a) Resulted from the carrying out of inventor's duties, either specifically assigned to him within the employment contract and the job description, or set out by other legally binding documents providing for an inventive mission;

b) Were made during the individual employment contract, or during a period of 2 years, at the most, following the termination of this contract, as the case may be, having knowledge of and using the employer's expertise, using the employer's means, as a consequence of the professional training acquired by the employee-inventor due to the employer's care and on the employer's expenses or using information resulting from the employer's activity or made available by him.

The employees' inventions are an evaluation indicator of the results of the research projects run by INCD, financed by national and European funded research programmes.

The employees' inventions are an indicator of professional, scientific and technical evaluation of the researchers from INCD.

The implementation methodology of the inventions is an integral part of the activity of technology transfer and capitalization of the results obtained in the research development innovation activity of INCD.

3. Relevant documents applicable to the procedural activity

Primary and secondary legislation

- Government Ordinance no. 57/2002 concerning scientific research and technological development, approved with modifications and supplements brought by Law no. 324/2003, with subsequent modifications;
- Law no. 319/2003 concerning the Statute of R&D personnel;

- Law no. 206/2004 on good conduct in scientific research, technological development and innovation;
- Decision no. 406/2003 concerning the approval of the Specific Methodological Norms on establishment, functioning, evaluation and accreditation of the entities from the innovation and technology transfer structure, as well as their supporting means;
- Government Decision no. 1062/2011 concerning the approval of Methodological Norms for evaluation and classification with the view of certification of the units and institutions from National R&D system;
- National Strategy for research development and innovation strategy 2014-2012 (from 21.10.2014) approved by Decision no. 929/2014;
- Law no.83/2014 concerning the employees' inventions;
- Order no. 4393/2012 concerning the approval of the Regulation of organisation and functioning of the National Council of Scientific Research, Technological Development and Innovation Ethics ;
- Emergency Ordinance no. 34/2006 on the assignment of public procurement contracts, public works concession contracts, and services concession contracts, with subsequent amendments;
- Government Ordinance no. 119 /1999 on Internal Audit and Preliminary Financial Control;
- Law no. 571/2003 on Fiscal Code;
- Accounting Law no. 82/1991;
- Law no.182/2002 on protection of classified information

Internal documents

- Government Decision on the setting up of the INCD;
- Government Decision concerning the approval of the Regulation of organising and functioning of the INCD;
- Plan of Institutional Development of the INCD;
- Development strategy of the INCD.

4. Process description

The national research and development institutes represents an institutional organisational framework specific for activities of research development, set up with the goal to ensure the development of these activities, as well as to consolidate the scientific and technological competence in the fields of national interest, established in accordance with the development strategy of Romania. These institutes are participating to the drafting of the development strategies in the specific field; are carrying research development activities for the achievement of the objectives included in the National Strategy, are setting up the bases of the scientific and technological competences, of expertise and innovation, for the improvement of human and scientific and technical documentation resources.

A basic component for the area of research development and innovation in national research and development institutes is intellectual property.

Intellectual property is divided in two main categories:

- Industrial property, which includes patents of inventions, trademarks and geographical indications, designs;
- Copyright which includes scientific works.

The process of the intellectual property management is an integral part of the policy of development, planning and strategic analysis of INCD.

Main points of intervention of the National R&D&I Strategy 2014-2020 foresee the development at the INCD level of the capacity of commercialisation by exploitation of the patents, facilitation of the access to support and commercialisation services in the field of innovation for productive SMEs, support of the based on innovation entrepreneurship, by the setting up of spin-offs and support of the innovative start-ups.

Thus, at the INCD level is required to create and to develop the institutional and organisational framework, necessary for the stimulation of the application/commercialisation/capitalization of the results obtained in different ways in the research activity, related to the specificity of the activity:

- application and commercialisation (in the fields of INCD expertise) within experimental pilot stations, by exploiting the already achieved expertise and clients portfolio;
- application and commercialisation at the spin-off level, on specific field of research;
- direct contracts with economic agents- spin-offs, incubated companies by means of Technological and Business Incubators;
- Technical assistance and specialised consultancy for the application of patents of invention, as starting point for entrepreneurial initiative.

5. Activities description

5.1 Application of the employees' inventions at the INCD level, within experimental pilot stations, and commercialisation of the results

Activities description

- ✓ delivery of the execution documentation toward Marketing, Production, Services department from INCD/ Economic analysis dept.
- ✓ analysis impact study - market study on the results obtained by the implementation of invention: fields of application, potential users, analysis requests of economic operators- users (together with inventors);
- ✓ analysis of the necessary material, human and technological resources for implementation within INCD (together with technical management of INCD);
- ✓ marketing, promotion, advertising activity for the promotion of the products resulted from the implementation of the employees' invention, by using the following promotional channels:
    - printed advertising (advertising in the magazines published by the Institute);
    - advertising on own sites;
    - advertising by events (contributions to seminars, workshops, fairs and exhibitions);
    - face to face product advertising
    - advertising by internet.
- ✓ receiving order and confirmation of the payment made in advance for raw materials supply, materials (together with the Finance Accounting service);
- ✓ organising activity, opening the Technical specification on technological operations, raw material supply (together with technical management of INCD);
- ✓ production supervision (together with technical management of INCD);
- ✓ testing on technological phases and results analysis, comparing with those from product technical specification (together with Investigation and quality control from INCD);
- ✓ corrective measures;
- ✓ order delivery (together with Sales dept.);
- ✓ cashing the amount due (together with the Finance-Accounting service);
- ✓ inventors' motivation, in accordance with Law no. 83/2014(together with patent attorney)

5.2 Implementation and commercialisation at spin-off level, on specific field of research

It is envisaged the support of the innovation based entrepreneurship.

Activities description:

- ✓ delivery of the execution documentation to the spin-off manager;
- ✓ testing on technological phases and the analysis of the results, comparing with those from Product technical specification (together with the Laboratory for Investigation and Quality control from INCD); on the basis of contract of testing-investigation services;
- ✓ cashing royalties and equipment rents (incomes from private funds attracted at the INCD level by capitalisation of the employees' invention;
- ✓ inventor's motivation, according to Law no. 83/2014 (together with patent attorney).

5.3 Direct contracts with economic agents- spin-offs, incubated companies by means of Technology and Business Incubators

It is envisaged support of the innovation based entrepreneurship.

Activities description:

- ✓ delivery of the execution documentation to the start-up incubated in the Technology and Business Incubator of INCD;
- ✓ testing on technological phases and the analysis of the results, comparing with those from Product technical specification (together with the Laboratory for Investigation and Quality control from INCD); on the basis of contract of testing-investigation services;
- ✓ royalties cashing and equipment rents(incomes from private funds attracted at the INCD level by capitalisation of the employees' inventions;
- ✓ Inventor's motivation, according to Law no. 83/2014 (together with patent attorney)

5.4 Technology transfer within economic operators as users

It is envisaged support of the innovation based entrepreneurship.

Activities description:

- ✓ delivery of the execution documentation to the Technological transfer dept. or to the technological transfer office of the INCD ;
- ✓ specific activity of brokerage, lobby, user identification;
- ✓ assignment, licensing agreement on employees' invention to applicant;
- ✓ royalties cashing (incomes from private funds attracted at the INCD level by capitalisation of the employees' inventions);
- ✓ Inventor's motivation, according to Law no. 83/2014 (together with patent attorney)

6. Organisation; related departments; responsibilities

6.1 Organisation

It is necessary to adapt the organisational structure of INCD as follows:

- Existence (setting up) of an industrial property department (intellectual property as the case may be);
- Existence (setting up) of marketing department;
- Existence (setting up) of a technology transfer department or a technology transfer office (owned by INCD or by cooperation with a regional TTO).

6.2 Relevant departments, responsibilities

Department/compartment/service	Responsibilities
Technical management- Technical Director	Technical and operational management
Micro production experimental stations	Technical and operational management
Marketing, Production, Services or similar (Economic analysis dept.)	Economic analysis, human–material-financial resources, promotion, advertising
Finance-accounting service	Economic analysis, human–material-financial resources, promotion, advertising
Laboratory for Investigation and Quality control from INCD	Testing-investigation raw materials, semi-finished and finished products
Technologic and Business Incubator of INCD	Start-up and start companies
Technology Transfer Dept./ Technology Transfer Office	Technology transfer activity, brokerage, lobby, user identification
Industrial/intellectual property attorney	Inventors' motivation, according to Law no. 83/2014

6.3 Actions aiming at continuous improvements of the process performances

- continuous staff training/education with specific competences;
- consolidation and development of relational framework;
- organisation of periodic working meetings with partners from profile clusters and with clusters from related fields, economic operators from health, etc.;
- intensification of activity for publicity, promotion, advertising;
- feedback analysis from users/applicants of the employees' inventions – results obtained in the research activity;
- corrective measure plan;
- Actions to stimulate inventors: support programmes of doctoral training, support for patenting, and financial motivation according to Law no. 83/2014.

6.4 Process proprietor

- **INCD-technological and business incubator from INCD**

6.5 Resources-extra budgetary funds

- own funds of INCD;
- private spin-off funds;
- other private funds.

6.6 Output documents

Depending on the way of implementation and valorisation of the employees' invention, output documents could be:

- handing over/reception report on the execution documentation, concluded between inventors and technical management of INCD;
- handing over/reception report on the execution documentation, concluded between INCD and spin-off;
- handing over/reception report on the execution documentation, concluded between inventors and management of the technological and business incubator;
- technical speciations' technological phases/technological process/preformed pieces/finished product/commercial exemplary;
- Payment documents/royalties cashing.

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Annex 6

Confidentiality clauses and professional secrecy

If the confidentiality clause is regulated by art. 26 of the Labour Code, together with clauses on training, non-competition and mobility, the obligation on professional secrecy, results from the provisions of art. 39, par.2, let. (f) *Obligation to observe the professional secrecy.*

Thus, under the confidentiality clause, as provided in art. 26, par. 1 of the Labour Code, the parties shall agree, for the entire length of the individual employment contract and after its cessation, to refrain from disclosing data or information they took knowledge of during the performance of the contract, under conditions laid down in rules of procedure, collective labour agreements or individual employment contracts.

The regulation of the confidentiality clause is justified by the fact that, with the occasion of concluding and then executing that contract, parties get acquaintance on data and information coming from both parties and some of them has obviously, a confidential character.

The applicable sanction in case of non-observance of the obligation assumed by any party consists in payment of damages. This fact presumes that the injured person (employer of employee) informs competent court, proves the clause existence, his/her violation of right and damage existence. Obviously, infringement of the obligation assumed by individual employment contract may lead to disciplinary responsibility of culpable employee.

More, from the provisions of art. 26, par. 1 of the Labour Code, arises that the clause insertion in the contract, produces effects for both parties, employer included, who according to Art. 40, par. 2, let. (i) has to "ensure the confidentiality of the employee data having a private character".

However, as has been indicated by doctrine in a narrow and express meaning, the confidentiality obligation represents also an employee's obligation to observe the service secret, wherefrom results that a distinction should be made against incidental confidentiality obligation- having a limited character-as an obligation to observe the service secret and confidentiality clause.

More, in contrast to the professional secrecy which shall be observed only during the duration of the individual employment contract, the confidentiality clause may produce effects also after the termination of the individual employment contract, which, in contrast with non-compete clause, must pre-exist to that moment (during execution of that contract).

As study-case, we are presenting the case of an **Employment contract**, for which it is agreed for the whole duration, an additional act, by which the **non-compete and confidentiality clauses** are provided, we will establish thus, to which extent the non-competition clause imposes monthly payment of the negotiated remuneration, and preparing also a comparative analysis on mentioned clauses.

According to Art. 21, par. 2 of the Labour Code as republished, "the non-compete clause shall only take effect when the activities prohibited to the employee upon the cessation of the contract, the amount of the monthly non-compete benefit, the time limits of the non-compete clause, the third parties for whom it is prohibited to perform activities, and the geographical area where the employee may reasonably compete with the employer.

Also, par. 3 of the same article provides that the monthly **no compete benefit** owed to the employee may not be a wage-like benefit, shall be negotiated and shall amount to at least 50% of the average gross wage income of the employee during the previous six months before the cessation of the employment contract or, if the duration of the individual employment contract was less than six months, of the average gross wage income owed to him/her during the contract

Therefore, the **non-compete clause** produces its effects only if in the individual employment contract is provided the amount of the monthly non-compete benefit, which it is negotiated and is of at least 50% from the average gross income wage in the last 6 months prior to the termination date of the individual employment contract or, if the employment contract duration was less than 6 months, from the average gross income wage due him on the contract duration.

According to art. 22 of the Labour Code as republished, the non-compete clause may take effect for a period of maximum 2 years from the cessation of the individual employment contract. In conclusion, the non-compete clause is payed for maximum 2 years after the contract termination and not for the contract duration.

The non-compete clause is regulated distinctly within Art. 26 par.1 from the Labour Code. Under the confidentiality clause, the parties shall agree, for the entire length of the individual employment contract and after its cessation, to refrain from disclosing data or information they took knowledge of during the performance of the contract, under conditions laid down in rules of procedure, collective labour agreements or individual employment contracts. Breach of this clause by any of the parties shall incur the obligation of the liable party to pay damages.

To have a better understanding on the confidentiality clause, a parallel is made between confidentiality clause and professional secrecy.

Professional secrecy is an obligation of the employee expressly provided in Art. 39 par. 2 let. f from the Labour Code and the confidentiality clause is regulated in a distinct way in Art. 26 par. 1 and represents a clause on which the parties shall agree. Thus, the professional secrecy envisages that information and general data which shall be respected by all employees at the level of one employer and the confidentiality clause envisages a larger area of information than that hade in mid by professional secrecy and is applicable to only some of the employees. Therefore, if by confidentiality clause the employer establishes exclusively this information and data generally valid for all employees as having a professional secrecy, than the confidentiality clause is irrelevant.

In conclusion, to simplify these procedures, at the employer level should be established expressly all data and information having a professional secrecy character and then incorporated in the company internal regulation , by mentioning in each individual employment contract of any employee only the general obligation to observe internal regulation. Where, by considering the ongoing activity, results that a certain person has access to some information not included as professional secrecy in the internal regulation, shall be inserted punctually in the individual employment contract of the relevant person, the special obligation drafted as a confidentiality clause.

There is no provision on the confidentiality bonus. In virtue of the employees 'obligations incumbent to the individual employment contract (Art. 39, par. 2 of the Labour Code), the employee has the obligation to comply with the provisions contained in the internal rules of procedure, in the applicable collective labour agreement and in the individual employment contract, as well as the loyalty obligation against employer, in the course of his/her duties.

The confidentiality clause regulated by Art. 26 of the labour Code shall not be mixed up with legal obligation provided in Art. 39 par. 2 let. (f) namely the obligation to observe the *professional secrecy*. The subject matter of the confidentiality clause does not include the information classified as professional secrecy by the Law no. 182/2002 on the protection of classified information, the area of information which is the subject matter of the confidentiality clause being larger than the area of the information having as subject matter the professional secrecy. For this type of information, law provides for the person who will conduct a business or to be hired in a working place which supposes access to classified information, to present to the company's top manager a written commitment to keep the secrecy which should not be mixed with the confidentiality clause.

By inserting the *fidelity clause* in the clauses of an individual employment contract it is envisaged the employee's labour stability. Having in mind that the employee whose individual employment contract includes a fidelity clause shall be stopped to have the initiative of its cessation for a time limit to be negotiated between parties and consequently to accede to another work place, this is compensated with supplementary financial or in nature bonuses, as the case may be, and the non-observance of this clause by any of the parties leads to the obligation of the person at fault to pay damages.

We can speak of the professional secrecy violation, when secrets are voluntarily disclosed, even if there is no specific intention to harm or to act against somebody.

A secrecy disclosure by negligence or inadvertence is equally considered as a professional secrecy infringement.

Is irrelevant the way in which the secrecy is disclosed: might be repeated of transmitted by e-mail, could be transmitted documents or somebody could be allowed knowingly to look the screen.

The professional secrecy is violated even by confirmation of known information.

The storage of the documents containing professional secrecy has also a strong impact. Therefore, the Labour Code describes the offence of negligence in documents storage as*" the negligence resulting in the destruction, alteration, loss or theft of a document containing state-secret information, as well as the negligence resulting in another person's becoming aware of such information shall be punishable by no less than 3 months and no more than 1 year of imprisonment, or by a fine".*

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Annex 7

Capitalization of the results of a research development activity (employees' invention)

Current number	Activity symbol	Activity		Level of technological maturity
1	**ST**	**Inventor** defines technical solution of invention (ST)		TRL 1
2	**Information ST**	**Inventor** informs OCD on **ST** by using a report template	**OCD** engages the ST evaluation	TRL 1
3	**ST evaluation** (1-4 months) ⇩	**Inventor + CPI** prepares **patent application** for registration with OSIM • search • patentability analysis • ST improvement • drafting patent specification	**OCD** performs **ST evaluation** with INV-VAL+IP Score 2.2 method	TRL 2
4	**DECISION 1**	**OCD** decides on the result of ST evaluation (Art. 4.5) • right to invention ST belongs to **inventor** • right to invention ST belongs to **OCD** →		
5	**ST registration-invention with OSIM**	**OCD** files the patent application with OSIM and pays the registration fee 134 lei publication fee(4 months) 446 lei+ fee for Search report with written opinion 1338 lei; Total: **1918 lei**		TRL 2
6	**ST capitalization** (0-12 months) ⇩	**OCD** + **inventor** start capitalization procedures • Publication/communication ST(advisable after 4 months from the filling with OSIM • Execution of experimental model +tests • Assignment/licensing to industrial environment • Spin-off(start-up) establishment		TRL 3-4
7	**Decision 2** (0-12 months)	**OCD** – patenting abroad (PCT/EPO) if advisable, on the basis of the result of internal evaluation and of the Report with written opinion drafted by OSIM Patenting fees PCT/EPO **approx. 2000 EUR**		
8	**Capitalization ST** (12-24 months) ⇩	**OCD** + **inventor** continue the steps for capitalization • possible **ST** prototype building • assignment/licensing to industrial environment • spin-off(start-up) setting up • a new **ST** evaluation done at 24 months regarding assignment/licensing/spin-off chances		TRL 4
9	**Final decision** (24 months)	**OCD**- decides on the basis of evaluation results on assignment/licensing/spin-off if: **YES**- patenting procedure goes on → **NO**- patenting procedure surrendered →		
10	**Patenting with OSIM**	**OCD+inventor**- cooperation with new proprietor (assignor/licensee/spin-off) **royalties**		TRL 4-6

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Guidelines on employees' invention remuneration system in other countries

In France, the mission inventions[1], similar to those provided in Art.3 para.1 let. (a) from the Romanian Law (Law no. 83/2014), belong to the employer. However, an employee is entitled to "additional remuneration" for the invention.Nevertheless; an employee has the right to a "supplementary remuneration" for his invention. The statutory provisions do not specify the method for calculation of such remuneration.

Additional remuneration can be calculated on the basis of:

- Collective agreements (that is, agreements governing all employees working in a particular industrial sector);
- Company agreements (that is, agreements between the company and its unions, applicable to all company employees);
- Individual employment contracts.

Typically additional remuneration is determined under a contractual arrangement and is equivalent to a remuneration of between one and three time the employee's monthly wage.

The supplementary remuneration granted in the case of an employees' invention is assimilated to a wage and thus underlies to income taxation.

In the case of inventions similar to those provided in Art. 3 alin.1 let (b) from the Romanian law, if the employer acquires ownership, the employee is entitled to a "fair compensation" to be calculated when the invention is disclosed to the employer.

Fair compensation calculus is based on:

- the invention's economic value;
- the level of the employee's contribution to the invention;
- any other relevant circumstances relating to the invention.

The compensation shall be established by an agreement between the employee and the employer and can be;

- a flat and final lump sum;
- staged payments proportional with the fiscal value generated by invention;
- royalty arrangement, by cumulating both methods.

The incomes obtained by "fair compensation" are subject to the taxation regime of the noncommercial benefits "-taxation on long term earnings"- as well as to some social contributions, because the employee is considered as an independent worker.

In Germany, the clauses from the employment's contract which excludes or puts restrictions to the compensation right of the employee, are not applicable if they started to produce effects before the invention is done. However, after the invention's accomplishment and after notification made to employer by employee regarding its existence, the parties may negotiate and agree on the compensation. In practice, the employers are often proposing the payment of a lump sum instead the rights provided by the German Law of employees 'inventions (ArbnErfG).This is under section 23 of the ArbnErfG, which cancels agreements which are obvious unfair. A claim of unfair compensation must be in written within 6 months from the end of the employment contract.

Each party may also request adaptation of the agreed remuneration (either by mutual agreement or by unilateral decision of the employer) if occurred a major change of situation

[1] Employees' inventions, all what is needed to declare an employees' invention, Cerfa Nr. 50729#02

If the employer claims ownership of a employees' invention, it must both:

- pay "reasonable compensation" to the employee, which is determined in accordance with their applicable regulations;
- ensure the invention is properly protected in Germany.

If the employer and the employee cannot agree the terms and conditions of the compensation within a reasonable time frame, the employer must calculate the level of compensation in a written declaration that includes reasons. This declaration must be made within three months from the patent grant. If the employee disagrees with the proposed compensation, he or she can start arbitration proceedings.

In United Kingdom, it is not allowed the withdrawal of the employee's compensation before the invention is done (for instance by an employment contract).Invention stimulating schemes could be activated within employment contracts meant to avoid other employees' compensations, by the reason that a supplementary compensation would not be fair. Nevertheless, there is no case-law on the matter. The employees and employers have the liberty to agree after the invention is done, on the legal compensation level.

In Belgium, for inventions similar to those provided by the Law no. 83/2014 Art.3, par. 1, let. (a), the salary is considered as a sufficient compensation for the assignment of the right to invention to the employer. However, for inventions similar to those provided by the Law no. 83/2014 Art. 3, par. 1, let. (b) when the employers own that invention the employee may benefit of a supplementary compensation. It is established by taking into consideration all specific circumstances.

In the Netherlands*,* if a patent belongs to the employer, equitable remuneration (compensation) can be awarded if the inventor is not deemed to have been compensated for the patent "in the salary he earns or the pecuniary allowance that he receives or in any extra remuneration he receives" (Article 12(6), Patents Act 1995). The inventor's right to claim compensation lapses three years after the date of the grant of the patent. There are no details in the Patent Act of how the principle of compensation is to be applied, and only limited guidance in the case law.

In Japan*,* where an employee assigns his invention or grants an exclusive license to employer, the Patent law provides he employee's right to a fair remuneration. It is calculated as a function of the profits obtained and generated by employer from invention, as well as by the employee's contribution to invention. The big Japanese companies have often predefined steps of remuneration of the employees' inventions.

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Methods of establishing remuneration in other countries

The Law no. 83/2014 leaves at company level the use of methods to calculate the percentage of the achieved income, and this is the reason we present some practices in EU member states which could be used as models in this respect.

In Germany, law provides three methods for calculation of the inventor's remuneration:

- license analogy;
- percentage of the internal cost savings which the employer achieves by using the invention;
- free estimation of the value of the invention.

In all cases, the first step to determine an appropriate remuneration is always to find the value of the invention, either by license analogy, based on internal advantages or savings, or by free estimation. Then, a personal percentage for the respective inventor is determined, such percentage, the so-called "share factor," meaning that e.g. a research chemist who is factually paid to make inventions gets very little remuneration, practically nothing, whilst a person not being paid to do that, e.g. an ordinary worker in a chemical factory making the same invention, nearly gets as much remuneration, e.g. royalty, as an independent third party giving the respective invention to the employer.

The most used method is the so-called license analogy where the inventor gets a certain percentage, depending on the net sales of the employer, by a reasonable royalty which normally would be paid by employer if a license would acquire from a third party.

Method "License Analogy in Practice"

The first step in such an instance is to find out what the reasonable royalty in the respective field of industry would be. A typical example would e.g. be that in machinery industry reasonable royalty rates of 4 %, based on net sales, are not uncommon.

The second step is represented by the determination of the personal share factor of the inventor (percentage for inventor). This share factor does not mean the personal percentage of the ownership in an invention for a certain inventor where exist co-inventors. This means rather that even in case where there is a sole inventor in view of the fact that this inventor is an employee it will not get the full remuneration as a third party licensor would usually get from the employer.

The share factor is determined by taking into consideration three sub-factors: 1) the contribution of the company/employer in creating the problem to be solved by the invention; 2) the contribution of the company/employer in creating the solution of the problem; 3) the position and duties of the employee with the company/employer. Without going into detail, according to the rules attached to The Law the aforementioned three sub-factors lead usually in case of a chief chemist in a research department to a share factor of e.g. 10 %, which means that the employee gets 10 % of the aforementioned reasonable royalty of 4 %, i.e. 0, 4 % of the net turnover of the employer.

Where the turnover achieved by the employer is beyond a turnover of 3.000.000, 00 € a, the quota factor is diminished and a reduction of 10 % takes place. For a further increased turnover beyond 50.000.000, 00 € turnover the royalty is reduced by 80 %. Thus, the inventor in this example does no longer get a remuneration of 0, 4 %, rather only of 0,032 of the employer's turnover.

It is to be noted that the aforementioned turnover based decrease takes into consideration not the annual, but the accumulated turnover achieved starting from the beginning of using the invention by the employer.

It should be stressed again that after notification of an invention an individual agreement between employer and employee can even provide for a full renouncing of any remuneration by the employee. However, until six months after termination of any employment agreement the employee has the possibility to object to any remuneration agreement he concluded earlier because of being considerably unjustified, and certainly such circumstances will be assumed by courts e.g. in the instance of renouncing where otherwise a rather considerable remuneration to the employee would have to be paid. Accordingly, it is highly recommendable that agreements are made which under the justification and good faith view point do not bear the risk that later on, when normally disputes between employer and employee begin, namely after termination of the employment agreement. However, the Law provides the possibility of later revision of a remuneration agreement and neither employee nor employer cannot renounce to this right.

Another method to calculate the remuneration is when the employee gets a certain percentage of the internal cost savings which the employer achieves by using the invention. This method is specifically used when an invention is related to e.g. a certain kind of manufacturing which does not modify the products finally sold by the employer, but relates to improvements inside the company.

A third and final possibility is a free estimation of the value of the invention, in which the inventor has the right to participate. Such method is used e.g. in cases of cross-licensing without real royalty income or purchase price income to the employer.

According to the practice in Finland, when setting the amount of compensation payable, the invention's economic value should be taken into account together with issues such as the employment connection under which it was created, the invention's protection level, the invention's range (parent invention or secondary invention), the extent of the rights to be obtained by the employer, and the influence of issues relating to the employment contract on invention[1].
If several inventors are involved, the compensation is to be divided between them in relation to their contribution to the invention. Unless the inventors come to a different agreement amongst themselves, the compensation is to be shared equally between them.
Company's board is to confirm that compensation is to be paid to the inventor in accordance with this code of practice.
For each invention, for which a notification has been agreed and submitted, and for which Company has decided to claim full rights, a notification payment of 5,000 EUR is to be made for each individual invention. However, under no circumstances is this payment to be less than 2,000 EUR per inventor.
If Company has claimed full rights to the invention and the invention has been granted a patent, Company is obliged to pay a patent commission for the invention. When deciding on the amount payable in commission, the extent and economic value of the invention is to be taken into account.

Depending on the number of inventors involved, the commission could, for instance, be calculated as follows:

- ✓ 1 inventor 5,000 – 20,000 EUR
- ✓ 2 inventors, 7,500 – 30,000 EUR
- ✓ 3 inventors or more, 10,000 – 40,000 EUR

The commission is also to be paid if the patent application would have been granted, but Company decides not to take the patent application to its conclusion. For an invention to which Company has claimed the rights but not exercised these rights, a one-off payment is to be agreed and confirmed by the board of Company

If the notification fee and the patent commission are deemed not to be reasonable remuneration for the invention, it is possible to pay compensation for the use of an invention ('user fee') that is creating revenue for Company. The user fee is to be confirmed by the board of Company. The user fee can be paid as one- off payment or royalty-based.

[1] A Guide for Bioindustry Start-up and Growth companies on how to draft a Code for Employee Inventions

Example of how to calculate compensation or the use of the invention ('user fee')

The user fee (K) can be calculated as follows:

K = (M x P x V x T x Z) - compensation already paid (notification fee and the patent commission), where

M = the revenue generated by the invention in a year, in EUR

P = percentage

V = the readiness multiplier

T = the employment connection multiplier

Z = 1 for parent invention, <1 for secondary invention

M is calculated on the revenue gained by the company as a result of the invention. This can be net sales revenue, royalties, contractual fees or other income.

Percentage P is estimated on the basis of what it would cost the company to buy a corresponding Percentage P is estimated on the basis of what it would cost the company to buy a corresponding invention from an outside supplier. This licensing percentage varies between 0.5% and 6%.

Licence and royalty revenue usually results in a larger licensing percentage than net sales. The readiness multiplier V is estimated on the basis of how ready the innovation is for commercial use. An employment invention is normally not ready for marketing, but the company may have to invest significant amounts before the invention is commercially viable. If the invention is ready to be marketed, then V = 1. When setting a readiness multiplier, it is important to bear in mind the product development input of the inventor/inventors. In the pharmaceutical sector, for instance, the readiness multiplier is usually in the range of 0.1 to 0.3.

The employment connection multiplier T denotes the degree to which the employment connection has contributed to the generation of the invention.

his employment connection multiplier T can be given three different values:

- ✓ The invention is linked to a task originating from the employer, and the employee has been given instructions by the employer as to the solution: T = 0.1
- ✓ The invention is linked to a task set by the employer, but the employer has not indicated a solution to the task: T = 0.3
- ✓ The invention is not connected to a task set by the employer: T = 0.4

Z is the multiplier that indicates the value of an invention. When dealing with a parent invention, Z =1. In the case of a secondary invention, generated to support the parent invention, the value of Z is on a range from 0.1 to 0.5.

It is preferable to accept a one-off compensation payment in cases when the effect of the invention on the company's revenue is uncertain or difficult to measure. Furthermore, if the revenue generated by the invention is so slight that it is not worth calculating the revenues involved, it is suggested that the invention notification compensation and the patent compensation are considered sufficient compensation.

Example of the calculation of compensation: the revenue generated by the invention for the company is 100 million EUR in the year in question. On this basis, the user fee in the year in question for use of the invention is K = EUR 100,000,000 x 0.03 (P) x 0.2 (V) x 0.3 (T) x 0.4 (Z) = 72,000 EUR (minus compensation already paid). This compensation is paid to the inventors divided by the number of inventors and in relation to the contribution of each individual inventor.

In Hungary *there are two possibilities* [2]for the remuneration of inventors: (i) payment through a license analogy or (ii) a lump sum amount. The inventor's right to remuneration arises upon the utilization of the invention. As outlined in greater detail below, the concept of utilization is broadly interpreted. The Patent Act includes a number of provisions in connection with the statutory claim of remuneration that is due to inventors.

The following rules apply unless a remuneration agreement is concluded between the inventor and the employer that departs from these mandatory rules:

[2] SZECSKAY, Ugyvedilroda- Lawyers Hungary, IP Law in Hungary: the rules applicable to employees' inventions

- time span of the remuneration claim: the general rule provides for the presumed entire term of patent protection, i.e. twenty years (plus the term of the supplemental patent certificate in the case of medicines), even if the patent is terminated earlier through any act or omission of the employer.
- types of utilization by the employer on the basis of which the inventor employee is entitled to remuneration: production, use of process, and/or licensing, and/or assignment of the patent, and/or any omission of utilization in order to create or maintain an advantageous market position;
- the inventor is entitled to remuneration separately in respect of each and every type of utilization including the granting of any licenses or assignments without consideration.
- the remuneration claim may be enforced against the employer. In the case of licensing or assignment of the patent, the licensee or assignee may assume the obligation to pay remuneration without prior consent from the employee. In the absence of a remuneration agreement, the claim may always be enforced against the employer (in case of multiple employers, against the employer utilizing the employees' invention).
- the remuneration of the inventor must be governed by a remuneration agreement.

The application of the statutory provisions can be avoided through the use of well-drafted invention regulations (i.e. by-laws) and remuneration agreements.

Remuneration on the basis of the License Analogy

In the event the employer itself utilizes the employees' invention, the remuneration provided to the employee shall be proportionate to the fee that would be paid by the employer as a licensee pursuant to a patent licensing agreement, in view of the licensing practice in the given technological field and in accordance with the subject matter of the invention. If the employees' invention becomes the subject of a license or an assignment, the royalty paid must be proportional to the proceeds of a license or assignment, or to the transfer or economic benefit/advantage resulting from a free license or free assignment. Remuneration will be deemed proportional where due regard is paid to the employer's contribution to the creation of the invention as well as to the obligations of the inventor in the employment relationship.

There are under preparation further guidance in the form of jurisprudence with respect to proportionality as well as license analogy.

Lump Sum Payments

The Patent Act allows expressly allows for lump sum remuneration agreements.

A remuneration agreement qualifies as a civil law contract despite the fact that it is concluded in the context of an employment relationship and this is reinforced by the Patent Act itself. There is no published case law on whether the inventor may challenge the agreement based on the legal cause of flagrant disproportion between the services rendered and the consideration paid for services, of error or deceit.

Companies often address remuneration issues by the way of internal invention regulations. Such invention regulations are in fact regarded as a general term of the (employment) contract to which all rules laid down by the Hungarian Civil Code are applicable. However, in the event a workers' council or other similar representative organization duly accepts such a regulation, it qualifies as an individual agreement binding upon the employee pursuant to the employment contract, although under the Labour Code, the workers' council only has a right of consultation.

Similar to companies, for ***public law legal entities*** there is no general rule for the setting up of the percentage of compensation due to inventor, but a series of methods in determining it from the net income obtained by employer, could be recommended, deriving from existing practices in the EU member states and in the USA., with special emphasises in universities. For national R&D institutes,

there are some specific provisions in the Government Ordinance OG n0. 57/2002 with subsequent amendments.

The German law in force grants the universities' right to any invention done by the university's employees (not only professors) and introduces a remuneration scheme different of that for employees, in general. The employee gets a percentage of 30% from the net incomes, not a lump sum.

According to the ***Act on Employees from Danemark***[3] the employee is entitled to a reasonable remuneration unless the value of the invention does not exceed what he can reasonably be expected to provide considering his terms of employment in general.

He/she is not entitled to financial compensation in a normal sense.

According to the Act on Inventions made within Public Research Institutions the employee is entitled to a reasonable compensation from the institution where the institution has required transfer to it of the rights to commercially exploit the invention. If the parties have agreed that the employee inventor can carry out commercial exploitation of the invention, the institution is entitled to a reasonable compensation. The institution must establish general rules for its calculation of compensation to employees.

According to the Act on Employees' Inventions the remuneration to an employee must be calculated taking consideration of the value of the invention and its usefulness to the undertaking as well as to the terms of employment of the employee and the importance of his employment to the creation of the invention. An agreement between employer and employee may at the request of either party be regulated at a later time if the circumstances have changed materially or if other circumstances warrant a revision of the agreement.

A claim for compensation under the Act on Inventions made in Public Research Institutions occurs only when an invention is exploited commercially. No compensation is due unless and until the exploitation implies a net profit to the institution. The claim for compensation must reflect the market value of the invention. The starting point is that the compensation must be calculated on the basis of the profit which is generated on the basis of the use of the invention. The personal situation of the employee including the employees' wages is of no consequence in this respect. The normal arrangement is that the institution will distribute its net income with 1/3 to the employee and 2/3 to the institution. Where the employee is given the right to commercially exploit his own invention, the normal distribution of net income is 1/3 to the institution and 2/3 to the employee.

University of Utah (USA)[4]

Inventors shall receive a share of royalty income or other revenue received by the Research Foundation as a result of commercialization of an invention. The inventors' share of income shall be based on a percentage of such income or revenue remaining after: reimbursement of the University for all direct costs of patent prosecution or maintenance; payments to other institutions required by University agreement, including but not limited to inter-institutional agreements for the management of jointly owned patents; all development funds advanced according to the University regulation.

The inventors' share (in the aggregate situation where there is more than one inventor) shall be:

- 40% of the first 100,000 $ of net revenue,
- 35% of the next 200,000$ of net revenue,
- 33% of any additional net revenue received by the Research Foundation.

[3] Denmar; Report Q183, in the name of Danish Group, by Nicolai LINDGREEN, Employers' rights to intellectual property
[4] Policy 7-002: Patents and Inventions - Regulations Library - The University of Utah, file:///C:/OLD%20C/HDD%20Vechi/Partitia%20D/Centrul%20de%20Informare%20Tehnologica/Manual%20pentru%20inventia%20de%20serviciu/de%20la%20George/Policy%207-002%20%20Patents%20and%20Inventions%20-%20Regulations%20Library%20-%20The%20University%20of%20Utah.htm

Exceptions to the above procedures shall be approved by the Technology Commercialization Advisory Committee of the Utah University.

University of Oregon (USA)[5]

The Oregon Administrative Rules (OARs) provides procedures for equitably sharing net royalty income with employees, and with sponsoring agencies when required by an agreement. Employees (inventors and authors) shall be eligible to share in net royalty income from each invention or separate improvement thereof, as follows:

- 40% of the first $50,000, 35% of the next $50,000, and 30% of all additional net royalty income received by the Board for inventions and technological improvements;
- 50% of net royalty income from educational and professional materials.

Persons entitled to share in this distribution of net royalty income include: faculty, staff, assistants, graduate teaching fellows, graduate research assistants, and student employees.

The employee's share of net royalty income referred to above is the maximum percentage of net royalty income allowed for distribution to inventors and authors. Hence, this amount shall be divided between said inventors or authors, should there be more than one, in an amount agreed upon in writing by all the inventors and authors.

The Internal Management Directives defines net royalty income as gross royalty income received by the University minus the following costs: all institutional expenses and reasonable costs incurred in developing the invention or material, expenses incurred in obtaining, enforcing or defending a patent, copyright litigation, licensing, interference, and marketing costs attributable to the invention or material, as well as any other expenses deemed necessary to recoup. In the normal situation this means repayment of the direct expenses paid by the University to attorneys for the filing and prosecution of the patent applications, or registration of copyright or trademark.

Example of Distribution of Royalty Income

The Office of Technology Transfer (OTT) receives a check for $75,000 for a license fee (gross royalty income) called for under a newly executed license agreement. The license is for patented technology developed by Dr. X from the Department of Chemistry and Dr. Y from the Materials Science Institute (MSI). OTT has expended $10,000 on patent costs thus far and the licensee has agreed to pay future patent costs directly. The revenue shall be distributed as follows: $75,000 minus $10,000 for patent expenses incurred by OTT leaves $65,000 net royalty income for distribution to faculty/inventors, the departments (Unit Share) and the University (Central Share). The amount of $ 65.000 is divided in two: $50.000 (for which the quota of 40% is applied) and $15,000 (for which the quota of 35% is applied).

Inventors: 40% -$20.000; 35%-$5.250, shared as follows: Dr. X -60%: $12,000+ $ 3,150; Dr. Y -40% $ 8,000+ $2,100

Faculty (departments): 30% - Chemistry – 60%: $9.000 + $2.925; MSI – 40%: $6.000 + $1.950

Central Share 30% -$ 15,000+ $4,875

[5] Licensing Income Distribution, Oregon University, http://policies.uoregon.edu/policy/by/1/09- research/licensing-income-distribution

North-western University (USA)[6], as long as the cumulative net income (i.e., the net income from all years) is less than or equal to $50,000,000, then the distribution will be allocated as follows:

1. 33% of the net income to the inventor;
2. 17% of the net income to the department or departments in which the inventor serves;
3. 17% of the net income to the school in which the inventor serves;
4. 33% of the net income to the Central Administration.

When the cumulative net income exceeds $50,000,000 but is less than or equal to $500,000,000, then any further distribution will be allocated as follows:

1. 33% of the net income to the inventor;
2. 10% of the net income to the department or departments in which the inventor serves;
3. 10% of the net income to the Faculty;
4. 47% of the net income to the Central Administration.

When the cumulative net income exceeds $500,000,000, then any further distribution will be allocated as follows:

1. 33% of the net income to the inventor;
2. 5% of the net income to the Faculty;
3. 62% of the net income to the Central Administration.

If there is more than one inventor, the applicable income will be divided equitably among the Inventors. If there is more than one teaching unit, department, or canter in which the inventor(s) serves, the applicable income will be distributed to the teaching unit, department or canter that administered the academic year salary at the time of the disclosure. The University will review the proposed distribution plan, in light of the declarations of department, school and canter affiliations declared at the time of invention disclosure to the University as well as the sources of salary support at the time of disclosure.

University at Buffalo (USA)[7], the royalty income distribution schedule is as follows**:**

Distribution To	Percent	Limitations
Inventor(s)	40%	Royalty income distribution checks are made payable only to the inventor and are non-assignable.
Inventor's Department(s)	5%	Royalty income received by the department must be utilized for the support of scientific research or education.
Inventor's School(s)	5%	Royalty income received by the school must be utilized for the support of scientific research or education.
University Support of Research	50%	Royalty income must be utilized for the support of scientific research or education.
Notes: 1. If royalty payments are received via wire transfer, processing fees associated with the wire transfer will be deducted from the campus 60% share before distributions are made. 2. The department share of royalties will be capped at $1 million per fiscal year, and the school share at $5 million. Royalties in excess of the caps will be distributed to the university in support of research.		

[6] ROYALTY DISTRIBUTION POLICY, NORTHWESTERN UNIVERSITY, HTTP://WWW.INVO.NORTHWESTERN.EDU/POLICIES/ROYALTY-DISTRIBUTION-POLICY

[7] Royalty Distribution Policy, University at Buffalo, http://www.buffalo.edu/administrative-services/policy1/ub-policy-lib/royalty-distribution.html

The University of Florida (UAS)[8], the distribution of the net income got from inventions is the following:

- ✓ for net adjusted income up to $500,000:
- 40% inventor(s)
- 10% program(s)
- 7,5 % inventor(s)'s department
- 7,5 % inventor(s)'s college
- 35% VPR or UFRF

where

"UFRF"shall mean University of Florida Research Foundation Inc., a non-profit organization which provide assistance to the research activities of University Faculty, staff and students;

"VPR" shall mean the Office of the Vice-president for research within University.

Only VPR shall be authorized to commit available University funds for the expenses of licensing and patenting of inventions on behalf of the University.

- ✓ for net adjusted income of $500,000 and above:
- 25% inventor(s)
- 10% program(s)
- 10 % inventor(s)'s department
- 10 % inventor(s)'s college
- 45% VPR or UFRF

Within ***U.S. Department of Health And Human Services (NIH)[9],*** the royalties have the following distribution scheme:

Inventors share in:

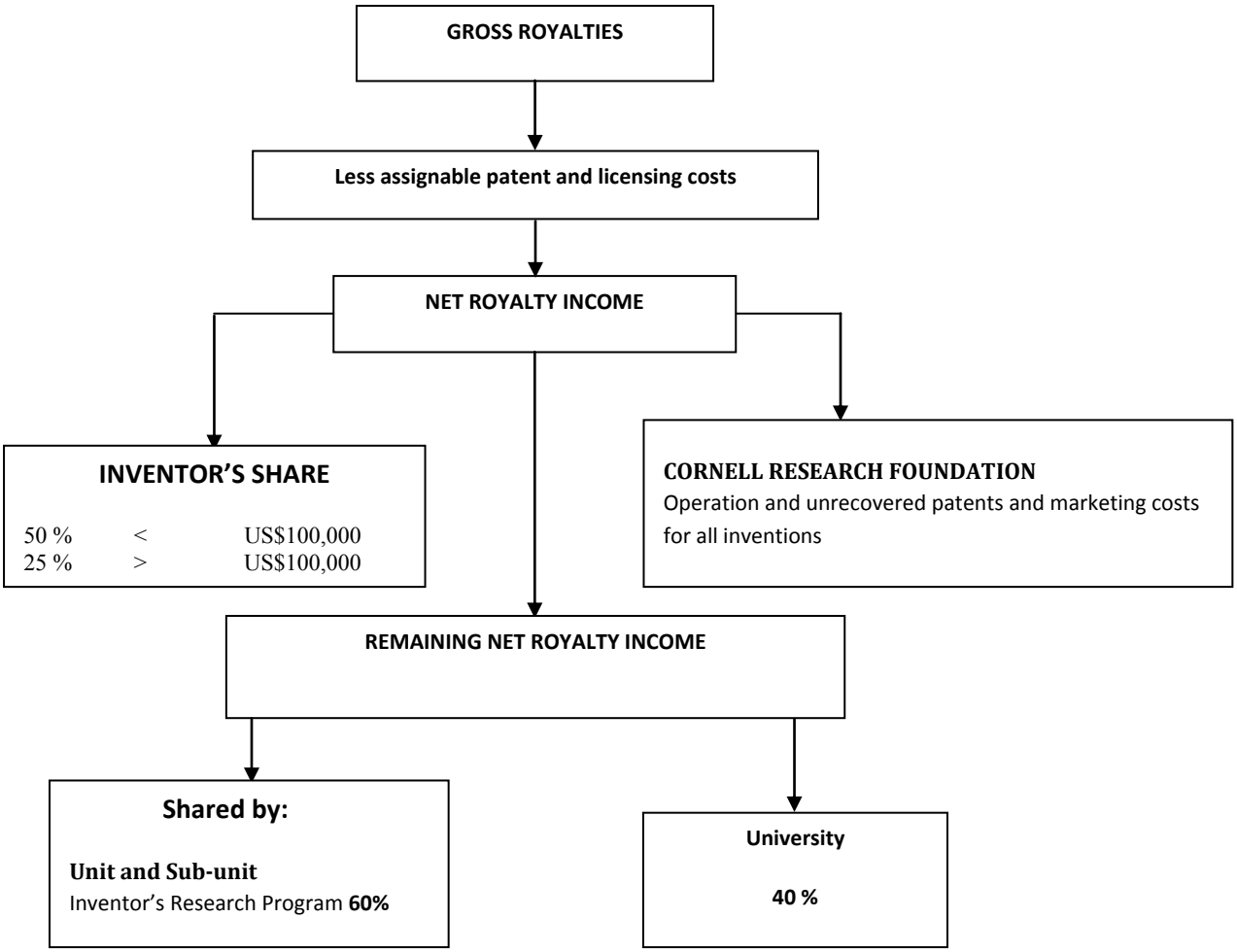
- 100% of the first $2,000 of royalties received under the license agreement;
- 15% of receipts between $2,000 and $50,000;
- 25% of receipts over $50,000.

In a financial year, the maximal amount an inventor may receive in royalty income cannot be more than $150.000. Amounts in excess are distributed to co-inventors (unless they also have an imposed limit) or to the Institute.

[8] Property Policy, University of Florida, http://web.uflib.ufl.edu/committees/etd/PolicyandProcedures/uf_IPP.pdf
[9] What every NCI scientist should know about Employees' invention Reports (EIR) and patents, U.S.DEPARTMENT OF HEALTH AND HUMAN SERVICES National Institutes of Health, 2009,https://ttc.nci.nih.gov/pdfs/brochures/EIR_brochure.pdf

Cornell Research Foundation of Cornell University (USA)[10]

Example of inventor's share from net royalty income



Kobe University of Japan[11] shall pay the inventors compensation for the patent registration and exploitation ("Compensation for Invention") as follows:

- the compensation for patent registration is ¥30,000 per one patent.
- the compensation for exploitation of a patent is 35% of the sum of royalty income and assignment fees after reduction of the patent costs.

The compensation for invention shall be divided among the inventors in proportion to their contribution rates to the invention when more than one inventor is involved.

The compensation for invention will also be paid to those inventors who have retired, taken other occupations, graduated, finished their course or left the University for other reasons.

In the event that an inventor has passed away, his or her successor is entitled to compensation for invention.

[10] Guidelines on Developing Intellectual Property Policy for Universities and R&D Organizations, WORLD INTELLECTUAL PROPERTY ORGANIZATION (WIPO), GENEVA, www.wipo.int/uipc/en/guidelines/doc/ip_policy.doc

[11] Regulation for Intellectual Property Management, The National University Corporation Kobe University, Japan

The remuneration that the University of Amsterdam[12] receives upon transfer of a patent application/patent or licensing thereof, or revenues from other forms of operation will be distributed as follows:

-the amount representing the costs incurred as part of the patent application and granting procedure and maintaining the patent, including consultation fees regarding commercial opportunities, will be subtracted from the remuneration amount. This amount will be credited to those Articles of the organisation that incurred the relevant costs.

- any remaining amount will be distributed as follows:

- 33 %(1/3) for an individual inventor or for a group of inventors and to be divided among them as they decide; the amount to be awarded to the inventor(s) during the entire validity term of the patent is limited to 2,500,000 EUR per invention;
- 33 % (1/3) for the faculty/research institute of the inventor(s);
- 33 % (1/3) for the Technology Transfer Office Patent Fund.

[12] REGULATIONS FOR INVENTIONS MADE BY STAFF OF THE UNIVERSITY OF AMSTERDAMAND OTHERS, Enacted by order of the Board on 13 November 2008

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