



INVENTOR'S GUIDE

TO TECHNOLOGY TRANSFER AND THE COMMERCIALIZATION PROCESS

Office of Intellectual Property Optimization (IPO)
Rensselaer Polytechnic Institute



Rensselaer

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MISSION

The mission of the Office of Intellectual Property Optimization (IPO) is to support and promote innovation and technology commercialization across education, research, media, and the arts to spur regional and national economic development; and to use science and technology for social advancement and environmental stewardship.

Rensselaer inventors continually develop materials, processes, and technologies with significant commercial potential. IPO supports inventors in protecting intellectual property and bringing inventions into the commercial marketplace by identifying, assessing, and marketing technologies, and by managing the commercial pathway for inventions.

The Inventor's Guide to Technology Transfer and the Commercialization Process is intended to provide a broad overview of the technology transfer and commercialization process at Rensselaer. This guide is not an official policy of Rensselaer and the reader should always consult the Rensselaer Intellectual Property Policy and associated regulations.

If you have specific questions, please contact the Office of Intellectual Property Optimization (IPO) at (518) 276-6023 or email us at innovation@rpi.edu.



TECHNOLOGY TRANSFER AND COMMERCIALIZATION OVERVIEW

What is technology transfer?

Technology transfer is the formal transfer of rights from Rensselaer to another party for the use and commercialization of new discoveries and innovations resulting from scientific research. The process of transferring Rensselaer technology generally includes identifying, protecting, and licensing Rensselaer intellectual property (IP). Technology transfer can also include transfer of knowledge through training and educating students, extension and outreach services to existing and startup companies, cooperative education and internships, consulting services, and collaborative research activities.

What are the benefits of technology transfer?

Successful commercialization efforts or the transfer of technology can yield many benefits:

- Enables society to benefit from your work
- Provides principal investigators (PI) with a sense of personal fulfillment
- Attracts research funding/sponsors
- Forms industrial partnerships
- Places graduate students in rewarding jobs
- Offers recognition and financial reward for you and Rensselaer
- Meets the obligations of a research contract





What is intellectual property?

Intellectual property (IP) refers to creations of the mind or intangible property. IP rights are exclusive rights defined by patent, trademark, copyright, and trade secret statutes. Examples of IP include inventions, which are protected by patents; literary and artistic works, which are protected by copyrights; designs, which are protected by design patents and/or trademarks; and symbols, names, and images used in commerce, which are protected by trademarks. By striking the right balance between the interests of innovators and the wider public interest, the IP system aims to foster an environment in which creativity and innovation can flourish.

Examples of patentable inventions include:

- Machines (i.e., electronic devices, robotics, etc.)
- Composition of matter (i.e., materials, therapeutics, pharmaceuticals, etc.)
- Processes (i.e., algorithms, formulas, methods for creating compounds, etc.)

Examples of IP that is often not patented:

- Software (often protected by copyrights and/or license agreements, etc.)
- Know-how (often protected by a license or consulting agreement)
- Research tools and materials (often protected by a license or material transfer agreement)

When should I contact IPO?

All types of intellectual property, i.e., IP protected by patents, trademarks, copyrights, and trade secrets, should be disclosed to IPO early in the development process. Disclosure of IP to IPO should be made before disclosing (oral or written) to the public. After the IP is disclosed, IPO first evaluates whether the IP has been developed enough to be commercialized. For IP that is ready to be commercialized, IPO next assesses both the patentability and commercial potential of the IP and develops an appropriate protection and marketing strategy for IP it deems to have sufficient potential.

It is always best to check with IPO if you have any questions or concerns about disclosing or protecting your research. If any of the following are applicable to you, please contact our office:

- Have an idea for a new product or service or improvement to an existing product
- Have a functional prototype of your idea
- Preparing to disclose your research results in a presentation, publication, interview, poster session, dissertation, with other researchers, etc.
- Using federal funding or sponsored research that may yield IP
- A company has inquired about your research
- Need to share innovative research information or materials with another institution
- Interested in launching a company with your idea or technology

How is technology transferred through IPO?

These are the basic steps involved in the commercialization process:

1. Submit an Invention Disclosure

Rensselaer innovators have a responsibility to disclose creations to IPO that were developed with a significant use of Rensselaer support. Generally, this includes completing an invention disclosure form at rpi.edu/innovation.

2. Invention Evaluation

After we receive the invention disclosure form, we'll follow up with you to discuss:

- Funding sources
- Collaborators
- Your plans to disclose the invention to others

We determine the patentability and marketability of the invention. We then determine the best protection strategy for technologies most likely to transfer from the laboratory to the marketplace. The evaluation process typically takes less than four months to complete. It is important to note that some inventions, like reagents and certain data sets, do not necessarily require patent protection for commercialization.

3. IP Protection

If the invention meets the evaluation criteria for technology commercialization, steps will then be taken to protect the intellectual property. This may involve filing one or more applications to secure a patent, trademark, and/or copyright.

4. Technology Marketing

Once a patent application has been filed, IPO may begin to seek commercial partners for inventions that meet evaluation criteria. If a commercial partner seeks rights to the invention, a license agreement may be negotiated. Commercial partners are often referred to as licensees and may include existing companies or entrepreneurs and investors to help form a new startup company. The best marketing and licensing strategy depends upon the specific technology, the commercial opportunities, and development level of the invention. For example, a startup business could further develop the technology to demonstrate proof-of-concept, i.e., prototype development or clinical trials, before

partnering with a larger company, which may have greater resources to take the product to market.

5. Commercialization

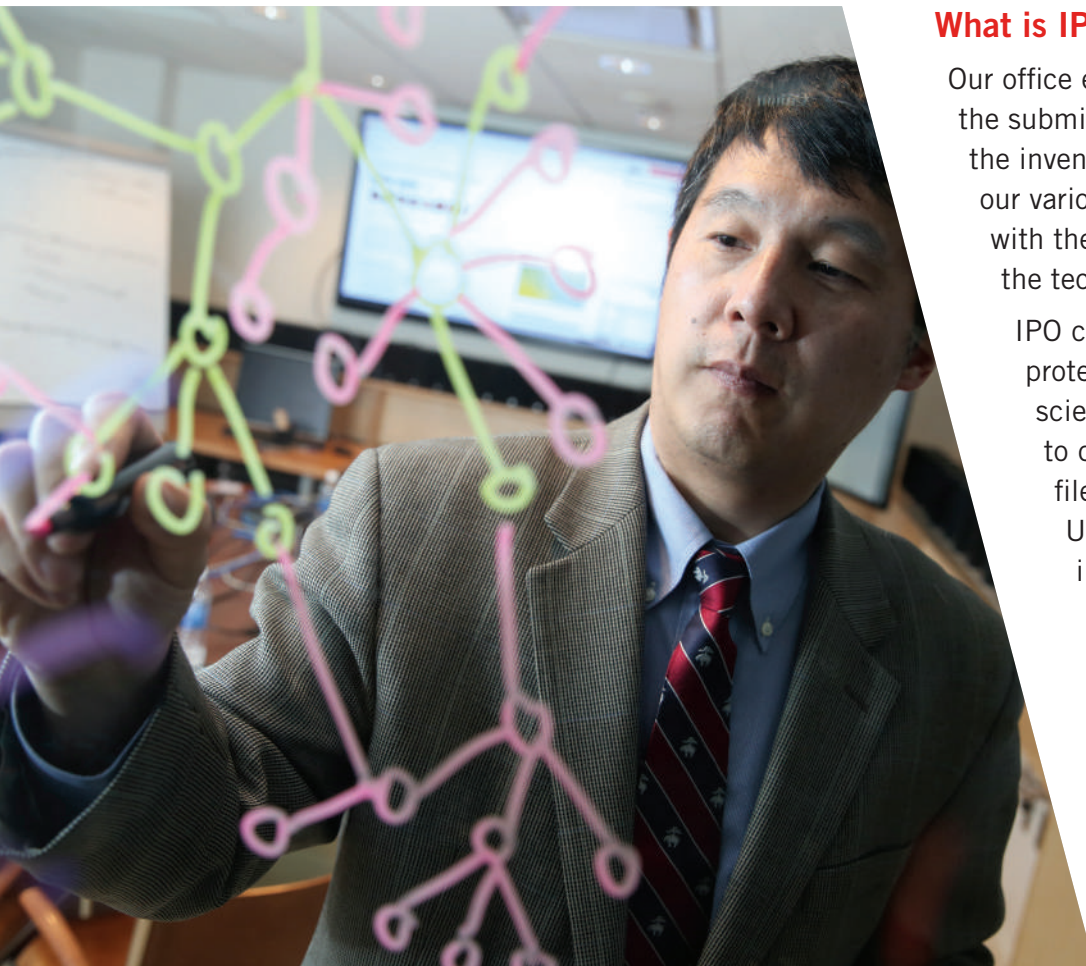
Most licensees continue to develop an invention to reduce risk and satisfy market requirements for adoption by customers. The commercialization phase, which includes implementing a plan for getting inventions to market, may vary depending on the product, additional development and testing needed, available resources, etc.

6. Royalty Distribution

If the invention gets licensed, IPO manages the fee collection and distribution process. IPO will apply the initial royalties to cover any legal or patenting costs incurred. Additional royalties earned will be distributed among inventors and departments according to the Rensselaer IP Policy.

Why should intellectual property not be disclosed prior to public disclosure?

After you publish, present, or otherwise publicly disclose the invention, you have one (1) year from the first disclosure date to file a U.S. patent application. If you fail to file a U.S. patent application on or before the one-year public disclosure anniversary, all U.S. patent rights in the invention may be lost. Moreover, no grace period exists for foreign patent applications. With very few exceptions, all foreign patent rights in the invention will be irrevocably lost if it is publicly disclosed before filing a patent application. IPO can assess what steps must be taken to ensure Rensselaer IP rights are not compromised.



What is IPO's role in technology transfer?

Our office engages with potential inventors and entrepreneurs even before the submission of an invention disclosure. We work closely with inventors on the invention disclosure process. We share valuable information gained from our various assessments and if a patent application is filed, we work closely with the inventor to either license it to industry or form a startup around the technology.

IPO considers a number of factors to determine if intellectual property protection will be pursued. However, IPO does not assess an invention's scientific merit. We review patentability and commercial opportunities to determine the best course of action. When determining whether to file a patent application, IPO evaluates each invention according to United States Patent and Trademark Office (USPTO) guidelines: All inventions must be new, useful, and non-obvious.

How long does the technology transfer process take?

The process of protecting the invention and finding the right licensing partner may take months — or even years — to complete. The amount of time will depend on the development stage of the technology, the market for the technology, competing technologies, the amount of work needed to bring a new concept to market-ready status, and the resources and willingness of the licensees and the inventors.

What is the role of the researcher and inventor in the technology transfer process?

Rensselaer innovators have a responsibility to disclose their inventions to IPO. Generally, this includes completing the invention disclosure form. Inventor involvement is important to the entire patenting and licensing process. Inventors typically provide technical evaluation of previous patents and publications in their field, supply information to the patent attorney to assist with writing the patent, review draft applications and responses to patent office actions, and discuss technical aspects with interested companies.

We strive to keep inventors well informed during the process and will always consider your input when making decisions about protecting and licensing the invention. Unless otherwise agreed to with another party such as a licensee or research partner, final responsibility for all protection and licensing decisions rests with IPO.

What happens if a faculty member or a student who has a useful technology/product doesn't want to start a business? Is there still an advantage to patenting an invention?

Under the Rensselaer IP Policy, if a creator believes its IP may have value, they are obligated to disclose the IP to our office. If they have no interest in starting a business, that may be all they do. However, if we can license the IP, the inventors will share 35% of the revenue generated — even if they do no more than disclose the invention and participate in the patent prosecution process. In addition, being an inventor on a patent adds to your reputation and can often lead to more opportunities for you.

How can researchers and inventors help with marketing materials and identifying potential licensees?

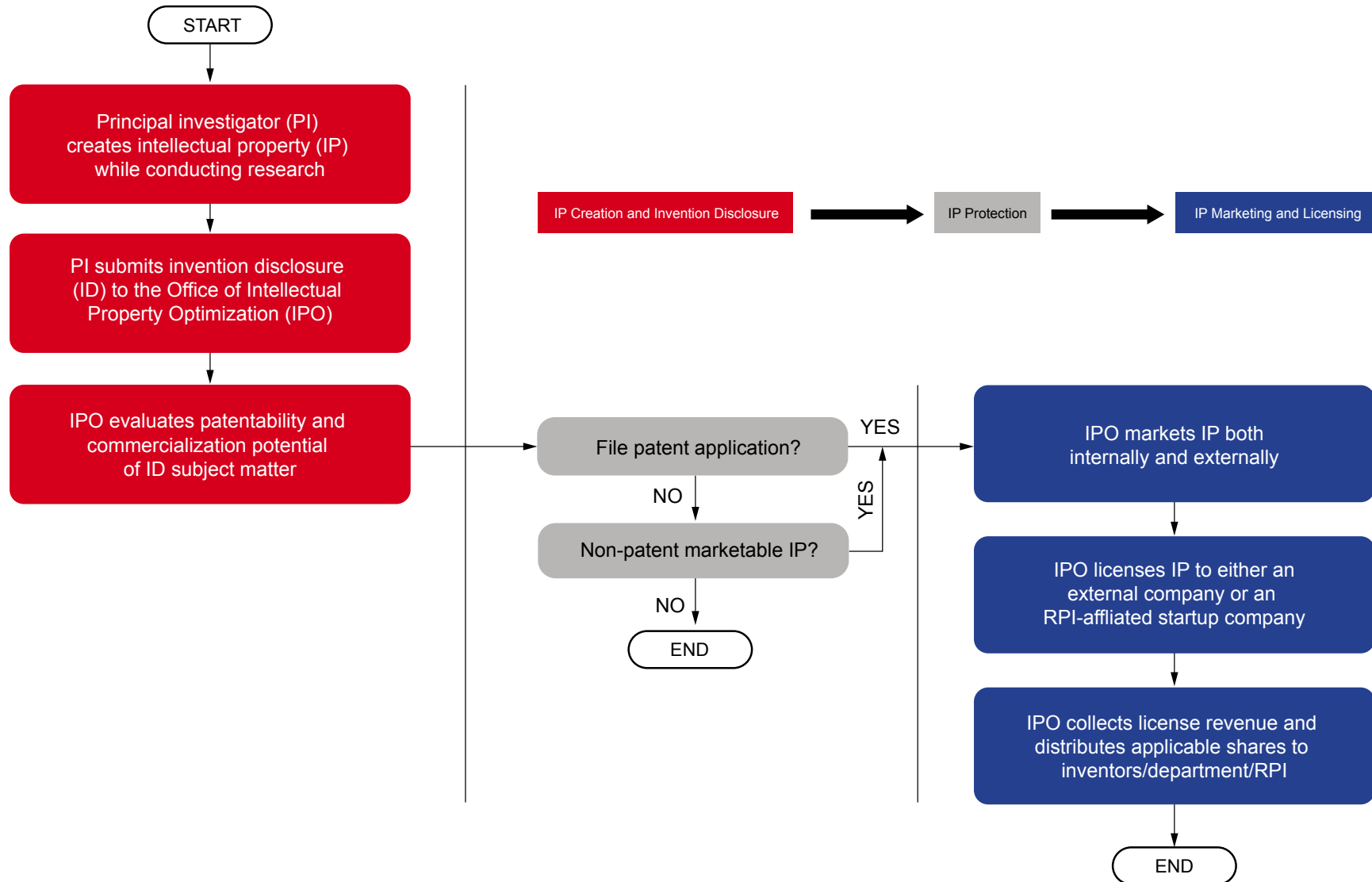
You are an essential part of the marketing process! The first step of marketing your invention is development of the marketing materials. These materials consist of a high-level overview of the invention, called a marketing slick, and a list of potential licensees that will be contacted. Prior to beginning the marketing process, IPO will provide you with draft versions of both the marketing slick and list. Please review the information to ensure (1) the marketing slick accurately depicts the technology and (2) the marketing list encompasses companies that may have an interest or need for your technology. If you have already had contact with a company regarding your technology, please let IPO know. This will prevent IPO from reaching out to companies with which you have already formed a relationship. By reviewing both the marketing slick & list, IPO can make the most of the marketing efforts.

What is the Bayh-Dole Act?

The Bayh-Dole Act allows small businesses, nonprofits, universities, and research institutes to own inventions that result from federally funded research. In exchange, the research institutes are required to report each disclosed invention to the funding agency. Since the act was passed in 1980, the number of technologies patented, licensed, and commercialized through university technology transfer offices has grown rapidly. The Act allows Rensselaer to use licensing revenues to support patenting and licensing, pursue additional research and education, and provide proceeds to inventors.

THE TECHNOLOGY TRANSFER PROCESS

The technology transfer and commercialization process at Rensselaer is a continuous cycle through which research is transformed into marketable products and services in the marketplace. The proceeds from licensed technologies are reinvested in future research and innovation.



RESEARCH, MATERIAL TRANSFER, NON-DISCLOSURE, AND CONSULTING AGREEMENTS



Sponsored Research Agreements (SRAs)

A sponsored research agreement (SRA) is an agreement between Rensselaer and a company or other party outside the Institute (“sponsor”) that defines terms under which the sponsor will fund research conducted at Rensselaer. While SRAs typically identify the principal investigator, define the research project scope, list the funding amount, etc., other key terms in an SRA define the ownership rights of any intellectual property created during the sponsored research. At Rensselaer, all sponsored research agreements are negotiated by Research Administration and Finance (RAF). The Office of Intellectual Property Optimization (IPO) reviews IP terms in SRAs to ensure compliance with the Rensselaer Intellectual Property Policy and related policy guidelines.

Inter-Institutional Agreements

An inter-institutional agreement (IIA) is an agreement between two academic institutions engaging in joint research that includes terms for jointly managing any intellectual property developed during the research project. IIAs often include terms that define which institution will lead any patent filing efforts, how patent expenses will be shared, and how any revenue generated from IP will be divided. Other terms include confidentiality requirements, pre-negotiated IP licensing terms, and pre-negotiated material transfer terms. IIAs are particularly useful when researchers move from one institution to another, but continue research conducted at their predecessor institution.

What if a researcher requests material from me?

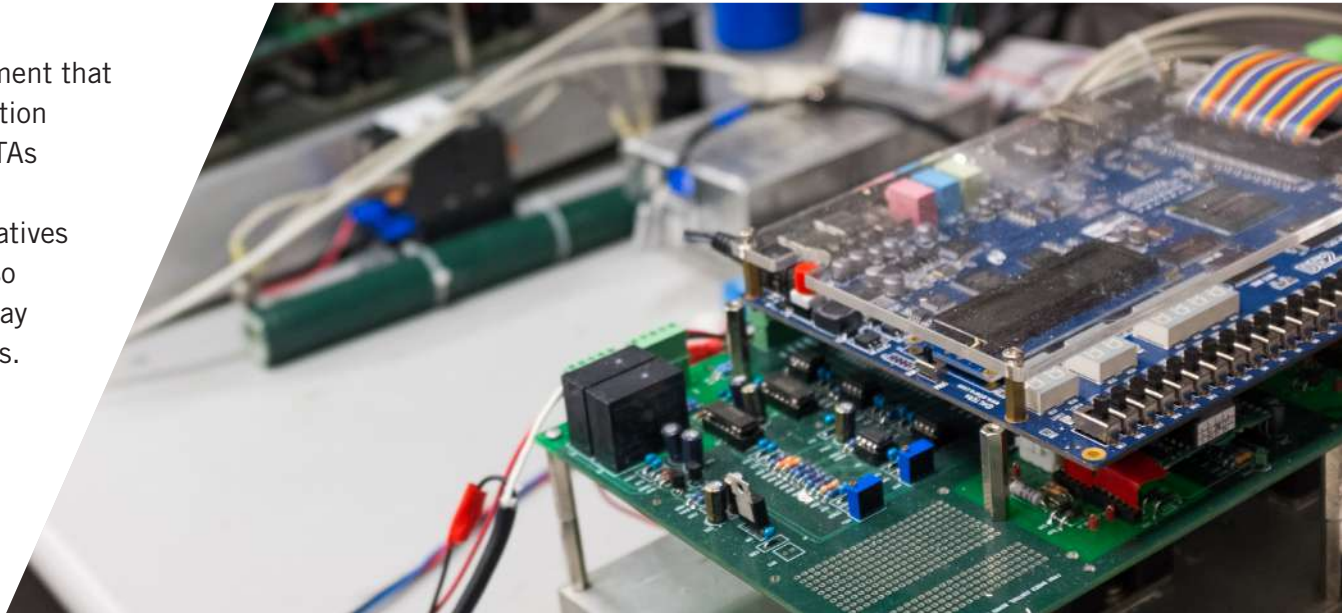
Let them know that a material transfer agreement (MTA) will need to be completed before you can send any materials. The researcher(s) can contact our office directly or you may send them to our website to download the Rensselaer-approved MTA. Once we have all of the required information, we will complete the paperwork, and let you know when you are permitted to transfer the materials.

Material Transfer Agreements

A material transfer agreement (MTA) is an agreement that governs the transfer of materials from one institution to another in the course of a research project. MTAs typically include terms defining the ownership or specific rights to use the materials and any derivatives created by the recipient institution. They may also include confidentiality terms that specify what may be published concerning the transferred materials. More complex MTAs may include terms that resemble an intellectual property license and cover rights to any IP created while using the materials transferred.

May I use material from others in my research?

This is a complicated question that does not have an easy answer. It depends on the material and who generated or owns the material. IPO can help answer this question on a case-by-case basis and take steps to ensure your use of material from others is done properly. In some cases, an agreement such as an MTA must be entered into with the party who owns the material.



What if a company wants to talk to me about my work?

Contact our office before you give any details to the company. We can get a CDA/NDA into place that will protect your IP rights immediately. In addition, we may be able to establish a partnership with the company that will benefit your efforts for further research and licensing.

What is a non-disclosure agreement (NDA) or confidential disclosure agreement (CDA)?

A non-disclosure agreement (NDA), a confidential disclosure agreement (CDA), or other confidentiality agreement is a contract between Rensselaer and one or more outside parties, e.g., prospective licensee companies, research sponsors, research partners, etc., to establish a legal expectation that both parties will keep certain information provided (one-way agreement) or shared (two-way agreement) secret and use it only for an agreed purpose.

Who can sign a non-disclosure agreement (NDA) or confidential disclosure agreement (CDA)?

Under Rensselaer policy, a professor is not authorized to legally sign a confidentiality agreement. Those who can sign confidentiality agreements for Rensselaer include the Executive Director of IPO, the Director of Research Administration and Finance, and the VP of Research.

What rights does a corporate research sponsor have to any discoveries associated with my research?

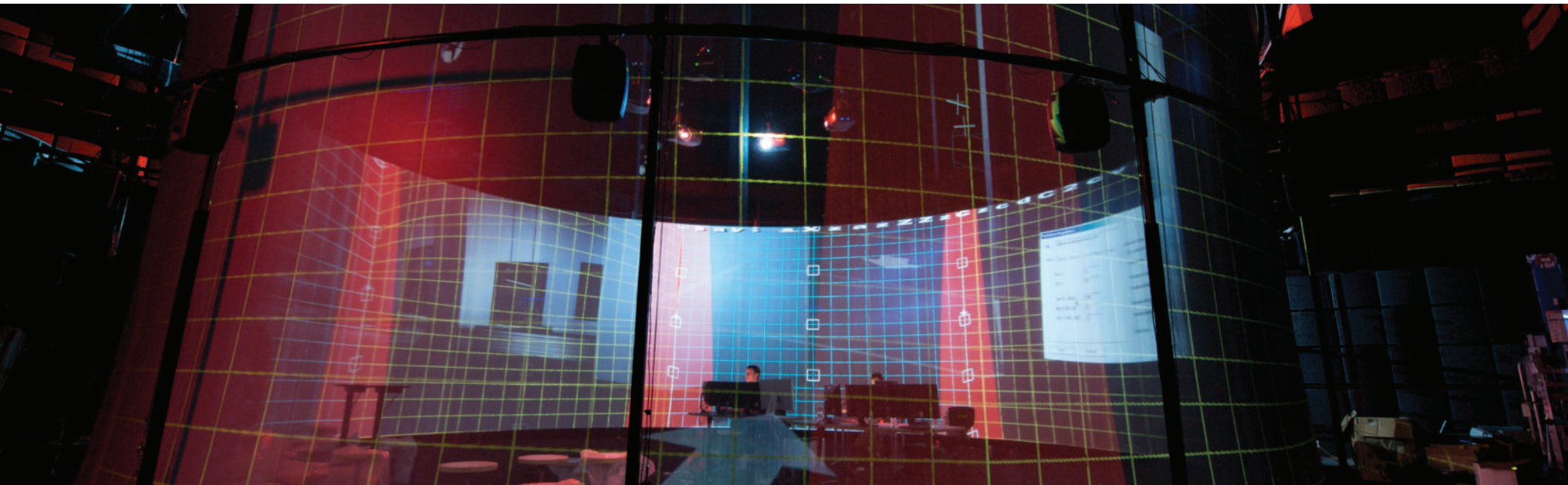
Unless otherwise agreed to, under the Rensselaer Intellectual Property Policy, discoveries made by Rensselaer faculty, students, and research staff during sponsored research at Rensselaer are owned by Rensselaer.

How are consulting agreements handled at Rensselaer?

Faculty members are expected to inform their appropriate administrative officer, i.e., either their department chair or other person to whom the faculty member directly reports. In some cases, a consulting agreement should be reviewed by other Rensselaer offices. For example, if it is anticipated that a consulting agreement will last for an extended period of time, the consulting agreement should be reviewed by Research Administration and Finance (RAF). If a consulting agreement includes terms related to Rensselaer intellectual property, the Office of Intellectual Property Optimization (IPO) should review the agreement.



PRE-INVENTION DISCLOSURE



What is the pre-disclosure period of technology transfer?

The pre-disclosure period is the time frame in which IPO works with inventors prior to the time they submit a formal invention disclosure.

What takes place during the pre-disclosure time frame?

During the pre-disclosure period, IPO will provide informative resources to the inventor(s) and answer questions regarding entrepreneurship, innovating, intellectual property, and commercialization of IP. IPO will educate inventor(s) on the type of information required to file a satisfactory invention disclosure.

What should researchers consider prior to filing an invention disclosure?

Researchers should consider what problem they are solving and very specifically how their solution is better than the attempts made by others to solve the same problem. They should then consider gathering the level of information that would be required to teach someone of their skill to practice the invention.

When should a researcher consider commercialization?

Researchers should consider commercialization potential early in the discovery process. Although there are exceptions, the degree and pace of commercial success generally depends on the researcher's understanding of the application space for the innovation. Most licensing contacts come directly from the professional network cultivated by the inventor in his or her field of expertise.

Should researchers make public disclosures during the discovery period of their research?

During the discovery period, the researcher should not make public disclosures regarding the innovation and should keep detailed records of the technology development. Everyone involved with the project should keep lab books with signed, dated, and witnessed entries. All researchers should be familiar with the Rensselaer Intellectual Property Policy.

When should a researcher contact the Office of Intellectual Property (IPO)?

It is often useful for the researcher to engage in informal discussions about the innovation with an IPO licensing associate prior to disclosure. This communication keeps IPO abreast of research developments and may provide the researcher with information about commercial opportunities and potential collaborations with other researchers on campus.

When should a researcher complete and submit an invention disclosure form?

The researcher should complete and submit an invention disclosure form as soon as the idea has been reduced to practice if the resulting invention or intellectual property is suitable for patent or copyright protection. Because the disclosure is the initial formal record of a discovery, it must be completed as thoroughly as possible. Upon receipt, the disclosure is assigned a permanent case number and is delegated to the appropriate licensing associate.



INVENTION AND TECHNOLOGY DISCLOSURES

If I think I invented something, do I have to disclose it to Rensselaer?

Under the Rensselaer Intellectual Property Policy, Rensselaer faculty, students, and staff are obligated to disclose all intellectual property created at Rensselaer, which has any possible commercial or other value. Other reasons for disclosing potential IP include benefiting from the Institute's generous revenue sharing policy where creators share up to 35% of the net revenue generated from the IP. Sponsored research agreements often require disclosure of IP generated during the course of the sponsored research project. If you are not sure whether your IP has any value, it is always better to contact the Rensselaer Office of Intellectual Property Optimization (IPO) for assistance.

How do I disclose my invention to Rensselaer?

IPO is the primary contact for a creator with regard to their disclosure of IP. IPO is responsible for protecting, marketing, negotiating, and licensing Rensselaer IP. Using IPO's invention disclosure form, creators are urged to submit a completed form to IPO before notifying outside parties, including sponsors. IPO will then determine whether the technology is ripe for commercialization and/or protection. The decision to protect, develop, market, and/or commercialize any Rensselaer intellectual property is at the sole discretion of Rensselaer unless a contract states otherwise. IPO will provide a timely response to creators and may employ outside evaluators and other consultants to review the disclosure, as well as to assist in the protection, licensing, and commercialization of the IP.

How do I know if what I created is an invention?

Whether a creation is a patentable invention under the Patent Law is a complex and highly technical question. To be a patentable invention, a creation must be useful, novel, and non-obvious. In addition, the creation must be developed to a point where the invention disclosure could be used by one skilled in the art, i.e., the creator's peer, to build and/or practice the creation. IPO along with outside patent counsel to Rensselaer are here to assist in determining whether a creation is a patentable invention or other protectable form of intellectual property, e.g., trademark, copyright, trade secret.



Will disclosing my invention to Rensselaer prevent me from publishing my work?

No, but the Rensselaer Intellectual Property Policy requires creators to submit a complete invention disclosure form to IPO before notifying outside parties, which includes publication of the work that describes the creation. Valuable intellectual property rights may be compromised if details to a creation are publicly disclosed before filing a patent application. IPO, working with outside patent counsel to Rensselaer, can ensure that Rensselaer intellectual property rights are protected by filing a provisional patent application prior to your publication. While creators are encouraged to disclose their creations as early as possible and well in advance of any planned publications or other public disclosures, a provisional patent application can be prepared and filed with very little lead time, if necessary.

If I invented a research tool or software, should I disclose those types of inventions as well?

Yes. Whether a creation is patentable is immaterial. If a creator develops a research tool, software, or any other type of creation at Rensselaer that has any possible commercial or other value, he or she is obligated to disclose it to IPO.

Should I submit an invention disclosure for a composition of matter (i.e., reagent or materials that are not commercially available)?

Absolutely. Section 101 of the Patent Law specifically defines a composition of matter as an invention that is patentable. And, even compositions of matter that are not patentable may still have commercial potential.

What if I created an invention with someone at another institution?

Please disclose all parties who contributed to the creation of your invention. Under the Patent Law, inventorship must be correct. IPO will assess each situation and typically seek the assistance of outside patent counsel to determine those parties whose contributions rise to the level of inventorship. Rensselaer often works with other institutions to protect jointly developed intellectual property.

What kind of information do I need to provide when I disclose my invention?

You should provide information from lab notebooks, published and unpublished papers, presentation slides, presentation papers, presentation abstracts, presentation video or audio recordings, thesis papers, white papers, grant proposals, grant progress reports, sketches, test results, and any other information you have that directly or indirectly describes the invention. You will also need to answer a series of WHAT, WHY, and HOW questions meant to ensure that important aspects of the invention are properly disclosed. WHAT do you call the invention? WHAT problem does the invention solve? WHY should someone use the invention? WHAT are existing solutions to this problem? Existing solutions are also referred to as the prior art. HOW is the invention better than the prior art? Also, be ready to provide a detailed response to the last question, WHAT specific mechanical parts and design or process steps make the invention better?

If my research is sponsored, either privately or by government funding, do I need to inform my sponsor if I invent something?

Under the Rensselaer Intellectual Property Policy, creators must submit a complete invention disclosure form to the Office of Intellectual Property Optimization (IPO) before notifying outside parties, including sponsors. If required according to the terms of a sponsored research agreement (SRA), IPO will provide a copy of the invention disclosure to the sponsor. After submitting the invention disclosure and consulting with IPO, a creator is typically permitted to also informally inform his or her sponsor of the creation.

Can I discuss my invention with colleagues outside of Rensselaer? Is that a public disclosure?

If you are discussing your work with colleagues outside of Rensselaer, it is a best practice to do so under a nondisclosure agreement and/or inter-institutional agreement that includes confidentiality provisions. If those agreements are not in place, your discussion will typically not be considered a public disclosure if there is an expectation of privacy. What does that mean? It means that if you disclose confidential information to a colleague outside of Rensselaer in a private conversation, it would not typically be considered a public disclosure. However, if you visit the outside colleague's lab and have the same conversation in the presence of his students, postdocs, and/or laboratory assistants, the conversation may be deemed a public disclosure. If you are not sure, please contact IPO before disclosing your creation to colleagues outside of Rensselaer.



OWNERSHIP OF INTELLECTUAL PROPERTY



Who owns what I create?

As explained more fully in the Rensselaer Intellectual Property Policy, if the intellectual property was developed by an employee of Rensselaer or whose conception, creation, development, or first reduction to practice involved significant use of Rensselaer support, e.g., invented at Rensselaer facilities and/or under the supervision of Rensselaer personnel, the intellectual property is owned by Rensselaer. Each inventor must assign their rights in the intellectual property to Rensselaer. This includes all faculty, staff, and fellows who have an appointment at Rensselaer.

Who owns rights to discoveries made while I am consulting?

In most cases, a written agreement will govern who owns the intellectual property rights to any discoveries made while consulting. Please contact IPO for assistance in negotiating a consulting agreement before you begin consulting work for a third party. If no agreement is in place, the facts of the specific case, the Rensselaer Intellectual Property Policy, and sometimes the relevant intellectual property law must be reviewed to determine ownership of intellectual property rights.



Who owns rights to discoveries made while I am on sabbatical?

If a discovery is made while on sabbatical and without significant use of Rensselaer support as defined by the Rensselaer Intellectual Property Policy, the creator of the discovery will own the intellectual property rights associated with the discovery.

Should I list visiting scientists on my invention and technology disclosure?

If the visiting scientists were part of your research team — yes. You should list all parties who may be potential inventors.

Can students contribute to an invention?

Yes. Anyone can contribute to an invention if they assist in the conception and/or development of claimed subject matter. Inventorship requires a highly technical analysis of patent claims included in the patent application and, in some cases, contributions do not rise to the level of inventorship.

Will Rensselaer sign a waiver of rights letter when I have invented something that falls outside the Rensselaer policy?

While IPO must review the specific facts surrounding each request for a waiver of rights letter separately, in most cases Rensselaer will provide a waiver of rights letter to Rensselaer-affiliated parties who create non-Rensselaer intellectual property.

ASSESSMENT OF INTELLECTUAL PROPERTY



Working closely with the inventor, IPO will perform a technical and commercial evaluation of the invention. The evaluation generally includes patent and literature searches and may include confidential discussions with internal and external experts. The decision to pursue patent protection is based upon the following two factors:

- Patentability and ability to enforce the patent
- Marketability and commercial potential of the invention

The evaluation begins with a meeting between the researcher and the designated IPO licensing associate. Through this communication the licensing associate will gain a greater understanding of the invention's technical merits. Initial market research begins during this period as well. The inventor may be contacted by marketing or licensing associates to discuss the commercial application space. The evaluation typically takes less than four months to complete.

With respect to potential commercial value of a technology, IPO tries to keep it simple. We ask researchers and inventors to consider whether someone would pay money for the technology they are creating. If the answer is no, it doesn't mean they should not continue to pursue research in the area. It simply means that the prospects of commercializing what they are creating may be lower. Whether the answer is no, maybe, or yes, IPO asks them to consider the answer and how the technology they are creating can be modified so the answer is a definitive yes.

Intellectual Property Protection (If appropriate or necessary)

Steps will be taken to protect intellectual property if it meets the evaluation criteria and when protection is required to achieve technology commercialization.

If IPO decides to file for patent protection, it will engage a law firm that specializes in the subject matter of the invention. The law firm will identify the inventors, construct claims, and submit the required paperwork to the U.S. Patent and Trademark Office and applicable foreign patent offices. The inventor works personally with attorneys to review drafts and to ensure the technology is thoroughly understood. It generally takes one to three years for a patent to be issued or denied by the U.S. Patent Office.

Marketing

Focused marketing determines the appropriate commercialization strategy for innovations or groups of innovations and finds the best fit among potential licensees. The goals of IPO marketing and licensing are to maximize the benefits of the relationship to all parties, and to get the innovation to market as quickly as possible.

During this stage, IPO works closely with the inventor to define commercial applications and to identify potential licensees. Specific marketing actions taken by IPO include the bundling of complementary inventions, pursuit of leads provided by the inventor and other sources, inclusion on the IPO website, and other appropriate activities where resources are available.

Licensing

There are several options for licensing and commercialization. The appropriate path depends upon marketplace conditions, attributes of the technology, the expertise of potential entrepreneurs, and the availability of funds. Certain technologies, particularly software packages, may be licensed directly from IPO's website. Terms of these agreements vary, but may include up-front fees payable to Rensselaer, royalty percentages and schedules payable over a number of years, or further research funding with options to license the resulting technology.

Commercialization

Most technologies are commercialized through exclusive or non-exclusive license agreements with existing companies.

Royalties

IPO collects license revenue and distributes applicable shares to inventors, departments, and Rensselaer.

Reinvest

Revenues received and shared throughout Rensselaer provide investment for the next generation of research and innovation.

PATENTS

What is a patent?

A patent for an invention is the grant of a property right to the inventor, issued by the United States Patent and Trademark Office (USPTO). Generally, the term of a new patent is 20 years from the date on which the application for the patent was filed in the United States.

The right granted by the patent is, "the right to exclude others from making, using, offering for sale, or selling" the invention in the United States or "importing" the invention into the United States. Once a patent is issued, the patentee must enforce the patent without the aid of the USPTO.

There are three types of patents:

- 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;
- Design Patents may be granted to anyone who invents a new, original, and ornamental design for an article of manufacture; and
- Plant Patents may be granted to anyone who invents or discovers a distinct and new variety of an asexually reproducing plant in an uncultivated state.

What kind of research is patentable?

According to the USPTO, in order to receive a patent, your technology must be novel, useful, and non-obvious. Some examples of patentable subject matter include apparatus, coatings, circuits, polymers, systems, controllers, sensors, detectors, MEMS, nanotechnologies, diagnostics, therapeutics, designs, methods, compounds, processes, gene therapies, small molecules, medical devices, and transgenic animals. If you have any questions about the patentability of your research, please contact our office.



PATENTS

What is prior art?

Prior art is any evidence that an invention is already known. Prior art does not need to exist physically or be commercially available. It's sufficient that someone, somewhere, sometime previously has described or shown or made something that is publicly available and contains technology that is very similar to the invention.

What is the United States Patent and Trademark Office (USPTO)?

The USPTO is the governmental agency that issues patents to inventors and businesses for their inventions, and trademark registration for product and intellectual property identification. The agency has a searchable online database of patents and trademarks.



What is a foreign patent?

Patents are territorial. A foreign patent is any patent granted by a country outside the U.S. In each country, the laws, regulations, rules, procedures, and protections regarding patents differ slightly from those in the U.S. Most of the industrialized world countries are part of the Patent Cooperation Treaty, or PCT. This treaty provides for the filing of a single “International Patent Application” or “PCT Application” at a central processing office yet establishes a filing date at the patent offices of the 150+ treaty contracting states.

Do the rights granted by a United States patent extend to foreign countries?

The rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country. An inventor who wants patent protection in other countries must apply for a patent in each of the other countries or in regional patent offices.

What are some benefits of filing a PCT application?

A PCT application is a good way to plan for foreign patents, without having to decide immediately on the specific countries in which to seek protection. There are many benefits that come along with the PCT application:

- Buy time
- Save money
- Immediate protection in a foreign country

Is there something called a provisional patent?

No. But there is a provisional patent application. A provisional patent application is an application that can be filed with the USPTO to establish the effective filing date of a patent application. The provisional application is not examined by the USPTO — and is only effective for one (1) year. At the end of the one- (1) year period, IPO must decide whether to convert the provisional application to a regular non-provisional patent application or lose the benefit of the provisional filing date. During the provisional one- (1) year period, the innovation can be publicly disclosed, marketed, and the term "patent pending" can and should be used to put the public on notice. If the innovation is publicly disclosed during the provisional period, failure to convert to a regular non-provisional patent application at the end of the period may forever prevent the ability to patent the innovation.

What is the difference between a provisional patent application and a regular (or “utility or non-provisional”) patent application?

A provisional patent application merely establishes a filing date for the purposes of being first to invent over other applications and only lasts one (1) year. A provisional patent application is not examined and never matures into a granted patent. A provisional patent application does not require patent claims and does not have to adhere to the same formalities of a non-provisional patent application. In contrast, a non-provisional patent application is highly formal, includes a set of patent claims, is searched and examined by the USPTO, and ultimately may grant as a patent.

What is different about foreign patent protection?

Patents are territorial, i.e., a U.S. patent only provides protection in the United States. If patent protection is desired internationally, one must seek protection in each country where it desires protection. The PCT provides uniformity across most countries, but our outside patent counsel engages law firms in each country where a patent application is filed to ensure that the specific laws and procedures of that country are followed.

What is the timeline of the patenting process and resulting protection?

Generally, patents are issued approximately 18 to 42 months after application. During this period a patent is pending.

What is a Notice of Allowance?

If a U.S. patent application is found to be allowed after its examination by the USPTO, a Notice of Allowance is sent to the applicant or the applicant's attorney or agent of record. For the patent application to grant as a patent, an issue fee must be paid within three months from the date of the notice; if payment is not made in a timely manner, the application is considered to be abandoned.

Can an invention be corrected once a patent is granted?

Typographical errors may be corrected by filing a certificate of correction. When a patent is defective in certain aspects, the patentee may apply for a reissue patent. New matter cannot be added to the application. A reissue patent is granted following the examination of the changes made to the application. It replaces the original patent and is granted only for the remainder years left from the unexpired term.

What is a maintenance fee?

In the U.S., all utility patents issued are subject to the payment of maintenance fees that must be paid to maintain the patent in force. These fees are due at 3.5, 7.5, and 11.5 years from the date the patent is granted.

How many years does a patent last?

Utility and plant patents are granted for a term which begins on the date of the grant and ends 20 years from the date the patent application was first filed. Design patents are granted for a term of 14 years from the date of the grant. Patentees can lose their rights when periodic maintenance fees are not paid or when the term expires.

What happens when a patent expires?

After a patent has expired anyone may make, use, offer for sale, or sell or import the invention without permission of the patentee, provided that matter covered by other unexpired patents is not used. Expired patents are said to be in the public domain.

Will Rensselaer initiate or continue patenting activity without an identified licensee?

Yes. Because of the desire to publish research results, patent activity is typically commenced and pursued by IPO without an identified licensee. If it is later determined that no viable commercial pathway remains, IPO may discontinue pursuit of a patent for particular research.

Who decides what gets protected?

The determination is based on the scope of the invention, its patentability, and commercial merit. The decision is made based on recommendations of IPO in consultation with the inventor(s).

PATENTS

What does it cost to file for and obtain a patent?

Between USPTO filing fees and associated attorneys' costs, filing a patent just in the United States can cost over \$30,000. International patent filings are even more expensive, as they cover a larger number of countries and often involve foreign attorneys and translators. A Patent Cooperation Treaty (PCT) filing plus filings in major industrial nations have been known to cost over \$100,000. Additionally, there are annual annuities due for all pending foreign patent applications and maintenance fees for all granted patents, pushing the cost over the lifetime of a patent even further.

What if I created the invention with someone from another institution or company?

In most cases, an agreement will already be in place that governs both ownership of the invention and the sharing of any revenue generated by related granted patents. If not, please contact IPO for assistance in reviewing the matter to ensure such questions are addressed as early as possible in the process.

What is an infringement of a patent?

Infringement of a patent consists of the unauthorized making, using, offering for sale, or selling any patented invention within the United States or U.S. Territories, or importing into the United States of any patented invention during the term of the patent. A patentee can sue the infringer and ask for an injunction to prevent the continuation of infringement and for an award of damages.

What should I do if I believe that a patent on which I am an inventor has been infringed?

Please contact IPO immediately if you suspect someone is infringing a patent on which you are an inventor. Rensselaer is the designated assignee and owner of the patent, so any potential infringement on its patent rights should be brought to the attention of Rensselaer through IPO.



OTHER INTELLECTUAL PROPERTY



What is a copyright and how is it useful?

Copyright is a form of protection provided by the laws of the United States to the authors of “original works of authorship.” This includes literary, dramatic, musical, artistic, and certain other intellectual works as well as computer software. This protection is available to both published and unpublished works. The Copyright Act generally gives the owner of copyright the exclusive right to conduct and authorize various acts including reproduction, public performance, and making derivative works.

Examples of copyrightable works include:

- Software;
- Databases; and
- Curricula.

Do you have to apply for copyright protection?

Copyright protection is automatically secured when a work is fixed into a tangible medium such as a book, song, software code, video, mobile app, etc. It is not necessary to register the copyright with the U.S. Copyright Office, although registration of the copyright is required if one intends to litigate over the infringement of its copyright. In addition, there are certain statutory benefits if one registers a copyright within three (3) months of the first publication of the copyrighted material. Please contact IPO to determine whether Rensselaer should seek a formal copyright registration for your materials.



Where can I learn about university copyright policies?

The Rensselaer Intellectual Property Policy covers all types of intellectual property — patents, trademarks, copyrights, and trade secrets. Please contact IPO with any specific questions regarding Rensselaer copyright policies.

What is an Open Source License?

An open source license is a type of license to computer software source code that allows the source code to be used, modified, and shared with others under specific license terms and conditions. Most open source licenses are free. In contrast, commercial software must be licensed or purchased for a fee, its use is heavily restricted and typically prohibits any modification, and additional fees are often required for multiple users.

What are the different types of Open Source Licenses?

Open source licenses vary widely with respect to whether the open source code may be included in a proprietary product that is sold under a closed source license. On one end of the spectrum is open source software protected under a copyleft license, which prohibits the copyleft open source code from being used in a closed source product. Such licenses are described as strict or non-permissive. At the other end of the spectrum are permissive licenses, which allow the open source code to be mixed with closed source code and sold as a closed source product. There are myriad open source licenses that include different mixes of restrictive conditions. One should select the appropriate open source license depending on how it will be used. IPO can assist you in making this decision.

What is the difference between copyrighted and patented software?

Copyrighted software is protected via a registration of its source code with the United States Copyright Office. Patented software is protected through the filing of a patent application with the United States Patent and Trademark Office. Generally, patented software offers broader protection of the overall functionality of the software where copyright protection prevents another party from copying the actual source code of the software.

What is a trademark or service mark and how is it useful?

A trademark is a word, phrase, symbol, and/or design that identifies and distinguishes the source of goods or services of one manufacturer or seller from those manufactured or sold by others. A service mark, on the other hand, is a word, phrase, symbol, and/or design that identifies and distinguishes the source of a service rather than goods. Some examples include brand names, slogans, and logos. The term "trademark" is often used in a general sense to refer to both trademarks and service marks.

Unlike patents and copyrights, trademarks do not expire after a set term of years. Trademark rights come from actual "use". Therefore, a trademark can last forever — as long as you continue to use the mark in commerce to indicate the source of goods and services.

What is a trademark registration?

While you acquire a common law trademark when you begin using the mark in commerce, a trademark registration involves the filing of a trademark application with either a particular state or more commonly, if the mark is being used in interstate commerce, with the USPTO. Federal trademark registration ensures that no other parties can use the mark anywhere in the United States. In addition, federal trademark registration provides certain statutory protections and allows a mark owner to use ® to indicate the mark's federal registration.

What is the Rensselaer policy on trade secrets?

While Rensselaer does not have a formal policy governing trade secrets, they are governed by the Rensselaer Intellectual Property Policy and creators of potentially valuable IP are required to disclose such IP to Rensselaer via IPO. IPO will then determine the best way to protect the IP, which sometimes includes holding the IP as a trade secret. In such situations, a specific plan will be devised by IPO to ensure protection of the trade secret, which may include specific confidentiality terms in license agreements, etc.



What is digital intellectual property?

Digital intellectual property is intellectual property in digital form, e.g., digital documents, databases, video, and audio.

What are intellectual property rights in data?

With the exception of copyrighted photographs included as part of a data set, data such as facts, etc., are not by definition considered intellectual property. Typically, access to data is granted via a license, which offers contractual protection to the owner of the data. In limited cases, the design and arrangement of a database may be copyrighted. However, this only offers thin protection against storing the data in close to the same arrangement as the copyrighted database, e.g., same rows, columns, titles, etc.

MARKETING AN INVENTION

Why does IPO market my inventions?

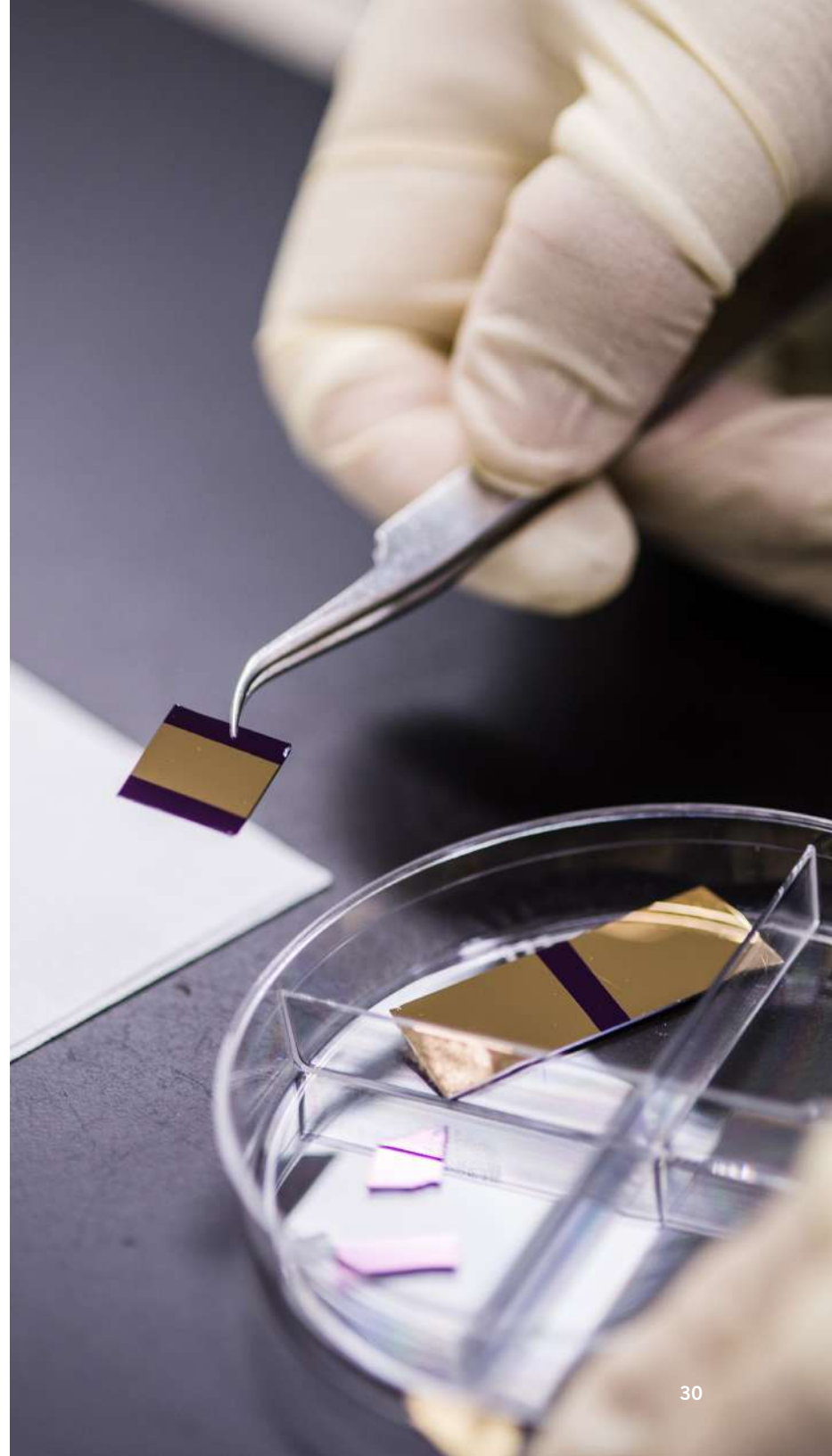
It is important to Rensselaer that novel inventions move from academia to the marketplace. This allows the world to utilize the invention while increasing both the prestige of Rensselaer research and your own research. The marketing of your invention may result in sponsored research and collaborations from industry. Additionally, if the technology is successfully commercialized by a licensee, you, the inventor, stand to monetarily gain from the further development of the technology.

How does IPO market my inventions?

IPO leverages an external consulting firm to contact potential licensees. The contact of potential licensees takes place through both emails and phone calls. During the outreach effort, the developed marketing slick is sent to potential licensees. If these potential licensees express interest or have questions, an IPO team member will reach out to you to schedule a teleconference with the potential licensee or get your response to the questions.

How are most licensees found?

Finding licensees can occur in a variety of ways from direct marketing to already established relationships with the inventor to potential licensees reviewing journal articles. Many licensees occur from direct marketing efforts, in which Rensselaer reaches out to a company. However, in other cases, the inventor has an established relationship with the company through sponsored research or collaboration. In a few cases, a licensee may be actively seeking out an invention to solve a problem they have. Therefore, a company may reach out to Rensselaer regarding a specific invention or needed expertise.





How long does it take to find a potential licensee?

Finding a licensee takes a bit of luck, as Rensselaer must have an invention that fits a current company need. Thus, timing is an essential ingredient in the marketing process. Typically, it can take anywhere from six months to several years to find a licensee. This timeline does depend on the invention, as more cutting-edge inventions may need another technology to mature before it can be commercialized. In other cases, the timing may work out perfectly and a potential licensee is found within a few months.

Can there be multiple licensees?

Yes. Multiple non-exclusive licenses may be granted and/or multiple licenses that are each restricted to particular fields, geographic regions, or other categories may be granted.

STARTUP COMPANIES



What is a startup?

At Rensselaer, the term startup typically refers to an early-stage company formed by entrepreneurial founders around intellectual property licensed from Rensselaer. In most cases, but not all, at least one of the founders is a co-inventor of the licensed Rensselaer IP.

Will IPO license to a startup?

In many cases, the answer is yes. IPO decides whether to license to a startup based on the strength of its business plan and the most commercially viable pathway for the IP in-question. For example, if the IP in-question will require significant capital investment to commercialize and a large company is seeking an exclusive license, IPO would likely not license to a startup in favor of the large company. However, IPO has successfully licensed Rensselaer IP to many startups.

How are entrepreneurial inventors involved in the licensing process?

Entrepreneurial inventors are often involved in the licensing process by promoting Rensselaer intellectual property, identifying licensee candidates, and participating in show-and-tell meetings to answer prospective licensee questions.

Does IPO give special consideration to inventor startups when selecting a licensee?

In some cases, yes. For example, often the IP requires further development and an inventor startup is the best licensee. However, if the IP is further refined, already developed to be scaled, and a mature company offers the best opportunity to successfully commercialize the IP, it may be selected over a startup.

When can the startup management team negotiate a license?

A startup management team may negotiate a license after it forms a corporate entity, e.g., an LLC, etc., and after it resolves any conflict of interest issues it may have with involved faculty.

What comes first, the funding agreement or the license agreement?

Every situation is different, but IPO often licenses to startup companies before they gain significant funding.

In fact, large investors are often wary of investing until they know the IP is secured by the startup.

How long does it take to get a license from IPO?

Again, every situation is different, and it depends on the complexity of both the IP and the licensee company. However, in most cases, a license agreement can be negotiated, drafted, and closed in under 12 weeks.

Who decides whether to form a startup?

The decision of whether to form a startup is made by its founders. However, if Rensselaer IP will serve as the basis for the startup, it is highly recommended that the founders consult with IPO prior to its formation.

What role does an inventor usually play in a company?

It depends on the inventor. In some cases, the inventor will be a founder in the company. In other cases, the inventor will not be involved in the company in any way. Inventors are not required to be part of a startup.

How much of my time and effort will it take?

It depends on your role in forming the startup. There have been faculty members who took a leave of absence to help form a startup, and there have been faculty members who have declined any involvement in a startup formed around IP in which they were a lead inventor. As there is no requirement of an inventor to participate in a startup, the amount of time and effort it will take is up to the individual inventor.

Does Rensselaer take equity in startups?

Every startup is different, but in many cases, Rensselaer either takes equity or has an option to take equity. All terms are negotiable, and IPO is happy to discuss and explain the Institute's standard license terms well in advance of any license negotiations. Please contact IPO if you would like to learn more.

How does IPO manage equity granted as part of the licensing agreement?

As discussed below in the Royalty Distribution section of the IP Policy, if Rensselaer accepts equity in a startup, unless otherwise agreed, it is at the sole discretion of IPO regarding the decision when to liquidate such equity. When liquidating or otherwise disposing of any equity interests, Rensselaer may incur the payment of commissions, other fees or charges, and other expenses. All such expenses are considered development expenses in determining the Net Equity Income that is to be distributed as Net Adjusted Income.

What happens if there are follow-on patents to the original patent?

Typically, but not always, a license agreement covers related patents granted subsequent to the effective date of the license. In those cases where the original license does not cover subsequent related patents, IPO will work with the licensee to amend the original agreement on mutually satisfactory terms.

What happens to the invention if the startup is based on an invention jointly owned by Rensselaer and another institution?

In such situations, IPO often negotiates an inter-institutional agreement with the other institution, which covers the sharing of license revenue and other related terms. In other cases, a licensee may be satisfied with receiving a non-exclusive license and the ownership rights of the other institution are not important.

Can I continue to do research at Rensselaer on a technology that is the basis of my startup?

Yes. But you must take care to ensure that any conflicts of interest are properly managed, e.g., your research cannot be managed by your startup, etc. In addition, all new IP developed must be licensed separately or by amending the original license agreement with the startup.



Where can I find out more information about startups?

| | |
|--|--|
| Business Plan Presentation | Venture B-Plan Series |
| Venture Capital Funding | REN Venture Series |
| Angel Investment Funding | Tech Valley Angel Network (TVAN) |
| Alumni Access | Rensselaer Entrepreneurship Affinity Group |
| Student Internships | Rensselaer Severino Center REIP Program |
| Student Employees | Rensselaer Career Development Center |
| Engineering and Automation | Rensselaer Automation CAT |
| Energy Entrepreneurship | Rensselaer Energy CAT |
| Resources for Energy Companies | National Alliance of Clean Energy Incubators |
| Economic Development | Center for Economic Growth Partnership |
| Professional Expertise | Consulting with Rensselaer Professional Resource Network |
| Startup Counseling | SCORE Partnership |
| Technology Transfer | Rensselaer & Albany Law School Tech Transfer Series |
| Market Research | Lally School of Management |
| Incubation & Acceleration | Student Teams Incubator Staff Advocacy & Support |
| Regional Support | Tech Valley Incubator Network (TVTN) |
| State Support | Business Incubators Association of NYS (BIA/NYS) |
| National Support | National Business Incubator Association (NBIA) |
| U.S. Patent & Trademark Office | www.uspto.gov |
| Socially or Economically Disadvantaged Businesses - SBA 8(a) Business Development | www.sba.gov/8abd/ |
| Women-Owned Businesses, National Women's Business Center | www.sba.gov/content/womens-business-center-grant-opportunities |
| Empire State Development | esd.ny.gov |

NAVIGATING CONFLICT OF INTEREST



How does Rensselaer define a conflict of interest?

A conflict of interest is a situation where a Rensselaer employee has financial interests that could adversely impact or influence their full-time employment, professional research, or teaching responsibilities. Conflict of interest also exists if an Institute employee has the opportunity to use their Institute position for personal financial gain.

Why are conflicts of interest important to manage?

Strict adherence to conflict of interest regulations is critical to the credibility of Rensselaer. Real or perceived conflict of interest can jeopardize taxpayer support for academic research, allow critics to challenge the credibility of scientific research by questioning the objectivity of investigators, and undermine academic freedom by interfering with the image of the Institute as a producer and certifier of knowledge.

What are examples of conflict of interest?

- Serving on the governing board of a firm that uses Rensselaer assets or resources
- Consulting with a firm in which Rensselaer has invested or proposes to invest
- Holding a financial interest in a firm in which Rensselaer has invested or proposes to invest
- Being employed or holding a financial interest in a firm that conducts business with Rensselaer
- Seeking to use Rensselaer resources for a firm in which one either holds an interest or is employed



How does Rensselaer manage conflicts of interest?

Rensselaer encourages faculty, staff, and students to engage in activities and share expertise with companies. In fact, the Institute is obliged to transfer technology to the private sector so that the public can benefit from the results of Rensselaer research. Within this context, the Institute acknowledges that conflict of interest is common and, in fact, frequently unavoidable. The Institute does not consider conflict of interest inherently bad or improper, so long as it is properly managed. The Rensselaer Conflict of Interest Committee must approve IP licenses with Rensselaer employee companies.

Rensselaer identifies and manages potential or real conflicts of interest through an ongoing disclosure process under which employees must submit annual outside activity reports. These reports are required any time the employee's outside activities change significantly, even if no conflict of interest is associated with the activity. Of course, if an employee becomes involved in any situation where a material conflict of interest might affect their responsibilities to Rensselaer, a report of that activity must be filed.

From whom should I seek guidance on conflict of interest?

The Vice President for Human Resources and the Conflict of Interest Committee determine whether a conflict exists and, if so, the extent of the conflict and what actions must be taken to manage its potentially adverse effects.

LICENSE AGREEMENTS

What is an intellectual property (IP) license?

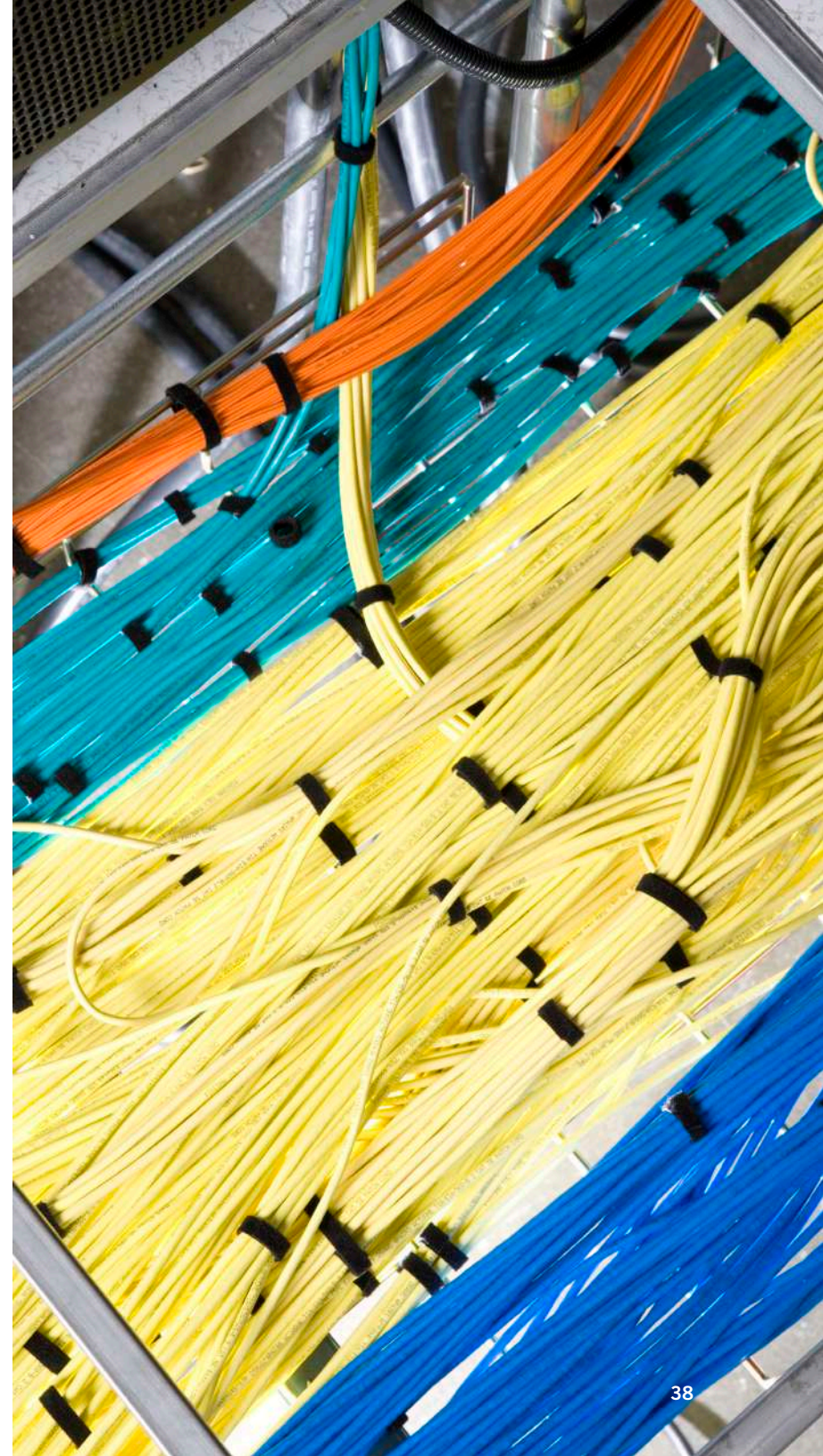
An IP license is an agreement between an IP owner (“licensor”) and another party (“licensee”) that provides the licensee certain rights in the IP, e.g., to make, use, or sell the IP, in exchange for money in the form of license fees and/or royalties. IP licenses vary in complexity depending on the IP and sophistication of the licensee.

What is an Option Agreement?

Option Agreements are used so that companies can evaluate a technology to determine whether it is interested in securing a license to intellectual property covering the technology. Option agreements include a defined term that provides a company enough time to determine whether it considers the technology commercially feasible but does not grant commercial rights. An option can be either exclusive, where for a limited term no other options on the particular technology or intellectual property will be granted, or can be nonexclusive where other options may also be granted. The outcome of an option agreement is a go/no-go decision by the company to license the technology.

How much inventor involvement is there in the licensing of technology?

IPO encourages the participation of inventors. The more involved and interested the inventor(s) are in the licensing of a technology, the higher the chances are that successful licenses will be secured. Normally the inventor(s) are the first best source of information on what companies would be interested in licensing the technology.



Where are potential licensees found and how does Rensselaer choose a licensee?

Licensees can be identified in many ways. First, the inventors often are aware of the commercial companies who would be interested in the work. Industry-specific marketing efforts including trade show participation, affiliations, and market research carried out by IPO, which also can serve to identify potential licensees. Additionally, issued patents listed by the USPTO can provide names of companies that currently have patents similar in nature, and often times these can prove to be potential licensees as well. IPO only licenses Rensselaer intellectual property to a licensee it believes will successfully commercialize the intellectual property. In some cases, IPO will decline to license IP to multiple licensee candidates if it finds them all unqualified, and in others it is able to select the best of multiple qualified licensee candidates.

How long does it take to execute a license agreement?

Every license is unique in that it brings together university intellectual property to solve a company's specific problem(s). Once the intellectual property is identified by the company, terms of a license need to be negotiated to arrive at a mutually acceptable agreement. Execution can take from as little as a few weeks to over a year, depending on the complexity and the response times of all involved.

What happens after a license has been executed?

Once a license is executed, the exact next steps are a strong function of the specifics of the license. Many licenses require the licensee to make an upfront payment, which is distributed according to the Rensselaer Intellectual Property Policy. The licensee is typically required to submit regular commercialization progress reports to Rensselaer, which include product plans, realized revenues from sales, sublicensing activities, etc. If there is a need for further expertise from the inventors to facilitate the licensee's commercialization, there may be an opportunity for the inventor(s) to consult directly with the licensee.

What will happen to my invention if the startup company or licensee is unsuccessful? Can the invention be licensed to another entity?

While every case is different, the answer to this question is almost always yes. With very few exceptions, if a startup company or other licensee is unsuccessful, its rights under the license are terminated and all rights to Rensselaer IP revert back to Rensselaer. At that time, Rensselaer is free to license the IP to another party.

ROYALTY DISTRIBUTION

How does Rensselaer distribute royalties?

The Rensselaer Office of Intellectual Property Optimization (IPO) calculates and distributes the Net Adjusted Income from each IP license or licensing-related transaction according to the Rensselaer Intellectual Property Policy. Net Adjusted Income is defined as the gross revenue minus current and reasonable projected expenses, e.g., patent prosecution costs or maintenance costs or specific marketing costs directly attributable to the licensed IP, that Rensselaer deems necessary to defend or maintain the Intellectual Property. Net Adjusted Income is distributed by the following formula: 35% to creator(s)/inventor(s), 15% to the creator's respective academic school or Institute center where the work was done, and 50% to Rensselaer.

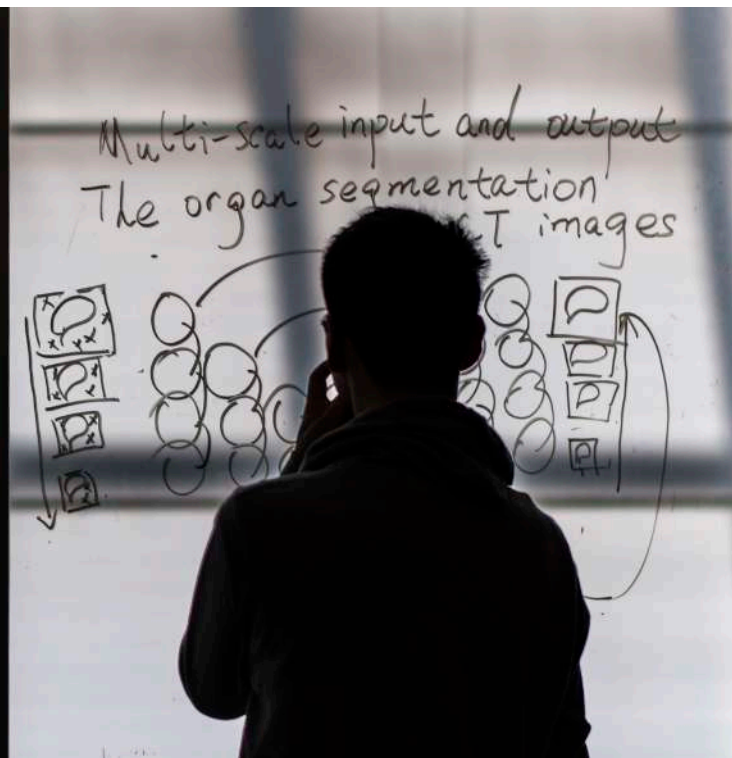
How are inventor's contribution percentages assigned?

Inventor contribution percentages refer to the formula by which the 35% adjusted royalty income is split among the inventors. The standard disposition is equal sharing. However, it is up to the inventors to propose and agree on a different formula and communicate that agreement to IPO. It is recommended that this be accomplished no later than the filing of the non-provisional patent application for patent-related intellectual property.



What if Rensselaer receives equity from a company?

Rensselaer may elect to accept equity in lieu of cash payments, licensing fees, royalties, or other consideration. The decision whether to accept equity and, if so, precisely when to liquidate such equity, is at the sole discretion of IPO. When liquidating or otherwise disposing of any equity interests, Rensselaer may incur the payment of commissions, other fees or charges, and other expenses. All such expenses are considered development expenses in determining the Net Equity Income that is to be distributed as Net Adjusted Income.



What are the tax implications of any royalty distributions I receive from Rensselaer?

Royalty distributions may be considered taxable income. Rensselaer recommends that all creators of licensed Rensselaer IP consult with their tax advisor or accountant prior to receiving any distributions of licensing income.

How is equity from a license distributed?

If Rensselaer receives equity in a license, the equity is not distributed until it is liquidated, which is at the discretion of IPO. Upon liquidation of the equity, the Net Equity Income, which is the gross amount received for the equity minus any costs associated with the liquidation, is distributed as Net Adjusted Income with 35% shared by Rensselaer inventors, 15% received by the inventors' department, and the remainder going to Rensselaer.

EXPORT CONTROLS

How can export controls affect my research?

“Export” is defined not only as a physical transfer/disclosure of an item outside the U.S., but also as a transfer/disclosure in any form of a controlled item or information within the U.S. to anyone who is a foreign person. This is called the “deemed export” rule. As a result, unless an exclusion or exemption is available, Rensselaer may be required to obtain prior governmental approval (in the form of an export license) before allowing the participation of a “foreign person” faculty, staff, or student in affected research. In some cases, a license may not be available based on the country involved.

In addition to affecting who may participate in the research project on campus, the following are examples of situations in which a license may be required:

- Presentation/discussion of previously unpublished research at conferences and meetings where foreign person scholars may be in attendance.
- Research collaborations with foreign persons and technical exchange programs.
- Transfers of research equipment abroad.
- Foreign scholars, foreign persons visiting Rensselaer laboratories.
- Releasing, transferring export controlled born technology during the research effort.

What kind of projects raise export control questions?

Basically, any research activity may be subject to export controls if it involves the actual export or “deemed” export of any goods, technology, or related technical data that is either: i) “dual use” (commercial in nature with possible military application) or ii) inherently military in nature.

Work in the following areas is considered high risk:

- Engineering
- Space sciences
- Computer Science
- Biomedical research with lasers
- Research with encrypted software
- Research with controlled chemicals, biological agents, and toxins

In addition, any of the following raise export control questions for a project:

- Sponsor’s restrictions on the participation of foreign persons in the research.
- Sponsor’s restrictions on the publication or disclosure of the research results.
- Indications from the sponsor or others that export-controlled information, controlled unclassified information (CUI) or technology will be furnished for use in the research.
- The physical export of controlled goods or technology is expected.

EXPORT CONTROLS

Why do they apply to me?

Violations of export controls may result in significant criminal and/or civil penalties for both the individual(s) involved and Rensselaer. It can also result in damage to both U.S. national security and our standing as a leading research institution. If you have questions related to export controls, please contact the Export Control Office at (518) 276-3777 or exportcontrol@rpi.edu.

What are export control laws?

Export controls are U.S. federal government laws and regulations that require federal agency approval before the export of controlled items, commodities, technology, software, information or technical assistance to restricted foreign countries, nationals/persons, and entities (including universities).

What do I do if I am exporting technology?

Please contact the Rensselaer Export Control Office at (518) 276-3777 or exportcontrol@rpi.edu for assistance prior to exporting any technology.

What activities should I avoid?

Every situation is different but there are few activities that you must avoid if you manage your project in accordance with any applicable export controls as defined by U.S. laws and regulations. The Export Control Office will assist you in developing an export controls management plan for your specific research project.

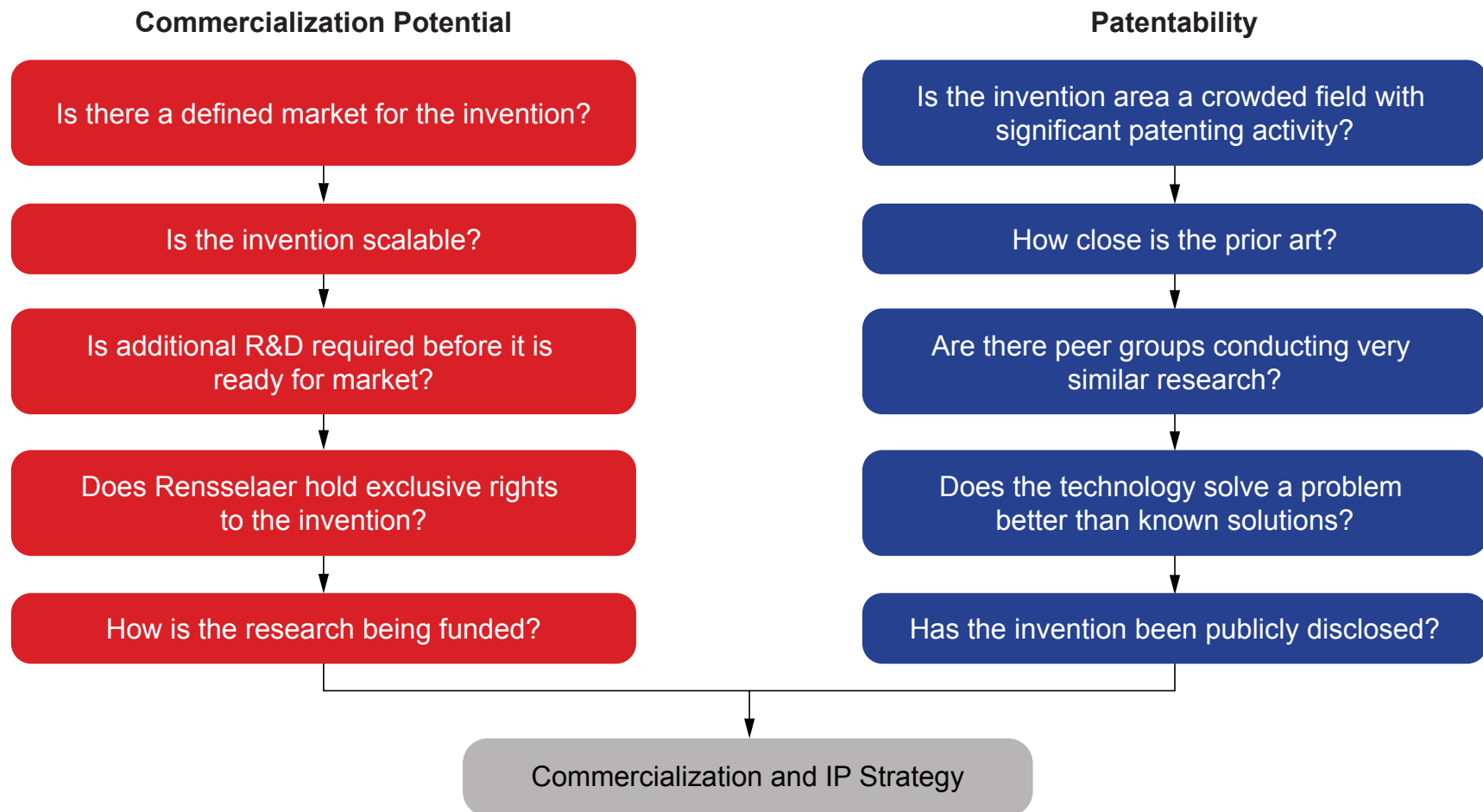
What happens if you violate export control laws?

Violations of the Export Control Laws (ECLs) can result in both institutional and individual penalties, including large fines, imprisonment, and debarment from future export activities. These penalties generally result from negligence and willful violation of the law rather than from honest error. Penalties associated with violation of the ECLs are mitigated by self-reporting the violation.



COMMERCIALIZATION EVALUATION CRITERIA

After receiving an invention disclosure, IPO evaluates the disclosed invention's commercialization potential and patentability. IPO's assessment is not an evaluation of the technical merits of the underlying research but rather a measure of whether it can be commercialized and patented. The results of this assessment along with input from the principal investigator assist IPO in developing the best overall strategy for commercializing and protecting the disclosed invention. The following shows some of the factors considered by IPO, with no one factor being determinative:



COMMERCIALIZATION COACHING LIST

- 1 Understand the Differences**
Industry-sponsored research is different from federally funded research. Understand that the project may not be as intellectually stimulating or scholarly (more application-focused than fundamentals). The project may also be a tight scope of work and a shorter timeline (typically 6 months to 1 year).
- 2 Do Your Homework**
What are trends in the target industry? Determine current problems and how your research and expertise can be used to resolve them.
- 3 Determine Your “Fit”**
How will you interact with industry? Collaboration, specific testing, use of specialized equipment, etc.? You need to know how you “fit” into the company’s current research strategy. Make sure you understand who will be doing the work and delivering on the project (yourself, graduate students, postdocs, research scientists). Do the current skill sets available align with the needs of the project?
- 4 Protect Yourself**
Before reaching out to industry, discuss the use of a non-disclosure agreement (NDA) with the Office of Intellectual Property Optimization (IPO). Determine how much of your idea or technology to disclose in conversation.
- 5 Build a Network to Promote Yourself and Your Technologies**
Publish papers, give presentations, and speak at conferences. Get the word out about your expertise and research. Try to connect with technical people from industry, which will allow you to better tailor your research pitch.
- 6 Prepare a Simple Pitch**
Be able to concisely and non-technically pitch your expertise and research. Focus on how you can bring value to the company by solving a problem. Have an idea of the resources (time, funding, equipment) needed to solve their problem.
- 7 Don’t Promise the Moon**
It is easy to get caught up in all the potential work that you can do for a company. However, remember that companies want tangible results, not to understand the basic science. Focus on pointed research, clear outcomes, and deliverables.
- 8 Keep IPO in the Loop**
As your relationship with a company evolves, be sure to keep IPO up-to-date on the status. IPO can provide not only agreements, but also best practices when dealing with companies. IPO can also assist in company conversations and negotiations.
- 9 Shift from Transactional to Strategic**
Listen to feedback from the company to better develop the relationship. Provide excellent customer service and regular communication to become more collaborative. You want to be viewed as a trusted resource.
- 10 Be Collaborative within Rensselaer**
Leverage other resources, research, and expertise within Rensselaer to assist the company in reaching its goals. This increases the chances that the relationship will become more strategic and collaborative.

Office of Intellectual Property Optimization (IPO)
Rensselaer Polytechnic Institute



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