

A Guide to

Technology Transfer

For Creators of Intellectual Property
at Brandeis University¹

Brandeis University

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What is technology transfer?

Technology transfer is the movement of knowledge and discoveries to the general public. It can occur through publications, educated students entering the workforce, exchanges at conferences, and relationships with industry. For the purposes of this guide, however, technology transfer refers to the formal licensing of technology to third parties, under the guidance of professionals employed by universities, research foundations, and businesses, in departments focused on these activities.

Use of the term “technology” in this context reflects the dominance of the field by discoveries in the life sciences, physical sciences, and information technology, but should not be interpreted to mean that the field is limited to such areas. For the purposes of this guide, “technology” encompasses all intellectual property that might be created within a university, including *inter alia* inventions; tangible research materials; software, books, multimedia, or audiovisual materials; and artistic works.

What is the Brandeis Office of Technology Licensing?

The Brandeis Office of Technology Licensing is a University service unit composed of a specialist in academic licensing networked with external consultants, as appropriate, to achieve a full range of competencies in licensing, business development, and legal matters for transferring technologies.

Why would a member of the Brandeis community want to participate in the technology-transfer process?

The reasons are unique to each individual and may include:

- Making a positive impact on society
- Feeling a sense of personal fulfillment
- Achieving recognition and financial reward
- Generating additional lab/departmental funding
- Meeting the obligations of a research contract
- Attracting research sponsors
- Creating educational opportunities for students
- Linking students to future job opportunities

How is technology transferred?

Technology is typically transferred through a license agreement in which the University grants its rights to a third party in the defined technology for a period of years, and sometimes for a particular field of use and/or region of the world. The licensee (the third party licensing the technology) may be an established company or a new business start-up. Licenses include terms that require the licensee to meet certain performance

requirements and to make financial payments to the University. These payments are shared with the creators and distributed to the schools and departments/units to provide support for further research, education, and participation in the technology transfer process.

What is the Bayh-Dole Act?

The U.S. Bayh-Dole Act of 1980 allows universities and other nonprofit institutions to have ownership rights to discoveries resulting from federally funded research, provided

certain obligations are met. These obligations include making efforts to protect (when appropriate) and commercialize the discoveries, submitting progress reports to the funding agency, giving preference to small businesses that demonstrate sufficient capability, and sharing any resulting revenues with the creators. The Bayh-Dole Act is credited with stimulating interest in technology transfer activities and generating increasing research, commercialization, educational opportunities, and economic development.

When you disclose an invention to the Office of Technology Licensing, it starts a process that could lead to the commercialization of the technology.



How do I work with the Office of Technology Licensing?

We encourage you to contact the Office of Technology Transfer during your discovery or creation process to ensure you are aware of the options that will best leverage the commercial potential of your work. The Office of Technology Licensing will assist you with questions related to marketability, funding sources, commercial partners, patenting, and other protection methods, new business start-up considerations, and University policies and procedures.

What are the typical steps in the process?

The process of technology transfer is summarized in the steps and diagram that follow. The process is described in the context of patentable inventions, which are the subject of the vast majority of academic licenses, but also applies generally to other forms of intellectual property. Note that these steps can vary in sequence and often occur simultaneously.

Ten Steps to Commercialization of a Patentable Invention

1

Research: Observations and experiments during research activities often lead to discoveries and inventions. An invention is any useful process, machine, composition of matter, or any new or useful improvement of the same. Often, multiple researchers may have contributed to the invention.

2

Predisclosure: An early contact with the Office of Technology Licensing to discuss your invention and to provide guidance with respect to the disclosure, evaluation, and protection processes described below.

3

Invention Disclosure: The written notice of invention to the Office of Technology Licensing that begins the formal technology transfer process. An invention disclosure remains a confidential document, and should fully document your invention so the options for commercialization can be evaluated and pursued.

4

Assessment: The period in which you and the Office of Technology Licensing review the invention disclosure, conduct patent searches (if applicable), and analyze the market and competitive technologies to determine the invention's commercialization potential.

5

Protection: The process in which protection for an invention is pursued to encourage third-party interest in commercialization. Patent protection begins with the filing of a patent application with the U.S. Patent Office and, when appropriate, foreign patent offices. Once a patent application has been filed, it will require several years and thousands of dollars to obtain issued U.S. and foreign patents. Other protection options include copyright, trademark, and trade secrets.

6

Marketing: With your active involvement, the Office of Technology Licensing will identify candidate companies that have the expertise, resources, and business networks to bring the technology to market. Your active involvement can dramatically shorten this process.

7

Start-up Versus Existing Company: If creation of a new business start-up appears to be the optimal commercialization path, the Office of Technology Licensing will work with you to try to identify entrepreneurs and investors to assist or take the lead in planning, creating, and funding the start-up. If an appropriate and interested existing business is selected as a potential licensee, the Office of Technology Licensing will identify mutual interests, goals, and plans to fully commercialize this technology.

8

Licensing: A license agreement is a contract between the University and a third party in which the University's rights to a technology are licensed (without relinquishing ownership) for financial and other benefits. A license agreement is used with both a new start-up business or with an established company. An option agreement is sometimes used to enable a third party to evaluate the technology for a limited time before licensing.

9

Commercialization: The licensee company continues the advancement of the technology, and makes other business investments to develop the product or service. This step may entail further development, regulatory approvals, sales and marketing, support, training, and other activities.

10

Revenue: Revenues received by the University from licensees are distributed to schools, departments, and creators to fund additional research and education and to encourage further participation in the technology-transfer process.

How long does the technology transfer process take?

The process of protecting the technology 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 University, the licensees, and creators.

How can I help in this process?

■ Call the Office of Technology Licensing (6-2176) when you believe you have a discovery or creation with potential commercial or research value.

■ Complete and submit the Invention Disclosure Form, which can be found online at www.brandeis.edu/offices/otl/investigators. If you believe you may have a patentable invention, do so before discussing your technology with people outside the Brandeis community or submitting a manuscript, in order to avoid risking loss of patent rights and possibly hindering the opportunity to market the invention.

■ On the Invention Disclosure Form, include companies and contacts you believe might be interested in your invention/creation, or who may have already contacted you about your invention. Studies have shown that over 70 percent of all licenses are executed with commercial entities known by the inventor/creator, so your contacts can be extremely useful.

■ Respond to requests from the Office of Technology Licensing and outside patent counsel. While some aspects of the patent and licensing process will require significant participation on your part, we will strive to make efficient use of your valuable time.

■ Keep the Office of Technology Licensing informed of upcoming publications or interactions with companies related to your intellectual property.



Research Considerations



Will I be able to publish the results of my research and still protect the commercial value of the intellectual property?

Since patent rights are affected by these activities, it is best to submit an Invention Disclosure Form well before any public communication or disclosure of the invention. There are significant differences between the U.S. and other countries as to how early publication affects a potential patent. Once publicly disclosed (published or presented in some form), an invention may have restricted or minimal potential for patent protection outside the United States. Be sure to inform the Office of Technology Licensing of any imminent or prior presentation, lecture, poster, abstract, Web site description, research proposal submission, dissertation/master's thesis, publication, or other public presentation of the invention.

May I use material or intellectual property from others in my research?

It is important to document carefully the date and conditions of use so we can determine if this use may influence the ownership rights of your subsequent research results. If you wish to obtain materials from outside collaborators, an incoming Material Transfer Agreement (MTA) should be completed. Contact the Office of Technology Licensing for more information on incoming MTAs.

Will I be able to share material, research tools, or intellectual property with others to further their research?

It is imperative to document items that are to be shared with others and the conditions of use. If you wish to send materials to an outside collaborator, an outgoing Material Transfer Agreement (MTA) should be

completed for this purpose. It also may be necessary to have a Confidentiality Agreement completed to protect your research results or intellectual property. Contact the Office of Technology Licensing to assist you in completing outgoing MTAs.

What rights do a research sponsor have to discoveries associated with my research?

The Sponsored Research Agreement between Brandeis and the sponsor should specify the intellectual property rights of the sponsor. The University retains ownership of the patent rights and other intellectual property resulting from sponsored research. However, the sponsor may have rights to obtain a license to the defined and expected outcomes of the research. Often, sponsored research contracts allow the sponsor a limited time to negotiate a license for any patent or intellectual property rights developed as the result of the research. Even so, the sponsor generally will not have contractual rights to discoveries that are clearly outside the scope of the research. Therefore, it is important to define the scope of work within a research agreement.

Sponsored research projects are handled by the Office of Sponsored Programs. Project representatives in this office work closely with the Office of Technology Licensing on intellectual property issues in sponsored research agreements. If you have questions about sponsored research, please contact the Office of Sponsored Programs.

What about consulting?

When researchers enter into consulting agreements, they are deemed to be acting outside the scope of their employment. Therefore, consulting arrangements are neither negotiated by the University nor formally reviewed by the Office of Technology Licensing or the Office of Sponsored Programs. The researcher is expected to ensure that the terms of the consulting arrangement are consistent with University policies, including those related to intellectual property ownership, employment responsibilities, and use of intellectual property. The Office of Technology Licensing is available to provide informal advice on how your consulting agreement relates to your Brandeis intellectual property.

Invention Disclosure

What is an Invention Disclosure?

Use of the term “Invention” in this context reflects the dominance of patentable inventions in technology transfer, but should be taken to mean any discovery or creation that might have commercial value. An Invention Disclosure is a description of your invention or development that is provided to the Office of Technology Licensing. The Invention Disclosure Form lists all collaborating sources of support and includes information necessary to begin pursuing protection and commercialization activities. To initiate the process, e-mail the Invention Disclosure Form to the Office of Technology Licensing and follow up by sending a hard-copy original signed by each of the contributors. This document will be treated as confidential information of the University. Using this document, the Office of Technology Licensing can then generate a nonconfidential description of your invention or development to assist in marketing and creating confidentiality agreements with outsiders to allow more detailed exchanges of information with potential partners.

Why should I submit an Invention Disclosure Form?

When you disclose an invention to the Office of Technology Licensing, it starts a process that could lead to the commercialization of the technology. On the part of the Office of

Technology Licensing, this may involve beginning the legal protection process and working to identify outside development partners. If government funds were used for your research, you are required to file a prompt disclosure. Similar requirements may exist for other sponsored projects.

How do I know if I should be submitting an Invention Disclosure Form?

You are encouraged to submit an Invention Disclosure Form for all inventions and developments that you feel may solve a significant problem and/or have significant value. If you are in doubt, contact the Office of Technology Licensing to discuss the invention. We can also advise on alternatives to licensing.

When should I complete an Invention Disclosure Form?

You should complete an Invention Disclosure Form whenever you feel you have discovered or created something unique with possible commercial value. If you believe you may have made a patentable invention, this should be done well before presenting the discovery through publications, poster sessions, conferences, press releases, or other communications. Once publicly disclosed (i.e. published or presented in some form), an invention may have restricted or minimal potential for patent protection outside the



United States. Differences exist between the U.S. and other countries on the impact of early publication on a potential patent. Be sure to inform the Office of Technology Licensing of any imminent or prior presentation, lecture, poster, abstract, Web site description, research proposal, dissertation/master's thesis, publication, or other public presentation of the invention.

Should I disclose research tools?

Typically, research tools are materials such as antibodies, vectors, plasmids, cell lines, mice, and other materials used as “tools” in the research process. Research tools do not necessarily need to be protected by patents in order to be licensed to commercial third

parties and generate revenue for your laboratory and the University. If you have research tools that you believe to be valuable, or wish to provide to others (including research collaborators), the Office of Technology Licensing will work with you to develop the appropriate protection, licensing and distribution strategy.

How do I submit an Invention Disclosure?

You can download a disclosure form and simple instructions from <www.brandeis.edu/offices/otl/investigators/>. If you have any questions, contact the Office of Technology Licensing.

Ownership of Intellectual Property

What is “intellectual property”?

Intellectual property is material that may be protected under the patent, trademark, and/or copyright laws.

Who owns what I create?

The Brandeis Intellectual Property Policy defines ownership of intellectual property. The creators of intellectual property retain their right, and the University shall not assert ownership rights unless one of the following circumstances applies:

■ Development was funded as part of a sponsored research agreement.

■ A faculty member or student was assigned, directed, or specifically funded by the University to develop the intellectual property, and the creator has agreed in writing that the intellectual property is to be owned by the University.

■ The intellectual property was developed by an employee or employees other than faculty or students in the course of their employment duties.

■ The intellectual property was developed with the use of University resources that substantially exceed or are qualitatively different from those that would normally be provided for the creator’s employment duties.

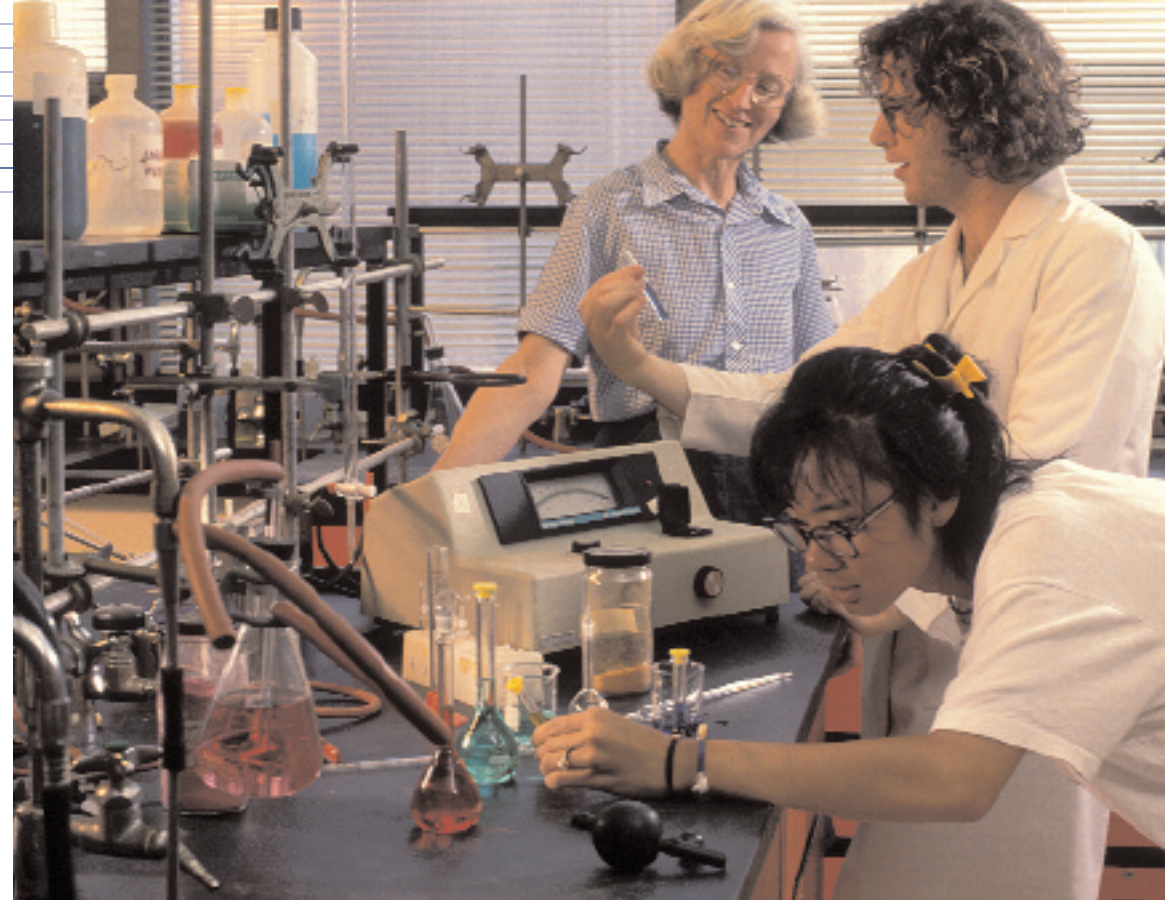
The Intellectual Property Policy contains explanations and examples of each of the above circumstances that confers University ownership. The policy can be found online at www.brandeis.edu/offices/otl/investigators/Patent_Policy.html. When in doubt, it is best to call the Office of Technology Licensing for advice.

Who owns rights to discoveries made while I am consulting?

The ownership of inventions made while consulting for an outside company depends on the terms of your consulting contract. It is important to clearly define the scope of work within consulting contracts to minimize any issues with inventions from University research. If you have questions, the Office of Technology Licensing is available for informal advice.

Who owns rights to discoveries made while on sabbatical?

Generally, if you are on a sabbatical paid by the University, the University retains rights to any discoveries that it would own if the discovery were made while you were working at the University, although the host institution may also require an undivided ownership interest in discoveries made while you are working at the host institution. Contact the Office of Technology Licensing or the Office of Sponsored Programs before your sabbatical to ensure that ownership considerations are documented.



Should I list visiting scientists on my Invention Disclosure Form?

All contributors to a discovery or creation should be mentioned in your disclosure, even if they are not Brandeis employees. The Office of Technology Licensing, along with legal counsel, will determine the rights of such persons and institutions. It is prudent to discuss with the Office of Technology Licensing all working relationships (preferably before they begin) to understand the implications for any subsequent inventions.

Can a student contribute to intellectual property?

Yes, a student can even be the sole inventor or creator. Students retain their rights, and the University shall not assert ownership rights unless development of the intellectual property was funded as part of a sponsored research agreement; the student was assigned or specifically funded by the University to develop the intellectual property and has agreed in writing that the intellectual property is to be owned by the University; or the intellectual property was developed with the use of significant University resources. The Brandeis Intellectual Property Policy contains explanations and examples of each of the above circumstances that confers University ownership. The policy can be found online at www.brandeis.edu/offices/otl/investigators/Patent_Policy.html.

Invention Disclosure

How does the Office of Technology Licensing assess Invention Disclosures?

The Office of Technology Licensing examines each invention disclosure to review the novelty of the invention/creation, competing technologies, protectability and marketability of potential products or services, relationship to related intellectual property, size and growth potential of the relevant market, amount of time and money required for further development, pre-existing rights associated with the intellectual property, and potential competition from other products/technologies.

If my conviction is that all University-owned intellectual property should be licensed nonexclusively to all potential users for the public good, will the University honor my request?

The Office of Technology Licensing will work with you to develop the appropriate commercialization strategy for the intellectual property. Some technologies lend themselves to nonexclusive licensing (licensing to multiple third parties), while others will only reach the commercial marketplace—and therefore the public—if they are licensed on an exclusive basis. We will try to accommodate creators' commercialization wishes. However, the final decision will be determined by our assessment of what strategy will produce the most benefits for the general public, consistent with policies of funding agencies and other obligations.

How do we decide whether to commercialize with a traditional or an “open source” license for software?

Generally, the Office of Technology Licensing supports University software developers who choose to essentially give their programs away through open source mechanisms, provided the University retains the right to distribute the program freely and each developer's unit supports the decision.

Does the University ever waive its ownership rights in intellectual property?

If the Office of Technology Licensing chooses not to prepare a patent application or other appropriate protection, or otherwise to pursue commercial development of University-owned intellectual property, then the University will waive its rights in writing to the creator. If the Office of Technology Licensing files a patent application but subsequently decides against prosecuting the patent application or otherwise pursuing commercial development, then the University will reassign ownership of the invention to the creator subject to mutual agreement regarding reimbursement of patent and other direct expenses incurred by the University, sharing of royalty income, and indemnification of the University against any claims that result from licensing or commercializing the technology. Such waivers and reassignments are subject to external sponsor restrictions and the University's retained right to use the intellectual property for educational and research purposes.



What is a patent?

In the U.S., a patent gives the holder the right to exclude others from making, using, selling, offering to sell, and importing any patented invention. Thus, a patent does not necessarily provide the holder any affirmative right to practice a technology. Instead, it provides the right to exclude others from practicing it. Patent claims are the legal definition of an inventor's protectable invention.

What type of subject matter can be patented?

Patentable subject matter includes processes, machines, compositions of matter, articles, some computer programs, and methods (including methods of making compositions, methods of making articles, and even methods of performing business).

Can someone patent a naturally occurring substance?

No. A natural substance that has never before been isolated or known may be patentable in some instances, but only in its isolated form (since the isolated form had never been known before). A variation of a naturally occurring substance may be patentable if an inventor is able to demonstrate substantial advantages of using the variant.

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

The PTO is the federal agency, organized under the Department of Commerce, that administers patents on behalf of the government. The PTO employs patent examiners skilled in all technical fields in order

to appraise patent applications. The PTO also issues federal trademark registrations.

What is the definition of an inventor of a patent, and who determines this?

Under U.S. law, an inventor is a person who takes part in the conception of the ideas in the patent claims of a patent application. Thus, inventorship of a patent application may change as the patent claims are changed during prosecution of the application. An employer or person who furnishes money to build or practice an invention is not an inventor. Inventorship may require an intricate legal determination by the patent attorney prosecuting the application.

Who is responsible for patenting?

The Office of Technology Licensing contracts with outside patent counsel for intellectual property protection, thus assuring access to patent specialists in diverse technology areas. Inventors work with the patent counsel in drafting the patent applications and responses to worldwide patent offices. The Office of Technology Licensing will help with the selection and oversight of the outside patent counsel.

What is the patenting process?

Patent applications are generally drafted by a patent attorney or a patent agent (a nonattorney with a science education, licensed to practice by the PTO). The patent attorney generally will ask you to review an application before it is filed, and will also ask you questions about inventorship of the application claims. At the time an application is filed, the patent attorney will ask the

inventor(s) to sign an Inventor's Declaration and an Assignment, which evidences the inventor's duty to assign the patent to the University.

In about one year, depending on the technology, the patent attorney will receive written notice from the PTO as to whether the application and its claims have been accepted in the form as filed. More often than not, the PTO rejects the application because either certain formalities need to be cleared up, or the claims are not patentable over the "prior art" (anything that workers in the field have made or publicly disclosed in the past). The letter sent by the PTO is referred to as an Office Action or Official Action. If the application is rejected, the patent attorney must file a written response, usually within three to six months. Generally the attorney may amend the claims and/or point out why the PTO's position is incorrect. This procedure is referred to as patent prosecution. Often, it will take two PTO Official Actions and two responses by the patent attorney—sometimes more—before the application is resolved. The resolution can take the form of a PTO notice that the application is allowable; in other words, the PTO agrees to issue a patent. During this process, input from the inventor(s) is often needed to confirm the patent attorney's understanding of the technical aspects of the invention and/or the prior art cited against the application. The PTO holds patent applications confidential until published by the PTO, eighteen months after initial filing.

Is there such a thing as a provisional patent?

No. However, there is a provisional patent application, which is described below.

What is the difference between a provisional patent application and a regular (or "utility") patent application?

In certain circumstances, U.S. provisional patent applications can provide a tool for

preserving patent rights while temporarily reducing costs. This occurs because the application is not examined during the year in which it is pending, and claims are not required. A regular U.S. application and related foreign applications must be filed within one year of the provisional form in order to receive its early filing date. However, an applicant only receives the benefit of the earlier filing date for material that is described and enabled in the provisional application. As a result, the patent attorney may need your assistance when an application is filed as a provisional.

What's different about foreign patent protection?

Foreign patent protection is subject to the laws of each individual country, although in a general sense the process works much the same as it does in the United States. In foreign countries, however, inventors lose patent rights if they publicly disclose the invention prior to filing the patent application. By contrast, the United States has a one-year grace period.

Is there such a thing as an international patent?

Although an international patent does not exist, an international agreement known as the Patent Cooperation Treaty (PCT) provides a streamlined filing procedure for most industrialized nations. For U.S. applicants, a PCT application is generally filed one year after the corresponding U.S. application (either provisional or regular) has been submitted. The PCT application must later be filed in the national patent office of any country in which the applicant wishes to seek patent protection, generally within thirty months of the earliest claimed filing date.

PCT provides two advantages. First, it delays the need to file costly foreign applications until the thirty-month date, often after an applicant has the opportunity to further develop, evaluate and/or market the invention for licensing. Second, the international preliminary examination often allows an applicant to simplify the patent prosecution process by

having a single examiner speak to the patentability of the claims, which can save significant costs in prosecuting foreign patent applications.

An important international treaty called the Paris Convention permits a patent application filed in a second country (or a PCT application) to claim the benefit of the filing date of an application filed in a first country. However, pursuant to this treaty, these so-called “convention applications” must be filed in foreign countries (or as a PCT) within one year of the first filing date of the U.S. application.

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

Currently, the average U.S. utility patent application is pending for about two years, though inventors in the biotech and computer fields should plan on a longer waiting period. Once a patent is issued, it is enforceable for twenty years from the initial filing of the application that resulted in the patent, assuming that PTO-mandated maintenance fees are paid.

Why does the University protect some intellectual property through patenting?

Patent protection is often a requirement of a potential commercialization partner (licensee) because it can protect the commercial partner’s often sizable investment required to bring the technology to market. Due to their expense, patent applications are not possible for all University intellectual property. We carefully review the commercial potential for an invention before investing in the patent process. However, because the need for commencing a patent filing usually precedes finding a licensee, we look for creative and cost-effective ways to seek early protections for as many promising inventions as possible.

Who decides what gets protected?

The Office of Technology Licensing and the inventor(s) consider relevant factors in filing patent applications. Ultimately, the Office of Technology Licensing makes the final decision as to whether to file a patent application or seek another form of protection.

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

Filing a regular U.S. patent application may cost between \$5,000 and \$15,000. To obtain an issued patent may require an additional \$10,000 to \$20,000 for patent prosecution. Filing and obtaining issued patents in other countries may cost \$20,000 or more per country. Also, once a patent is issued in the U.S or in foreign countries, certain maintenance fees are required to keep the patent alive.

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

If you created the invention under a contract or consulting agreement with a company, the Office of Technology Licensing will need to review that contract to determine ownership and other rights associated with the contract and to determine the appropriate next steps. Should the technology be jointly owned, the Office of Technology Licensing will work with other organizations under “interinstitutional” agreements that provide for one of the institutions to take the lead in protecting and licensing the invention, sharing of expenses associated with the patenting process, and allocating any licensing revenues.

Will the University initiate or continue patenting activity without an identified licensee?

Often, the University accepts the risk of filing a patent application before a licensee has been identified. After University rights have been licensed to a licensee, the licensee generally

(in the case of exclusive licenses) assumes the patenting expenses. At times we must decline further patent prosecution after a reasonable period (often a year or two) of attempting to identify a licensee.

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. Copyright protection is automatically secured when a work is fixed into a tangible medium such as a book, software code, video, etc. In some instances, the University registers copyrights, but generally not until a commercial product is ready for manufacture.

How can I learn more about University copyright policies?

Under the Brandeis Intellectual Property Policy, all intellectual property, including copyrights, is treated in the same manner independent of the nature of the legal protection afforded it. The Intellectual Property Policy is available online at <www.brandeis.edu/offices/otl/investigators/Patent_Policy.html>.

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

A trademark includes any word, name, symbol, device, or combination, that is used in commerce to identify and distinguish the goods of one manufacturer or seller from those manufactured or sold by others, and also to indicate the source of the goods. In short, a trademark is a brand name. A service mark is

How do I represent a proper University copyright notice?

Although copyrightable works do not require a copyright notice, we do recommend that you use one. For works owned by the University, use the following template:

Copyright © (INSERT YEAR HERE)

Brandeis University

For information, questions, or permission requests, please contact: (INSERT CONTACT INFORMATION: UNIT NAME, UNIT ADDRESS, PHONE, ETC.)

any word, name, symbol, device, or combination that is used, or intended to be used, in commerce to identify and distinguish the services of one provider from those of others, and to indicate the source of the services.

What is trademark registration?

Trademark registration is a procedure in which the United States Patent and Trademark Office (PTO) provides a determination of rights based upon legitimate use of the mark. However, it is not necessary to register a trademark or service mark to prevent others from infringing upon the trademark. Trademarks generally become protected as soon as they are adopted by an organization and used in commerce, even before registration. With a federal trademark registration, the registrant is presumed to be entitled to use the trademark throughout the United States for the goods or services for which the trademark is registered.

Start-Up Company

A start-up is a new business entity formed to commercialize one or more related intellectual properties. Forming a start-up business is an alternative to licensing the intellectual property to an established business. A few key factors when considering a start-up company are:

- development risk (often large companies in established industries are unwilling to take the risk)
- development costs versus investment return (can the investors obtain their needed rates of return)
- potential for multiple products or services from the same technology (few companies survive on one product alone)
- sufficiently large competitive advantage and target market
- potential revenues sufficient to sustain and grow a company

Who decides whether to form a start-up?

If an inventor/creator wants to participate in founding a company around his or her technology, and the Office of Technology Licensing agrees that a start-up is a viable commercialization route, the Office of Technology Licensing will work with the individual to try to identify qualified entrepreneurs and investors interested in creating and funding a start-up.

What role does an inventor/creator usually play in a company?

University faculty typically serve as technology consultant, adviser, or in some other technical developmental capacity. In many cases, the faculty role is suggested by the start-up investors and management team who identify the best role based on the creator's expertise and interests. As the company matures, and additional investment is required, the creator's role may change.

Faculty involvement in a start-up may create the potential for a conflict of interest under the terms of the Brandeis Conflict of Interest Policy. Conflict of interest is addressed below; and the Conflict of Interest Policy can be found online at <www.brandeis.edu/osp/policies/conflictpol.html>.

Student creators and post-docs may choose to join a start-up upon graduation, but rarely have the experience or business skills to serve as the company's sole management.

How much of my time and effort will it take?

Starting a company requires a considerable amount of time and effort. Until the start-up team is identified and engaged, the faculty member will need to champion the formation effort. After the team is in place, effort is required for investor discussions, formal responsibilities in or with the company, and University processes such as conflict of interest reviews.

Does the University share equity in the company?

The University can accept equity as part of the financial terms of the license. Equity may be substituted for other cash considerations that are often difficult for start-ups. It is also a way for the University to share some of the risk associated with the start-ups. A decision to take equity must make sense for both the University and the company.

Will the University pay for incorporating a start-up company?

No. As a separate entity, the start-up should pay for its own legal matters, including all business incorporation matters and licensing expenses.

What legal assistance is needed in creating a start-up?

In addition to corporate counsel, the start-up may have its own intellectual property counsel to assist with corporate patent strategy, especially if the company will be involved in a patent-rich area. Also, it is wise for creators to have agreements regarding their roles with the start-up reviewed by their own counsel to ensure that all personal ramifications—including taxation and liabilities—are clearly understood.





How does the Office of Technology Licensing market my inventions?

The Office of Technology Licensing uses many sources and strategies to identify potential licensees and market inventions. Sometimes existing relationships of the creators, the licensing staff, and other researchers are useful in marketing an invention. Market research can also assist in identifying prospective licensees. In addition, we also examine other complementary technologies and agreements to assist our efforts. Faculty publications and presentations are often the most effective marketing tools.

How are most licensees found?

Studies have shown that 70 percent of licensees were known to the creators. Thus, research and consulting relationships are often a valuable source for licensees. Licensees are also identified through existing relationships of the staff of the Office of Technology Licensing. We attempt to broaden these relationships through contacts obtained from Web site posting inquiries, market research, industry events, and the cultivation of existing licensing relationships.

How long does it take to find a potential licensee?

It can take months and sometimes years to locate a potential licensee, depending on the attractiveness of the invention and the size and intensity of the market. Most university inventions tend to be in the early stage in the development cycle and thus require substantial commercialization investment, making it difficult to attract a licensee.

How can I assist in marketing my intellectual property?

Your active involvement can dramatically improve the chances of matching intellectual property to an outside company. Your research and consulting relationships are often helpful in both identifying potential licensees and

technology champions within companies. Once interested companies are identified, the inventor is the best person to describe the details of the intellectual property and its technical advantages. The most successful technology-transfer results are obtained when the creator and the licensing professional work as a team to market and sell the technology.

Can there be more than one licensee?

Yes. An invention may be licensed to multiple licensees, either nonexclusively to several companies or exclusively to several companies, each only for a unique field-of-use (application) or geography.

License Agreements

What is a license?

A license is a permission that the owner or controller of intellectual property grants to another party, usually under a license agreement.

What is a license agreement?

License agreements describe the rights and responsibilities related to the use and exploitation of intellectual property developed at the University. University license agreements usually stipulate that the licensee should diligently seek to bring the intellectual property into commercial use for the public good and provide a reasonable return to the University.

How is a business chosen to be a licensee?

A licensee is chosen based on its ability to commercialize the technology for the benefit of the general public. Sometimes an established business with experience in similar technologies and markets is the best choice. In other cases, the focus and intensity of a start-up company is a better option. Typically, a university does not have multiple potential licensees bidding on an invention.

What can I expect to gain if intellectual property is licensed?

Pursuant to University policy and as described more fully below, a share of any financial

return from a license is provided to the inventor(s)/creator(s). Most inventors/creators enjoy the satisfaction of knowing their intellectual property is being deployed for the benefit of the general public. New and enhanced relationships with businesses are another outcome that can augment one's teaching, research, and consulting.

What is the relationship between an inventor/creator and a licensee, and how much of my time will it require?

Most licensees require the active assistance of the inventor/creator to facilitate their commercialization efforts. This can range from infrequent, informal contacts to a more formal consulting relationship. Working with a new business start-up can require substantially more time, depending on your role in or with the company and your continuing role within the University. Your participation with a start-up is governed by University conflict-of-interest policies and the approval of your supervisor.

What other types of agreements and considerations apply to technology transfer?

Confidentiality agreements are often used to protect the confidentiality of an invention during evaluation by potential licensees. Confidentiality agreements also protect proprietary information of third parties that University researchers need to review in order



to conduct research or evaluate research opportunities. The Office of Technology Licensing enters into confidentiality agreements for University proprietary information shared with someone outside the University. The Office of Sponsored Programs manages incoming confidentiality agreements related to research contracts.

Material transfer agreements (MTAs), used for incoming and outgoing materials at the University, are administered by the Office of Technology Licensing. These agreements describe the terms under which University researchers and outside researchers may share materials, typically for research or evaluation purposes. Intellectual property rights can be endangered if materials are used without a proper MTA.

Interinstitutional agreements describe the terms under which two or more institutions (e.g. two universities) will collaborate to assess, protect, market, license, and share in the revenues received from licensing jointly owned intellectual property.

Option agreements or option clauses within research agreements describe the conditions under which the University preserves the opportunity for a third party to negotiate a license for intellectual property. Option clauses are often provided in a sponsored research agreement to corporate research sponsors at the University, or are entered into with third parties wishing to evaluate the technology prior to entering into a full license agreement.

Sponsored research agreements describe the terms under which sponsors provide research support to the University. These are negotiated by the Office of Sponsored Programs. More information about the Office of Sponsored Programs can be obtained online at <www.brandeis.edu/osp>.

What activities occur during commercialization?

Most licensees continue to develop a technology to enhance the technology, reduce risk, prove reliability, and satisfy the market requirements for adoption by customers. This can involve additional testing, prototyping for manufacturability, durability and integrity, and further development to improve performance and other characteristics. Documentation for training, installation, and marketing is often created during this phase. Benchmarking tests are often required to demonstrate the product/service advantages and to position the product in the market.

What is my role during commercialization?

Your role can vary depending on your interest and involvement, the interest of the licensee in utilizing your services for various assignments, and any contractual obligations related to the license or any personal agreements.

What revenues are generated for the University if commercialization is successful?

Most licenses have licensing fees that can be very modest (for start-ups or situations in which the value of the license is deemed to warrant a modest license fee) or can reach

hundreds of thousands of dollars. Royalties on the eventual sales of the licensed products can generate similar revenues, although this can take years to occur. Equity, if included in a license, can yield similar returns, but only if a successful equity liquidation event (public-equity offering or a sale of the company) occurs. Most licenses do not yield substantial revenues. A recent study of licenses at U.S. universities demonstrated that only 1 percent of all licenses yield over \$1 million. However, the rewards of an invention reaching the market are often more significant than the financial considerations alone.

What will happen to the invention if the start-up company or licensee is unsuccessful? Can the invention be licensed to another entity?

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



How does the University define a conflict of interest?

A conflict of interest can arise when a Brandeis community member has the opportunity to influence the University's business, administrative, academic, or other decisions in ways that can lead to personal, family, or financial advantage of any kind for himself or herself. However, not all interests and financial relationships represent conflicts, and not all conflicts are necessarily forbidden. The University's Conflict of Interest Policy can be found online at <www.brandeis.edu/osp/policies/conflictpol.html>.

When should I seek guidance on conflict of interest?

Whenever a question or uncertainty arises, you should seek guidance from the Office of Sponsored Programs for research-related issues, and the Office of Technology Licensing for license-related issues. There are two times, in particular, when guidance is required: when research proposals are submitted to external sponsors (Office of Sponsored Programs) and when a license, option, or MTA is being considered for a company in which the faculty member has an equity or management interest (Office of Technology Licensing).

What kinds of issues concern conflict-of-interest reviewers?

Examples include the appropriate and objective use of research, the treatment and roles of students, supervision of individuals working at both the University and a licensee company, and your ability to meet your University obligations.

How does the University manage conflict?

As described in the Brandeis Conflict of Interest Policy, the responsibility for avoiding potential, apparent, or actual conflicts of interest begins with the Brandeis community member. If a situation arises that could present a conflict of interest, he or she must make full disclosure of the relevant information to the appropriate senior officer. In addition to this self-reporting obligation, all community members engaged in sponsored research are required annually to submit a disclosure of their significant financial interests. In the event that a disclosure by a community member reveals a potential, apparent, or actual conflict, the responsible senior officer or his or her designee will review the facts and determine whether a conflict of interest exists and, in consultation with the community member, determine the appropriate steps to take.

Revenue Distributions

How are license revenues distributed?

The Office of Technology Licensing is responsible for managing the expenses and revenues associated with license agreements. Pursuant to the Intellectual Property Policy, revenues from license fees, royalties, and equity—minus any unreimbursed patenting and file expenses—are shared with the inventor/creator. The inventor/creator receives forty percent of license income net of out-of-pocket and contractual expenses related to the intellectual property, including but not limited to legal expenses. In addition, the inventor's/creator's department or unit receives a share of license income, a portion of which is allocated for the direct support of the inventor's/creator's research and scholarly activities. The Intellectual Property Policy contains a detailed description of how license income is distributed. It can be found online at www.brandeis.edu/offices/otl/investigators/Patent_Policy.html.

What are the tax implications of revenues I receive from the University?

License revenues are typically taxed as Form 1099 income. Consult a tax adviser for advice.

What happens to my share of the revenue if I waive rights to it?

To avoid potential tax liability, revenues waived by you must not be under your control. See the Office of Technology Licensing for additional information.

How are inventor/creator revenues distributed if there are multiple inventors/creators and/or multiple technologies in a license?

The Invention Disclosure Form requires the inventors/creators to reach agreement regarding the allocation of the inventors'/creators' share of license income. If multiple technologies are included in a single license agreement, when the license agreement is developed, the inventors/creators of the different technologies are asked to agree on the distribution of nonroyalty license income (e.g. license initiation fee, maintenance fees, and milestone payments). Royalty income will be allocated to the technology(ies) responsible for the royalty income. Should the inventors/creators be unable to agree on revenue allocation, the Office of Technology Licensing will default to equal sharing.

How is equity from a license distributed?

When stock of a licensee is liquidated by the University Treasurer's office, the resulting funds are distributed in accordance with the revenue distribution plan.

Reinvestment and Relationships

Revenues derived from technology transfer are shared among Brandeis schools, departments and units, creators, and partnering institutions. These revenues are reinvested in additional research and education, thus fostering the creation of the next generation of research, researchers, and entrepreneurs.

In addition, the resultant relationships created and deepened with these activities support our University missions. They can result in additional research projects, broader educational opportunities, and, through the development of new products and services by our licensees, provide tangible benefits of taxpayers' support for fundamental research.

¹ Adapted from "An Inventor's Guide to Technology Transfer at the University of Michigan," with permission of the University of Michigan



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