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Commercialization of Scientific Research: **An Introduction to an Effective R&D Processes – 2.0**

#PhDkomercjalizacja

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Minister Nauki
i Szkolnictwa Wyższego

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Introduction

This guide was created for those who want to take their idea through the full cycle – from the first hypothesis and laboratory result, through intellectual property protection and operational testing, all the way to the decision on licensing or building their own venture. In one place, we connect the language of science with the language of implementation, to facilitate communication between researchers, engineers, entrepreneurs, lawyers, and grant providers. Its purpose is not to spark admiration for innovation, but to provide answers: where you are today, what you need to prove tomorrow, how to document it, and with whom to talk along the way.

The book can be read linearly, but it can also be treated as a tool you can use at any point depending on your needs. If you need a compass – go to the chapter on TRLs. If you are preparing for a meeting with an industrial partner – look into the chapters on commercialization paths and IP protection. If you are planning funding – head to the section on grants and financing methods. Every path leads to the same point: conscious, documented technology development that increases your chances of publication, licensing, or implementation.

Here we want to emphasize that becoming a future entrepreneur does not mean the end of science – it is, in fact, a different dimension of it. The common denominator of science and business is the pursuit of reliability: every thesis should be backed by data, and every stage should conclude with a report that can be presented to an external partner. In science and innovation there are no shortcuts, but there are better-lit paths. This guide can serve as support, particularly at the beginning of your future startup journey. If it helps you take the next, right step – it has fulfilled its purpose.

Legal foundations of research results commercialization – a compass for doctoral students and research teams

This chapter organizes the most important legal frameworks around R&D results in Poland: from what can be protected (and how), through who holds the rights in the academic environment, to what contracts are used in practice and how to think about international protection. But before we are ready to explore aspects related to research commercialization, let's look at a simplified definition. Commercialization of science is a process that allows research and development (R&D) results to be transferred into the economic sphere, with the aim of their practical application and commercial use. The goal is to create added value, which may take the form of new products, services, or technologies that meet market needs and contribute to economic growth. Therefore, while exploring the following topics, it is worth keeping

in mind the key definition for the entire guide, which can be summarized in simple words: “transferring scientific value from academia to business, without forgetting about the profits.”

Industrial Property (IP)

Patents and protective rights (utility models), as well as rights from registration (industrial designs, trademarks), are regulated by the Industrial Property Law. A patent is granted for a technical solution that is new, involves an inventive step, and is capable of industrial application; as a rule, the right to obtain a patent belongs to the inventor, with exceptions for so-called employee inventions (discussed below).

A patent is available for a technical solution that is:

- new (absolute novelty – nothing publicly available before the filing date),
- involving an inventive step (not obvious to a “person skilled in the art” from existing technical knowledge), and
- industrially applicable (capable of being repeatedly implemented).

As a rule, the right to apply for a patent belongs to the creator, but the law provides exceptions for employee inventions: if the solution is developed within the scope of employment duties, the right to file may belong to the employer, while the inventor is entitled to remuneration.

It is important to remember the exclusions: discoveries and scientific theories, methods of presenting information, purely aesthetic creations, as well as diagnostic and therapeutic methods applied directly to humans or animals, cannot be patented. Likewise, a computer program “as such” is not patentable, although IT solutions with a technical effect may meet the patentability criteria.

Alongside patents, there is the utility model – a “smaller” exclusive right for a new and useful technical solution, usually relating to the shape, structure, or permanent assembly of an object (e.g., a mechanical grip, hinge, device casing). It does not protect methods (processes), but rather the form of an object, and the protection period is shorter.

For clarity:

- an industrial design protects the external appearance of a product (lines, contours, texture, ornamentation, color schemes), not its technical function,
- a trademark protects any sign capable of distinguishing goods or services in trade (word, logo, color, sound).

They also differ in protection horizons:

- patent – up to 20 years from filing (with maintenance fees),
- utility model – up to 10 years,
- industrial design – up to 25 years (in five-year periods),
- trademark – renewable every 10 years without limit.

In practice, the choice of protection path (Polish Patent Office/EPO, possibly parallel filings in other countries) and the order of actions must be synchronized with publication and communication – any public disclosure before filing can destroy novelty. Therefore, the foundations are: a reliable lab notebook, NDAs in partner discussions, and a clear decision on what to patent and what to keep as know-how

Copyright

Creative results – texts, graphics, documentation, presentations, material databases, as well as computer programs – are protected under the Copyright Act. Protection arises automatically at the moment the work is fixed (no registration required) and primarily covers:

- economic rights (the right to use and dispose of the work within defined fields of exploitation), and
- moral rights (e.g., authorship, attribution, integrity of the work's content and form).

As a rule, economic rights last for 70 years after the author's death.

In the employee–employer relationship, the principle of a work made for hire applies: upon acceptance of the work by the employer, economic rights transfer to the employer within the agreed purpose and fields of exploitation. Exceptionally, for

computer programs created as part of job duties, economic rights generally belong to the employer without the need for a separate transfer.

In projects involving doctoral students, grant performers, or subcontractors, it is important to specify in the contract:

- who and when acquires rights,
- which fields of exploitation are covered,
- whether an exclusive/non-exclusive license is granted,
- for what duration and territory,
- whether sublicensing is allowed, and
- what remuneration rules apply.

Remember: a rights transfer agreement and an exclusive license require written form under penalty of nullity.

At the intersection of copyright and data lies the issue of databases: protection may cover the creative selection or arrangement (as a work) and – independently – sui generis database rights belonging to the producer for substantial investment. In practice, distinguish between data (individual records, facts) and the database (structure, selection, arrangement), and determine who is the database producer and under what terms it may be exported, shared, or used for model training.

Trade Secrets (Know-How)

Equally important is trade secrets, also known as know-how. These are technical, technological, organizational, or other information of economic value that is not generally known or easily accessible to those normally dealing with such information, and whose owner has taken due care to keep them confidential. Disclosure, acquisition, or use of such information without authorization constitutes an act of unfair competition under Art. 11 of the Act on Combating Unfair Competition.

In other words – whatever gives you an advantage (process parameters, formula, algorithm, dataset, pricing matrix) is protected as long as you actually maintain its secrecy.

The law is subject to amendments, and some details (e.g., fair use exceptions, database protection overlaps, text and data mining provisions) evolve — before signing key agreements, check the current legal text and your institution's internal regulations, which often specify how rights are handled in research projects.

What does “due care” mean on your side?

The law does not impose one fixed set of measures, but in practice it means reasonable, consistent, and documented actions:

- access policies on a “need-to-know” basis,
- confidentiality clauses in contracts (NDAs, employment and cooperation agreements),
- labeling information as confidential,
- controlling circulation (repositories, DLP, encryption),
- access logs,
- trainings,
- “clean desk” procedures,
- record-keeping of storage media.

If you end up in a dispute, it is precisely this “evidence package” that will demonstrate that it was not a loosely guarded secret, but a genuine trade secret within the meaning of the law. (These requirements derive from Art. 11 of the Act on Combating Unfair Competition.)

What is Legal and What is Not? Reverse Engineering and Independent Discovery

The law permits arriving independently at the same results – including reverse engineering of a legally acquired product – as a lawful means of obtaining information, unless the parties have contractually restricted such activity (e.g., in a

license). This standard is set out in Directive 2016/943 and implemented in national legislation.

Practical takeaway: if you share a prototype or SDK (Software Development Kit) with a partner and want to prohibit reverse engineering, you must expressly state this in the contract. That will be the safest solution for you.

According to Article 5 of the Directive, protection measures do not apply, among others, when disclosure occurs in the exercise of the right to freedom of expression and information, in whistleblowing (public interest disclosure of wrongdoing), or for the protection of a legitimate interest (e.g., defense in legal proceedings). These exceptions act as a “safety valve,” ensuring that trade secret protection does not stifle criticism or public oversight.

What Remedies Do You Have in Case of Infringement?

The Act provides a range of remedies: injunctions, removal of consequences, damages or surrender of unjustly obtained profits, as well as publication of the judgment or destruction of media containing the secret. Claims are generally time-barred after 3 years (calculated separately for each infringement from the moment you could have learned of it and of the infringer’s identity). Quick reaction and securing of evidence are therefore essential.

Unlawful disclosure or use of a trade secret (e.g., in breach of an employment duty or NDA), if it causes significant harm, and the use of a trade secret obtained unlawfully, are criminal offenses punishable by a fine, restriction of liberty, or imprisonment of up to 2 years (Art. 23 of the Act on Combating Unfair Competition). In practice, the criminal route is often pursued alongside civil action to swiftly stop ongoing infringements.

Know-How and Public Information (Universities and Institutes)

In public universities and research institutes, the starting point is transparency: documents and information – from official correspondence to tender results – are generally subject to disclosure under the Public Information Act or via BIP (Public Information Bulletin).

This principle does not, however, exclude protection of know-how. To lawfully refuse disclosure of certain content as a “trade secret,” the institution must demonstrate that the information has real economic value, is not generally known or easily accessible, and that concrete measures have been taken to preserve its confidentiality.

In practice, this means:

- from the moment materials are created, confidentiality agreements with partners and contractors should be in place,
- access to sensitive files should follow a need-to-know principle,
- documents should be marked with a notice (e.g., “*Trade secret – [project/partner name]*”),
- IT systems should leave permission trails and logs.

This way, when the dean’s office, Technology Transfer Center (TTC), or rector’s office receives a request for public information, the institution can quickly and convincingly justify withholding certain fragments instead of hastily “patching up” confidentiality after the fact.

Collaboration with external stakeholders further complicates matters, since some documents pass through channels where disclosure is the default – for instance, public procurement proceedings. After bid opening, contractors often want to mark as much as possible as confidential, but the university can only redact what truly meets the criteria of a trade secret and is duly justified.

Good practice: agree with your partner in advance which attachments are confidential, insert appropriate clauses into the contract, and attach a short justification explaining why the information has value and what protection measures are applied. This facilitates both later redaction and defending the institution’s stance against a requester.

In academia, one particularly important area is synchronizing two worlds: publishing results and preserving novelty for patenting. If you anticipate filing, the sequence must always be: filing (even provisional), then preprint, conference talk, poster, or repository code release. Every public disclosure becomes part of the prior art and may destroy novelty.

Therefore, plan the calendar carefully: weeks before a conference, consult with your TTC and patent attorney about the scope of information, prepare files in two versions (full and “public”), and ensure the entire team maintains confidentiality until the filing date. This order – consistent marking, limited access, contracts, and a thoughtful timeline – allows a university to meet transparency obligations, protect the public interest, and effectively safeguard the know-how of researchers and partners

Duty to Notify the University

An employee (and usually also a doctoral student or project contractor) has a duty to report obtained results and related know-how to the university – preferably before any public disclosure. Typically, this is done using a simple form submitted to the TT in accordance with the university's IP management and commercialization regulations.

This notification triggers a university decision: whether it will protect and commercialize the results (e.g., through licensing, rights transfer, spin-off) or transfer rights to the creator under clear, pre-defined rules. Until a decision is made, you are obliged to maintain confidentiality, cooperate in evaluation and possible protection, and refrain from independent implementation.

Remember the exceptions: if a project has specific terms in an agreement with a partner or grantor, those may override default university rules. In practice: notify early and in writing, and check the deadlines and procedures in your university's regulations and project agreement.

Patents

National Patent

For anything to function properly, the first step is order – in rights and in evidence.

1. Identify inventors and rights holders. Determine who qualifies as an inventor (who contributed inventive input), who will be entitled to file (university/company/inventors – depending on contracts and employee invention rules), and whether external funders have IP rights.
2. Protect confidentiality. Before showing anything to anyone: put NDAs in place, lock down public repositories, freeze preprints and posters – any public presentation before filing kills “novelty.”
3. Search prior art. Conduct a quick but reasonable search of patent and non-patent databases to check whether your solution meets the three pillars of patentability: novelty, inventive step, and industrial applicability. Decide what to patent and what to keep as know-how.
4. Prepare the filing package. The core includes:
 - description (technical field, background/prior art, essence of the invention, drawings with references, embodiments/parameters,

industrial applicability),

- patent claims (the exact scope of protection sought),
- abstract for publication.

Everything in the claims must be supported by the description.

5. List inventors (a substantive, not hierarchical, matter), identify the applicant (university/employer/inventor), and, if using a patent attorney, prepare a power of attorney.
6. File with the Polish Patent Office (UPRP). Submit electronically (trusted profile/ePUAP) or in paper form. The filing consists of a form + description + claims + drawings + abstract + any power of attorney and proof of fees. If you want to claim priority from an earlier filing (e.g., abroad), indicate it in time and attach proof – the priority window is generally 12 months. Once a complete filing is received, the Office assigns a filing date and number. Missing elements will trigger a request for supplementation – respond promptly and directly, as delays here often cost momentum.
7. Examination and publication. After formal review, the Office conducts a prior art search and issues a report with a preliminary patentability opinion. This is often the first confrontation with the “real” landscape of prior art and publications. Use this stage to refine your strategy: narrow or reformulate claims, add dependent variants, and drop weak elements. Keep unity of invention in mind – if unrelated solutions are squeezed into one application, the Office may require division.

About 18 months from the priority date, the filing will be published in the UPRP Bulletin. From this point, it is public, and third parties may submit observations. This is a good time to align communications (marketing materials) and monitor competitors. Note: publication ≠ patent grant. Substantive examination continues, with office actions (novelty, clarity, inventive step objections) and your responses. Timeliness and consistency are critical here.

8. Grant and maintenance. If the Office finds the criteria met, it issues a decision granting the patent. After payment, UPRP publishes the specification, records the right, and issues the patent document. A Polish patent lasts up to 20 years from the filing date, provided annual renewal fees are paid. Typically, the first payment covers years 1–3, then subsequent annual payments are due before

each protection year. Do not postpone – set calendar reminders with buffers.

9. After grant – manage and enforce.

- Update documents, change labels from “Patent pending” to “Patent No. ...,” decide on licensing policy, keep a register of agreements, and monitor renewal fees.
- Actively engage with the market: monitor for infringements and plan an enforcement strategy (warning letter → negotiations → securing evidence → lawsuit).
- If your filing was the first and you intend to expand abroad, remember the time windows (12 months for priority, 30/31 months for PCT national phase).

International Patents

An international strategy does not have a single template. Its backbone is the timeline and three milestones: 12 months, 18 months, and 30/31 months from the priority date. The day of filing the first application (whether in Poland or at the EPO) establishes priority. Within 12 months, you can file further applications in other countries and regions, or use the PCT procedure, claiming that priority. Around the 18th month, your application is published, and in the meantime, you usually receive the first search report. In PCT, at the latest around the 22nd month, you can request an in-depth examination, and real territorial decisions and large costs appear only when entering the national phases: in most jurisdictions around the 30th month, and at the EPO regionally usually by the 31st month.

This rhythm allows you to consciously manage publications and budget: a practical plan is “file → present → iterate,” meaning first file the application, then a presentation or preprint, and in the 12th month expand protection based on new PoC and pilot data.

When to Use PCT?

Use PCT when you want to buy time, spread costs, and not close territorial doors. The PCT procedure does not give a “worldwide patent,” but it provides one publication, a preliminary opinion on patentability, and, above all, defers the decision on where to enter with protection until the 30/31 month. This is very helpful when, a year after the first filing, your TRL is still 4–6, you are testing the market, and you still do not know whether the key territories will be the USA, China, or perhaps only Europe. A positive opinion in PCT also opens acceleration paths in selected offices

(programs such as the Patent Prosecution Highway), which shortens local proceedings.

However, if you are convinced that your main arena is Europe, and you want to quickly obtain solid examination and a strong signal to partners, direct filing at the EPO is often better and cheaper than going through PCT.

When to Use EPO?

Use the EPO when Europe is the first or only market, and you care about a single substantive examination procedure and flexibility after grant. Rights obtained at the EPO can either be validated in selected countries, or – if you aim for broad EU coverage – you can use the unitary patent, which combines most participating countries into one right with a single renewal fee and a centralized court (UPC).

The unitary patent simplifies life, but has a cost: a central invalidation acts “on the entirety.” For core technologies, it can sometimes make sense to split the risk by combining the unitary effect with individual validations in several key countries or outside the UP system where it makes sense.

Operational Timeline

The operational timeline can be summarized in a few sentences. Six to eight weeks before the planned publication, contact the TTC and patent attorney, decide what will be disclosed only after filing and what will remain as know-how. Four weeks before the presentation, finalize the description and drawings and “slim down” public materials by removing key parameters. On day zero, file the application and only then publish.

After twelve months, with new data and comments from labs or pilot tests, expand protection via PCT or direct EP, referring to the priority. At eighteen months, incorporate conclusions from publications and the search report, correct claims strategy, and prepare possible acceleration paths. In the thirtieth or thirty-first month, enter national phases where you have real sales or production plans, or where you expect competition.

Throughout this process, remember the budget and the “go/no-go” points. The first filing usually costs a few to a dozen thousand PLN, plus drawings and the patent attorney’s work. PCT adds expenses in the first year, while the big costs appear when entering national phases: official fees, translations, local attorneys. Renewal fees increase as the patent ages, so set annual reminders and review which territories you maintain and which you abandon. Where time is critical, consider accelerations: PACE at the EPO, PPH in many pairs of offices; if the office requires “unity of invention,” split the family into dependent (divisional) applications to maintain

alternative protection directions. In the USA, the continuation mechanism can be useful to adjust claims to current market conditions.

TRL – Technology Readiness Level

The Technology Readiness Level (TRL) scale is a simple yet demanding way to describe technology maturity. It organizes the journey from the first observation of a phenomenon to a solution tested in real operation. Its strength does not lie in the number itself, but in the requirement to provide credible “proof” at each stage.

In this guide, we treat TRL as a common language for researchers, engineers, investors, and grantors: it immediately shows where we are today, what we must demonstrate tomorrow, and how to plan the next step.

In the following steps, we will try to explain it using a relatively simple example, showing how it works in practice and what to pay attention to. Instead of a clinical test or advanced device, let’s take a microbiological mixture for a home compost bin: a non-invasive mixture of safe microorganisms and enzymes that accelerates the decomposition of kitchen waste and reduces odor.

TRL 1 – Basic principles observed

At this stage, you only know that certain microorganisms and their enzymes decompose starch, proteins, or fats, and that increased temperature and humidity favor composting. You have a literature review and notes from classes/research – no product yet, just understanding of the phenomenon.

TRL 2 – Application concept

An idea for use emerges: a sachet with a dry mixture to sprinkle in layers in a home compost bin. You define the purpose (faster decomposition and less odor), for whom (apartments with balconies, houses with gardens), and how it should work (dose once a week). This is still only a description, preliminary requirements, and a risk map. You are undoubtedly becoming more curious and asking more questions at this stage.

TRL 3 – Proof-of-concept

You conduct mini-experiments in simple containers, introducing the same amount of waste into several vessels, testing different mixture compositions and a “no proprietary mixture” control. You measure weight loss, temperature, and odor in a simple way (e.g., a smell panel). After a few weeks, you see that certain mixtures indeed accelerate decomposition and reduce odors. You have proof of the mechanism – still not a product.

TRL 4 – Laboratory prototype

The first prototype sachet is created: the mixture in a carrier, a simple bag, a one-page instruction. In controlled conditions (small laboratory compost bins), you demonstrate repeatable effects compared to the control: a certain percentage of faster weight loss and less odor after 14 days. You collect data on temperature and humidity over time, confirming consistency with what you predicted at TRL 3.

TRL 5 – Prototype in relevant environment

You move testing to near-home conditions, identifying several balconies and gardens, different types of waste (more citrus, more coffee grounds, different seasons). The same prototype still produces statistically significant effects, though you now observe “real-life” disturbances, e.g., someone dried out the compost, someone added too many eggshells, etc. You document when the mixture works best and which user errors disrupt it.

TRL 6 – Operational prototype

You build a prototype very close to the real product, define the final mixture composition, packaging materials, and create a QR code for instructions. You run a pilot in dozens of households for 2–3 months: real use, hotline support, feedback collection. You check product stability (how long it retains activity on the shelf), learn about logistics, and how people read the instructions.

TRL 7 – Integrated system demonstration

You conduct a full demonstration, collaborating with a housing cooperative or municipality: deliver the mixture, conduct short user trainings, and collect data (photos, surveys). Your proposed system works across the process – mixture + instructions + containers + communication. Repeatable results and scaling insights emerge (e.g., a “too wet/too dry” indicator is needed in instructions).

TRL 8 – Qualification and readiness for deployment

You finalize product qualification: composition is final, stability tests done (temperature, humidity), packaging complies with waste contact requirements, quality procedures for mixing and packaging established. Instructions are refined, marketing material clear. The product is in its target configuration, ready for regular sales.

TRL 9 – Confirmation in operation

The mixture is “alive” with users: regular sales occur, feedback and returns arrive, hotline inquiries appear, observations across multiple seasons are collected. You have real-world data, e.g., average decomposition time of individual compost layers, satisfaction indicators, number of complaints. Based on this, you confirm value and make small adjustments (e.g., smaller winter sachets due to higher humidity).

Commercialization Paths in LHEaS and Benefit Sharing for Creators

Direct and Indirect Commercialization

The Higher Education and Science Act provides for two main commercialization paths for research results: direct and indirect.

Direct commercialization occurs when the university manages the rights to results or know-how – selling them, transferring them, or granting a license to an external partner. This is usually handled by the technology transfer unit, and at some universities – based on an agreement – also by a dedicated university company.

Indirect commercialization involves creating or joining companies that implement the results: the university acquires or subscribes to shares (also through a dedicated company), and the IP itself is contributed to the company as an in-kind contribution or license.

The choice of path depends on the maturity of the technology and the strategy: if a specific recipient is ready to implement the solution, licensing or selling rights is usually faster; if a product and market need to be built, a spin-off company is established, where the university and creators combine expertise and capital.

Both paths are preceded by the same procedural step: submitting results to the university. If, along with the submission, the creator declares that they want to take over the rights and commercialize independently, the university has a set period to decide whether it will act itself or transfer the rights to the creator for a statutorily limited compensation. Until the decision is made, the creator maintains confidentiality and collaborates in assessment and potential protection.

Regardless of the path chosen, the law guarantees a minimum share of benefits: when the university commercializes, creators receive a significant portion of revenues; when the creator commercializes after taking over rights, the public university has a share in the obtained funds.

In practice, the details (thresholds, revenue splits, cost calculations) are specified in the university's regulations and the particular agreement – licensing, sale of rights, or investment agreement when creating a company. This structure ensures that ownership and responsibility are addressed first, and then the tool is chosen: license agreement, sale of rights, or company vehicle for development and implementation.

Two important principles for creators:

1. If the university commercializes (e.g., sells rights or grants a license), creators receive at least 50% of funds obtained by the university after deducting justified costs specified in its regulations (e.g., official fees, patent attorney costs, negotiation and contract management costs).
2. If, after submission, rights pass to the creator and they commercialize themselves, the public university is entitled to 25% of the funds obtained from commercialization (also after cost deductions specified in the regulations).

This division also applies in co-authorship: the university calculates the total pool due to creators, then distributes it among co-creators according to shares listed in the submission or in an agreement between them.

In practice, payments may take the form of advances, lump sums, license fees (royalties), or milestone bonuses – depending on the agreement with the partner. In indirect commercialization (e.g., spin-off), creator compensation may be mixed: part in company shares/stocks, part in license fees paid to the university and then distributed to creators. The exact proportions, cost catalog, and payment schedules are always specified by the university regulations and the specific agreement with the partner or company.

Technology Transfer Center (TTC)

The Higher Education and Science Act provides that universities may establish specialized units responsible for direct commercialization of research results. In practice, this role is fulfilled by the Technology Transfer Center (TTC – sometimes as a central unit, sometimes as a network of representatives across faculties, often cooperating with the university's dedicated company.

The TTC is the first point of contact when a result with implementation potential appears: it receives the submission, organizes rights, plans protection, and guides the team through negotiations.

First task of the TTC: verify potential and legal title. The team requests a description of the solution, a list of creators and co-owners (including external ones),

information on funding sources, and publication plans. At the same time, novelty and patentability (or justification for keeping the knowledge confidential as know-how) are assessed. At this stage, TTC helps synchronize protection with conference and preprint calendars to avoid losing novelty before filing.

Second block: commercialization strategy – “license or spin-off?”

- If a ready market recipient exists to implement the solution, TTC usually guides towards a license – defining fields of use, territory, duration, scope of exclusivity, sublicensing conditions, milestones, and payment model (upfront fee, royalties, minimum annual).
- If the technology requires further product development and market building, a spin-off is the natural path: TTC helps map founder roles, design the share structure, decide whether IP enters the company as an in-kind contribution or as a license, and determine the role of the dedicated company (shareholder, licensor, service provider). The decision is structured with a simple matrix: TRL level, regulatory barriers, capital needs, number of potential licensees, and the extent to which the advantage lies in the technology itself versus the business model and team.

Regardless of the path, TTC assists in valuation. Common approaches include:

- Income-based: forecasted license fee streams, discounted for risk and maturity stage.
- Cost-based: cost to recreate the solution.
- Comparative: transactions on similar technologies, if available.

A good practice is to combine methods and document assumptions – this facilitates negotiations and audits by funders or investors. Realistically, valuation is challenging for highly novel solutions developed over many years.

Next TTC area: negotiations and contracts. TTC manages the full set of documents: from NDA and letter of intent, through term sheet, to the actual license or transfer agreement, and in spin-off models – also investment and corporate agreements. Keep in mind the existence of the university’s dedicated company, which supports newly formed spin-offs. In R&D projects, joint development agreements (JDA), material transfer agreements (MTA), and data sharing agreements (DSA) are also involved. TTC ensures consistency between documents and university regulations:

publication rights, scope of responsibility, fields of exploitation, and that agreements align with public funding obligations.

Practical Advice for Creators

To prepare for a meeting with TTC, have ready:

- A 1–2 page description of the solution and problem.
- List of co-creators and co-owning institutions.
- Project/grant numbers and obligations.
- Research notes (lab book, repository).
- List of derivative elements (open-source libraries with licenses).
- Brief summary of tests/TRL.
- Publication plan.
- Preliminary ideas about applications and clients.

This accelerates assessment and avoids later contract corrections.

University Regulations

The regulations on intellectual property management and commercialization define submission procedures, deadlines, decision thresholds, minimum creator share in benefits, share distribution in spin-offs, and the catalog of costs deducted in settlements. Regulations are published in the university's Public Information Bulletin (BIP), which also provides form templates and TTC contacts. Before negotiating with an external partner, consult this document – it prevents surprises and allows discussion “in line with university policy.”

Typical Flow from Submission to Agreement

The usual sequence:

1. Submission to TTC.
2. Quick “screening” for novelty and risks.

3. Decision: patent/know-how and publications.
4. Choice of path (license vs. spin-off).
5. Preliminary valuation and term sheet.
6. Partner due diligence.
7. Negotiation and signing of agreements.
8. Settling fees, milestones, or university/company capital entry.

A well-organized TTC acts as a guide through these steps: managing the calendar, translating legal language into actions, and balancing scientific ambition with market requirements. This transforms commercialization from a one-time “event” into a repeatable process – transparent for the team, safe for the university, and attractive for the partner.

If you cannot easily find information about your Technology Transfer Center, you can visit the ATTCA website (Academic Technology Transfer Centers Agreement) to find current contact information.

University Special Purpose Vehicle (USPV)

A special purpose vehicle (USPV) is a capital company established by a university (usually a limited liability company or joint-stock company) whose task is to “translate” research results into the language of the market. It works closely with the Technology Transfer Center (TTC), but operates in a more business-oriented form: it can make decisions faster, conclude contracts, take shares in companies, and manage a portfolio of projects with implementation potential. Thanks to its legal personality and separate assets, it separates business risks from the university and allows negotiations in a formula typical of the private market. It can be compared to the university’s private arm.

As mentioned, the USPV deals primarily with preparing and executing commercialization transactions. It may grant licenses for R&D results, transfer rights (when justified by strategy), take or acquire shares in companies created to implement technologies (spin-offs), and sublicense IP. It also carries out valuations (combining cost, income, and comparative approaches, as mentioned earlier), organizes due diligence on the part of the university and the partner, coordinates IP protection (applications, maintenance, international strategy), and negotiates financial terms (upfront fee, royalties, milestones, equity). In many centers, the USPV

also provides additional support services: accounting and legal services for spin-offs, grant management, access to infrastructure, and regulatory advice (e.g., medical devices, data security).

The actual activities undertaken by a university's USPV largely depend on its portfolio and on the needs of researchers and the market. As previously mentioned, the USPV operates on business principles, so it reacts to market changes and trends—unlike the TTC, which operates independently of current market shifts.

From the perspective of this guide, it is important to indicate how the USPV helps young researchers in particular. The key is to recall that the USPV most often engages in indirect commercialization and, if it has the right resources, also undertakes direct activities, e.g., provides diagnostic services. For PhD students and young researchers, the USPV often serves as a “bridge” between the laboratory and the first customer. It helps to arrange intellectual property matters (usually in cooperation with the TTC), choose the path of action (license for an existing company or creation of a spin-off), prepare standard documents (especially those for founding a spin-off), and find missing competencies for the team (CEO, sales, regulatory affairs). It often has resources for micro-financing early steps (market research, proof-of-business, first patent applications) and leads to external capital (business angels, VC funds, NCBR/PARP/EIC programs). Equally important is the “soft” support: preparing for investor talks, equity valuation, designing vesting and exit rules, etc.

So, summarizing as we did for TTCs, the actions usually look like this: a result with potential goes to the TTC (submission), the TTC performs an initial screening of novelty and risks, and then—if the direction is business-oriented (with particular emphasis on indirect commercialization)—the case is passed to the USPV. The USPV prepares a commercialization plan and recommendation, e.g., a spin-off involving the university and creators. After approval by the university authorities, the USPV concludes agreements (license, investment, rights transfer) and supervises the implementation of conditions (milestones, sales reporting, IP protection). Its revenues come from license fees, services, and returns on equity investments (dividends, exits), and the generated value flows back into the system: for the university, units, and creators, in accordance with regulations. Key decisions are made based on investment policy and with respect for transparency and conflict-of-interest rules.

The USPV increases flexibility (faster decisions, market-level negotiation pace), safety (risk separation, professional IP management), and financing opportunities (a credible partner for investors). For a young researcher, this often makes the difference between a “promising result” and a product with first users. The condition

for success is one: transparent rules of the game—clear IP management regulations, standard documents, and predefined rules for benefit- and equity-sharing.

Transaction Models in a Nutshell

In practice, three simple arrangements are used:

1. Direct license – IP remains at the university/USPV, and the partner pays an upfront fee and royalties.
2. Contribution/license to spin-off – the USPV contributes IP or grants a license to a new company and takes shares in it.
3. Mixed – territorially/industry-limited license for a company + parallel spin-off for another market segment.

The choice of model depends on technology maturity, number of potential recipients, and capital needs.

A Few Words About Contracts in the University Ecosystem

NDA (Non-Disclosure Agreement)

An NDA, or confidentiality agreement, is the basic “seatbelt” for conversations with a company, investor, or within a consortium: it allows you to disclose as much as is necessary to assess cooperation without losing control of the information. The agreement itself does not create a trade secret but helps to maintain it—provided you actually take care of confidentiality (markings, “need-to-know” access, permission-based repositories). A well-drafted NDA clearly defines the purpose of disclosure (e.g., exclusively evaluating licensing/investment), defines what constitutes confidential information (not only files labeled “Confidential” but also presentations, conversations confirmed by email, access to repositories), specifies who may access it on the other side and under what conditions (mandatory “flow-down” to advisors), prohibits reverse engineering and decompilation, regulates the protection period also after talks end, provides a procedure for disclosure required by an authority/court, and states that disclosure does not transfer any IP rights.

For example, when a university team shows a prototype to a biomedical company, the NDA limits the use of information to licensing evaluation, prohibits dismantling the device and comparative publications without consent, and, after the decision, requires return or secure destruction of copies. This way, the partner sees “enough to

decide” but cannot reconstruct the solution “from the traces.” It is worth remembering that an NDA cannot replace good security practices—without consistent labeling of materials and access control, even the best template will be difficult to enforce.

Licenses

A license is permission to use someone else’s intellectual property without transferring ownership. In practice, it is the most flexible commercialization tool: it allows adjusting scope, duration, and price to the technology’s maturity and the parties’ risk appetite. Every good license answers five questions: who uses (and whether they may sublicense), what exactly (patent, application, software, data, know-how, trademark), to what extent (fields of exploitation and territory), for how long, and for how much (upfront fee, royalties, annual minimums, milestones). Additional elements include quality obligations (maintaining IP, sales reporting, confidentiality), rules for improvements, and termination procedures.

Exclusive License

An exclusive license gives one partner the right to use the technology within a defined scope as the only entity—neither the licensor nor other licensees may operate in that area. Exclusivity may be limited to a specific field of use or territory and is often combined with the right to sublicense, as the partner must build a sales network. This model makes sense when implementation requires large investments and risk: certification, clinical trials, production lines, or building a market from scratch.

In return for exclusivity, the licensor expects real commercialization progress, so the contract includes implementation obligations and milestones (e.g., CE marking by a set date, first sale within 24 months, revenue thresholds sustaining exclusivity), and failure results in loss of exclusivity or termination of the contract. Compensation usually has several components: upfront fee, sales royalties, annual minimums, and milestone payments; in spin-off projects, part of compensation may be in shares. Supplementary clauses address IP maintenance and enforcement (who pays for protection, who conducts disputes, how damages are shared), rules for including improvements, and strict confidentiality of know-how packages along with a reverse engineering ban. The biggest risk of exclusive licensing is “freezing” the technology if the partner fails to deliver—hence the importance of measurable progress thresholds and safeguards against changes in licensee control. For example: the university grants a medical company five years of exclusivity for oncology applications in the EU, but exclusivity continues only if milestones are met; no sales within two years automatically changes the license to non-exclusive.

Non-Exclusive License

A non-exclusive license works the opposite way: the same technology can be licensed to multiple entities simultaneously, and the licensor usually retains the right to use it themselves. This model works well for “platform” solutions with many applications that do not require huge investments from a single partner. Agreements are simpler financially (lower upfront fee, fixed per-unit or revenue-based rates, often without minimums), but must very precisely describe fields of exploitation and market segments to avoid conflicts between licensees.

Typically, sublicensing rights are limited or subject to university approval, and “most favoured nation” clauses that could tie prices for everyone are excluded. The risk in non-exclusivity is price erosion and communication chaos, so it is worth planning segmentation in advance (e.g., separately medicine, education, and research) and a policy of differentiating terms.

The final choice between exclusivity and non-exclusivity depends on TRL, regulatory barriers, capital needs, and the number of potential recipients, but in both models the key remains: precise scope, measurable obligations, transparent reporting, and clearly described exit scenarios.

Other Elements Differentiating Licenses

Apart from the division into exclusive and non-exclusive, licenses differ primarily in their subject matter and the way they are used. The key question is what exactly you are licensing: the patent or application itself, know-how and implementation documentation, software with an API, research data, and sometimes even the university's trademark. Each of these “building blocks” carries different obligations – patents require maintaining protection and support in enforcing rights, know-how shines only as long as it is effectively protected, software raises questions about the model of use (on-premises or SaaS), number of instances, etc.

Another difference arises in the fields of use: the same invention can be divided according to applications (e.g. oncology vs. veterinary) or distribution channels (medical devices vs. diagnostic software). Territory and time should reflect the partner's actual ability to implement – often a pilot on several markets with the right to expand upon achieving milestones makes sense, or exclusivity limited in time that automatically turns into non-exclusivity if progress does not occur.

Methods of Remuneration in Licensing and Spin-off Agreements

The remuneration model is the most important element of any transaction – it should reward implementation, not just signing the contract, and must be measurable and auditable. In practice, a single mechanism rarely works – hybrid

arrangements are most effective, combining an upfront payment, progress bonuses, and revenue sharing from the market. Below we organize the most common elements, with a comment on “what they are for” and how to align them with the interests of both the university and the partner.

1. Upfront payment signals seriousness of intent and reimburses part of the IP protection costs. It can be non-refundable or creditable against future royalties – the latter is helpful when the partner has a limited budget at the start but a real commercialization plan. In the “option fee” variant, less is paid, provided the partner decides on a full license within a specified time.
2. Running royalties are a percentage of sales or a per-unit rate. Rates are often tiered (decreasing at large scale) or differentiated across fields of use and territories. Standard practice includes “royalty stacking” reductions if the licensee must pay multiple IP holders for the same function; equally typical is a step-down after patents expire, when only know-how remains (lower, but non-zero rate).
3. Annual minimums serve as a safeguard, maintaining exclusivity only if the partner truly develops the market. Decide whether failure to meet the minimum results in a top-up payment, loss of exclusivity, or termination; grace periods (e.g. first year without minimums) and “catch-up” mechanisms are worth considering, so as not to penalize a single weak quarter.
4. Milestone payments (technical/regulatory/commercial milestones) reward actual progress without waiting for sales. Triggers must be objective and verifiable (e.g. “filing a clinical trial with the appropriate authority,” “first invoice above amount X,” “obtaining certification relevant to the company”), clearly time-stamped, and independent of completely external factors. They should not be mixed with penalties – treat them as success bonuses, not punishment for delays.
5. Sublicense income arises when the partner builds a distribution network. Usually, parties share revenues from upfront and royalty sublicense fees according to an agreed key, but it is important not to allow the licensee to “shift” all value into sublicenses while making only symbolic direct sales – this is prevented by minimums and the requirement of consent for the first line of sublicensing.
6. Equity component is natural in the spin-off model, where the university or special purpose vehicle acquires a small package of shares (often in exchange for reduced license fees), and royalties are lower or limited until

investment is recouped. It is worth defining vesting for founders (motivation model), dilution rules (e.g. broad-based weighted average), and ESOP relations (Employee Stock Option Plan). A royalty buyout option after reaching a defined value also works well – a simple way to “clean up” the cap table at a later stage.

There are more remuneration elements, but the six listed above constitute a basic – and slightly extended – catalog of forms that should suffice at this stage. Regardless of the variant, remember four “connecting threads.”

- First, fit to stage: the lower the TRL and the greater the uncertainty, the more weight should be on milestones and equity, and less on high minimums.
- Second, transparent definition of the royalty base and segmentation of fields/territories – order now means fewer disputes later.
- Third, diligence: exclusivity only for progress, with clear, measurable conditions and regular review.
- Fourth, exit routes: buy-out, loss of exclusivity, reversion of rights if no implementation occurs – this is not pessimism, it is insurance for both parties’ interests.

Academic Start-ups – From Idea to Company. The Difference Between a Spin-off and a Spin-out

An academic start-up is a company built around research results or the specialized know-how of a scientific team. It arises when the technology still has some distance to cover before reaching the market (needs iterations, user validation, first customers), and a classical license “to a company” does not provide the pace and attention the product requires. In this model, researchers not only transfer rights but also co-create the enterprise and participate in building its value.

Spin-off vs. Spin-out – What This Means in Practice

In the Polish ecosystem, these terms are sometimes mixed, but it’s worth sticking to a simple distinction. A spin-off is a company established with the university’s participation (directly or through a special-purpose vehicle). The university contributes intellectual property (e.g., a license or an in-kind contribution of rights) and usually takes shares, with the process supported by a technology transfer office

(TTO) or that special-purpose company. At this stage, particularly important are clarifying IP, negotiating the contract, valuing the solutions, and securing financing.

A spin-out, on the other hand, is a company founded by researchers independently, outside the university's ownership structure. It may use technology under a license (often non-exclusive or limited to a specific application), but the university does not directly hold equity.

In practice:

- A spin-off is strengthened by the university's brand and institutional support, but comes with more formal obligations.
- A spin-out gives the team greater autonomy but requires them to independently handle negotiations, financing, and IP management.

Thus, if the competitive advantage lies in university-owned rights (patents, key filings, unique databases), and market entry requires capital and a long runway (regulations, serial prototyping), the natural choice is often a spin-off. If, however, the core value lies in the team's know-how and speed of execution, where IP can be narrowly licensed (or the product doesn't require patent protection), and the project should grow free of institutional procedures, then a spin-out makes sense.

Both models can also be combined over time: starting as a spin-out with a research license, and later, as higher TRL is achieved, extending the license or allowing the university to take equity. Still, regardless of the model, the first step is reporting results to the university and clarifying IP ownership.

In a spin-off, the university usually grants an exclusive license (with defined fields of use and territory) or contributes IP as equity, in exchange for shares, agreeing on the founding team, milestones, and brand use rules. In a spin-out, the university typically grants a non-exclusive or narrowly exclusive license, without taking equity, while retaining rights for research and publication.

For tech start-ups in Poland, the most common legal forms are a limited liability company (sp. z o.o.) or a Simple Joint Stock Company (PSA). PSA is flexible: low entry threshold, easy share issuance, simple employee stock option programs, and the possibility to issue shares for non-monetary contributions (e.g., know-how, work, and services – counted toward shares, not share capital). A limited liability company is often simpler tax-wise in the early phase and works well with a single investor. The choice should be aligned with the financing plan (angels/VC) and the future ESOP.

Regardless of the form, the company agreement and founders' agreement should already cover: transfer of rights to work results to the company, vesting of founders' shares (e.g., 4 years with a one-year cliff), and exit rules.

Team, roles, finances, and responsibilities

A successful start-up usually combines three pillars: product/technology (CTO/CSO), customer/market (CEO/COO), and capital/process (finance, law, grants). Equity split should reflect current contribution and responsibility, not just past authorship of results. Define clearly who is responsible for sales and partner talks, who for the technical roadmap, and who for financial audits, etc. Vesting and reverse vesting protect both the company and relationships if someone leaves prematurely.

First funding steps are usually grants and microgrants (proof-of-concept, prototype), TTO/special-purpose company funds (for IP protection and early market work), business angels, and small pre-seed rounds. Later, loans can work, and for larger rounds – a standard investment agreement with tranche schedules and milestones.

In the spin-off model, part of the “price” for IP is often settled through equity and reduced royalties, making it easier to close financing.

A scientist in a company plays two roles: employee/lecturer and co-owner of a business. University regulations usually require declaring such activity, sometimes with supervisor or rector approval and a conflict-of-interest statement. It's worth clarifying in advance the rules for using university infrastructure, time accounting, and publication. That way, the project grows legally and without unnecessary tensions.

Common pitfalls and how to avoid them

The biggest problems usually stem from unclear IP (who is the inventor, what exactly is being licensed), overly broad exclusivity without milestones (technology gets “frozen” with one partner), lack of vesting among founders, and mixing university resources with company operations without clear rules.

The antidote is simple: early result disclosure to the university, a clear license or IP contribution, a “role map” within the team, vesting, and a founders' agreement. On the university side: transparent regulations and TTO/special-purpose company support.

A well-designed academic start-up is an extension of the lab toward the customer. Whether you choose a spin-off or spin-out, the same logic applies: clear rights, a realistic go-to-market plan, measurable milestones, and a team that connects science with product. If those blocks fit, the legal form and label are just tools.

Implementation Doctorate – A Practical Chapter for the Researcher and the Company

The implementation doctorate is a pathway in which research is subordinated from the beginning to real application at a specific employer. In practice, three perspectives meet here: the PhD student, who develops the scientific concept and creates measurable results; the university with the supervisor, which ensures scientific quality and compliance with the doctoral program; and the cooperating entity, which provides the implementation environment and resources. The idea of the program is therefore not a “PhD inside a company,” but a doctorate whose product, alongside the dissertation, is an implementation – a technology, method, procedure, or tool that begins to live in practice.

The starting point should be a clearly defined business or organizational problem. Instead of a vague slogan such as “we will increase efficiency,” you need to directly name the problem: overly long process stages, low sensitivity of an analytical method, high user error rate, unit cost, emissions, or failure rate. Only then can a research hypothesis be built and the path to a solution outlined. TRL helps here (as mentioned above) – what maturity level the technology is at today, and what level you want to reach at the end; between these points, you define transitions with evidentiary elements – test protocols, pilot scenarios, operational data. In a good application and four-year plan, you see changes in scale: first laboratory and models, then a relevant environment, then a prototype in operational conditions at the employer, and finally qualification and stable operation of the solution.

Relationships and roles are just as important as the technology itself. On the university side stands the supervisor, responsible for the scientific side, scholarly output, and compliance with the doctoral school’s program; on the employer’s side works the implementation mentor, who creates the environment with access to data, processes, infrastructure, and makes operational decisions. The PhD student connects both worlds: planning experiments, arranging pilot studies on production lines, preparing documentation for user teams, and collecting effect metrics.

At the project preparation stage, it is worth drafting a tripartite agreement that organizes tasks, the schedule, and reporting methods, and specifies intellectual property, confidentiality, and publication issues. This is where “background IP” provided by the university or company is defined, who will own the “foreground IP” created during the work, and on what terms the parties grant each other licenses. At the same time, you must align the publication calendar with the protection calendar: if you plan to file an invention, first work with a patent attorney and potentially sign NDAs, only then publish a preprint, attend a conference, or upload code to a repository.

Money in an implementation doctorate flows through two channels: the doctoral scholarship specific to this track and a salary from an employment contract with the employer, which is a condition for participation. This dual model makes it possible to reconcile scientific and operational expectations, but it also requires good time management. Agree with the supervisor and mentor in advance on the rhythm of work. Indicate weeks rich in experiments, weeks devoted to pilots or internal audits at the company, as well as interim and final reporting dates.

It is worth adopting a simple project rule: each major task ends with a document that can be placed in the implementation folder – a test report, acceptance protocol, work procedure, or user manual. This is evidence material both for the doctoral school and for the company. A good practice is to define the “Definition of Done” for the implementation. Implementation is not just a working prototype, but a solution embedded in the employer’s process, associated with measurable indicators. Such a definition makes it easier for everyone to assess whether success has been achieved and allows the doctorate to be closed without disputes over definitions.

Finally, remember that the implementation doctorate does not “close the door” to either science or the market – on the contrary, it teaches you to navigate between them. A well-designed project begins with a problem and ends with a working solution; along the way, a solid dissertation, publications, often a patent application, and sometimes even a license or the seed of a company are produced. If trust between the supervisor and the company mentor is added to clear rules of the game written into the agreement, you have all the elements to use the program as intended: the shortest possible path from hypothesis to implementation.

Glossary of Terms

Audit (license audit)

The licensor’s right to verify sales reports/usage counters of licensed technology at the licensee; usually once a year, with payment adjustment.

Background IP

Intellectual property rights existing before the start of a given project/agreement; the opposite of “Foreground IP.”

Change of control (clause)

A contractual provision specifying what happens with the license/company in the event of an acquisition or significant change in the licensee’s ownership.

Data

Derivatives rights – rules for using models/conclusions created on the basis of data (e.g. in AI); require separate regulation in the license/DSA.

Implementation doctorate

A doctoral track combining research with practical implementation in a company/institution; benefits both the PhD student and the employer (skills, access to infrastructure).

DSA (Data Sharing Agreement)

An agreement defining rules for sharing and processing data (purposes, retention, anonymization, access, security).

Due diligence

Legal/technical/financial review of a technology and its environment (including IP status), preceding a license or investment.

IP enforcement

Actions against infringements (cease-and-desist letters, lawsuits), along with allocation of costs and damages between the parties.

Foreground IP

Results/works created in a project; the parties must determine ownership and “grant-back” (mutual licenses for improvements).

Grant-back

Automatic or conditional license back to improvements created by one party, granted to the other party (e.g. research license for the university).

IRL / MRL

Integration readiness level and manufacturing readiness level scales; complement TRL.

JDA (Joint Development Agreement)

An agreement on joint development, clarifying contributions, ownership of results, and usage rules.

Know-how / Trade secret

Non-public information with economic value, protected as long as real confidentiality measures are applied (NDA, need-to-know access, logs).

License

Consent to use IP without transfer of ownership; parameters: scope (what), fields of use, territory, duration, remuneration, sublicenses, quality obligations.

Non-exclusive license

Multiple licensees can use the technology in parallel; lower risk/price, requires precise segmentation of fields/markets.

Exclusive license

Only one licensee uses the technology in a given scope; usually involves stricter implementation obligations and higher remuneration.

MFN (most-favoured nation)

A clause granting “most-favoured” client status; sometimes restricted so as not to block the university’s pricing policy.

Annual minimums

Minimum fees required to maintain exclusivity; failure to pay often results in loss of exclusivity or termination of the agreement.

NDA (Non-Disclosure Agreement)

Confidentiality agreement; defines confidential information, purpose of disclosure, protection period, exceptions, ban on reverse engineering, and rules for return/destruction of materials.

Net Sales (royalty base)

Net revenue defined in the agreement from which royalties are calculated (with a list of permitted deductions).

No-challenge (clause)

Limitation of the licensee’s right to challenge the validity of a patent; violation often entails financial consequences.

Novelty / inventive step / industrial applicability

Three pillars of patentability: no prior disclosure before filing; non-obviousness to a person skilled in the art; capability of reproducible execution.

Patent / Utility model / Industrial design / Trademark

Basic exclusive rights in industrial property law: respectively, a technical solution; form/layout of an object; product appearance; distinctive designation.

CIP (Confidential Information Policy)

A set of practices and markings maintaining confidentiality (clauses, access, registers, DLP, training).

Fields of use

Defined applications/markets in which the licensee can use the IP (e.g. oncology vs. veterinary medicine).

PoC (Proof-of-Concept)

Proof of concept validity (TRL 3); analyses/simulations/small-scale experiments confirming a key mechanism.

LHEaS

Law on Higher Education and Science; regulates commercialization paths and division of benefits between universities and creators.

IPL

Industrial Property Law; regulates patents, utility models, industrial designs, and trademarks.

Reverse engineering

In principle permitted analysis of a legally acquired product to understand its functioning; often contractually prohibited (NDA/license).

Royalty stacking

Cumulative royalty burden when using multiple licenses for the same function; usually limited by contractual "caps."

SaaS

Software-as-a-service model; license issues include SLO/SLI, uptime, support, and user data.

Spin-off

A company created with the university's participation (or its special purpose vehicle), usually with a license/contribution of university IP and TTO support.

Spin-out

A company founded by researchers without university equity participation; uses IP typically under a license.

University special purpose vehicle

The university's capital company for commercialization (licenses, equity, due diligence, spin-off support).

Sublicense

The licensee's right to further license; usually requires licensor's consent and revenue sharing.

Tail royalties

Royalties due after termination/expiry of a license, relating to transactions initiated during its term.

Royalties

Ongoing payments for using IP (percentage of Net Sales or unit rate).

Territory

Geographic scope of the license (Poland, EU/EEA, worldwide); often with extension rights after milestone achievement.

TRL (Technology Readiness Level)

Technology maturity scale 1–9 (from observation of phenomenon to confirmation in operation); the overall level is determined by the lowest TRL of a key subsystem.

Employee work

A work created in the scope of duties; upon acceptance by the employer, economic copyrights transfer to the employer (within the agreed scope).

Upfront (initial fee)

One-time payment at the start of a license; sometimes "credited" against future royalties.

Employee invention

A solution created as part of employee duties; the employer may be entitled to file, and the inventor is entitled to remuneration.

Legal Bases That May Be Useful to You

Law on Higher Education and Science (LHEaS)

Regulates ownership rules of R&D results at universities, commercialization paths (direct/indirect), special purpose vehicles, and creators' minimum shares in benefits. Latest consolidated text and article commentaries: university TTOs, USPVs, benefit sharing, disclosure obligations.

<https://sip.lex.pl/akty-prawne/dzu-dziennik-ustaw/prawo-o-szkolnictwie-wyzszym-i-nauce-18750400>

Implementation Doctorate Program (current recruitment rules)

A ministerial program announced annually; details published at:

<https://www.gov.pl/web/nauka/komunikat-ministra-nauki-i-szkolnictwa-wyzszego-o-ustanowieniu-programu-doktorat-wdrozeniowy-2025>

Industrial Property Law (IPL)

Patents, utility models, industrial designs, trademarks; filing procedures, licenses, priority, and more.

<https://dziennikustaw.gov.pl/DU/2023/1170>

Copyright and Related Rights Act

Protection of works (including documentation, presentations, graphic materials), employee work, licenses, contract forms; since 2024, new TDM (text and data mining) exceptions implemented.

<https://sip.lex.pl/akty-prawne/dzu-dziennik-ustaw/prawo-autorskie-i-prawa-pokrewne-16795787>

Directive (EU) 2019/790 (DSM)

EU context.

<https://eur-lex.europa.eu/legal-content/PL/ALL/?uri=CELEX:32019L0790>

Database Protection Act

<https://sip.lex.pl/akty-prawne/dzu-dziennik-ustaw/ochrona-baz-danych-16916843>

Directive (EU) 2016/943 (Trade Secrets)

Admissibility of acquisition by reverse engineering, exceptions (whistleblowing, freedom of expression), etc.

<https://eur-lex.europa.eu/legal-content/PL/ALL/?uri=celex:32016L0943>

Public Procurement Law (PPL)

E.g. rules for reserving trade secrets in bids, handling documents of contractors cooperating with universities.

<https://sip.lex.pl/akty-prawne/dzu-dziennik-ustaw/prawo-zamowien-publicznych-18903829/dz-1>

Civil Code

General rules for concluding and performing contracts.

<https://sip.lex.pl/akty-prawne/dzu-dziennik-ustaw/kodeks-cywilny-16785996/ks-1>

Commercial Companies Code (CCC)

Company forms (LLC, joint-stock company, simple joint-stock company – PSA and its flexible mechanisms, e.g. contributions in kind, ESOP), corporate governance in spin-offs/spin-outs.

<https://sip.lex.pl/akty-prawne/dzu-dziennik-ustaw/kodeks-spolek-handlowych-16886516/tyt-1>



MŁODZI NAUKOWCY KOMERCJALIZUJĄ WIEDZĘ 2.0