

MODULE TWO: UNDERSTANDING THE VALUE OF INTELLECTUAL PROPERTY (IP)



UNIVERSITY OF
TORONTO

Entrepreneurship

This presentation is adapted from the IP foundation series on the Canadian Intellectual Property Office (CIPO) website.

Understanding the Value of Intellectual Property (IP)

LEARNING OBJECTIVES

This training is targeted to a broad audience of staff, faculty and students, including students creating intellectual property in courses.

After completing this module, you will be able to:

- ✓ Identify the different ways IP rights can be used to generate value
- ✓ Identify strategies to maximize the value of IP when it is used by others, including faculty, company/external organizations, and other students
- ✓ Define the Technology Transfer Process
- ✓ Identify University resources for next steps, where to get guidance with regards to IP, patents, trademarks.
- ✓ Define the University Inventions Policy and understand when it applies to IP created by students and faculty



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MODULE OUTLINE

1. Value of IP and Using IP Strategically
 - A. Patents
 - B. Copyright
 - C. Industrial Design
 - D. Trademarks
2. Open Source
3. Combined Use of IP
4. The University's Role in Commercializing IP
 - A. University Inventions Policy
 - B. Innovations & Partnerships Office (IPO)
 - C. The Technology Transfer Process
 - D. University Supports and Resources



VALUE OF IP & USING IP STRATEGICALLY

BUILDING THE VALUE OF YOUR IP

Inventions
(patents)

How can you
enhance the
value of your
intellectual
property?

Product
design
(industrial
design)

Brands, logos,
slogans
(trademarks)

Recipes, data,
manufacturing
process (trade
secrets)

Written
works,
videos, music
(copyright)



VALUE OF IP & USING IP STRATEGICALLY

USING PATENTS STRATEGICALLY - COMMERCIALIZE YOUR INVENTION

Turn your patent into dollars!

Getting legal rights to your invention through a patent gives you **proof of ownership**.



VALUE OF IP & USING IP STRATEGICALLY

VALUE ADDED BY PATENTS - COMMERCIALIZE YOUR INVENTION

A patent is a **form of intellectual property** granted by a government that confirms the **exclusive right** to an invention.

Patents protect inventions.

Market Exclusivity: Patents can give start-ups and entrepreneurs a **competitive edge** and ensure market exclusivity by acting as a barrier to your competitors.

Remember:

The patent holder has the exclusive right to use, sell and manufacture the innovative technology for up to 20 years (and sometimes longer with extensions and patent term adjustments).



VALUE OF IP & USING IP STRATEGICALLY

VALUE ADDED BY PATENTS - COMMERCIALIZE YOUR INVENTION

Patents can also be a **revenue source**.

Three ways that you can use your patented technology to do so are:

Exploiting

You can use, manufacture or sell your inventions directly to consumers in the marketplace.

Licensing

You can allow another party to exploit your patent for royalties on sales.

Assigning

You can sell or transfer your patent ownership to another party for an immediate lump sum of money.



VALUE OF IP & USING IP STRATEGICALLY

USING PATENTS STRATEGICALLY- COMMERCIALIZE YOUR INVENTION

Holding a patent may open up opportunities for **business growth and job creation**.

Consider a **licensing agreement**. For start-up businesses, licensing is typically the fastest way to generate cash flow.

Licensing allows the transfer of certain rights to your patents to another party for commercialization in return for economic considerations, such as rights in a specific field of use for a defined period of time in a specific country.



VALUE OF IP & USING IP STRATEGICALLY

USING PATENTS STRATEGICALLY - COMMERCIALIZE YOUR INVENTION

What are some of the benefits of licensing your patent?

Leverage existing manufacturing deals and distribution channels

Access existing markets and benefit from established names

Reinvest in further research and development

Use revenues earned from monetizing your patent to finance further research and development for your company

Deter competitors from copying your potential product or service



VALUE OF IP & USING IP STRATEGICALLY

USING PATENTS STRATEGICALLY - COMMERCIALIZE YOUR INVENTION

You can also **export your invention and compete globally.**

You must obtain a **separate patent for each country or region** where you seek protection.

Consider strategically filing for patent rights in countries or region where:

- You plan on doing business—to sell or manufacture products
- You will license your technology or assign your IP to another party
- Your main competitors also do business



VALUE OF IP & USING IP STRATEGICALLY

USING COPYRIGHT STRATEGICALLY - MAKE SURE YOU OWN THE WORK

Copyright is the exclusive legal right to **produce, reproduce, publish or perform** an original artistic, literary, musical or dramatic work. It is generally recognized globally.

The creator of an original work is normally the **owner of the copyright**. However, if the work is created in the course of employment through a contract, it is possible that the employer, rather than the employee, legally owns the copyright in the work.

Also, if you commission someone to create content for you, on a for-hire basis, that person may legally own the copyright in the work.

Remember:

It is good practice to have a written agreement that addresses issues of **copyright ownership**, if ownership of the copyright is important to you.

VALUE OF IP & USING IP STRATEGICALLY

VALUE ADDED BY COPYRIGHT



Copyright protection can reward authors for their creative efforts because of the **economic incentive** it offers to either license or sell the rights in their original works.



Brand images, jingles and promotional materials protected by copyright may help create a strong **brand identity**, distinguishing your goods and services from those of others in the marketplace and providing your business with a **competitive edge**.



Copyright can also help support your claim of ownership when you **enforce your rights** against counterfeit products or copycat brands.



VALUE OF IP & USING IP STRATEGICALLY

USING COPYRIGHT STRATEGICALLY - TAKE CONTROL

Copyright can assist you in commercially benefiting from your works by:

forbidding copies

prohibiting the preparation of derivative works (e.g. translations, cinematic adaptations)

preventing unauthorized distribution

preventing public performances

protecting your reputation



VALUE OF IP & USING IP STRATEGICALLY

USING COPYRIGHT STRATEGICALLY - ASSIGN YOUR COPYRIGHT

Generally, copyright assignment occurs when a copyright holder **transfers ownership** of all or part of their right to another person or organization.

You may decide to assign your work to benefit from the other person or party's reputation, resources and network, or to use the money to focus on other aspects of your innovation or business.

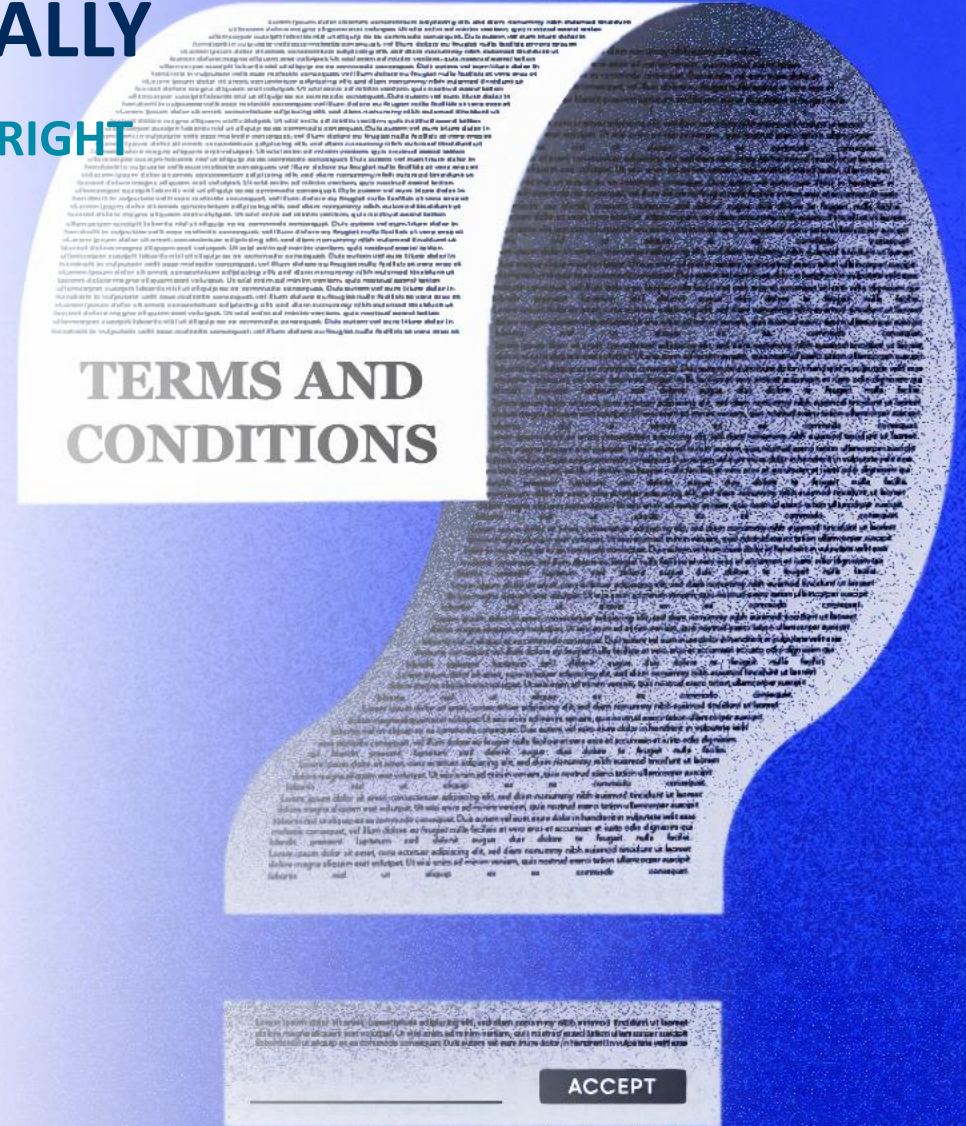


VALUE OF IP & USING IP STRATEGICALLY

USING COPYRIGHT STRATEGICALLY - LICENSE YOUR COPYRIGHT

An alternative to assigning the entire copyright is to license your work in a limited capacity. This allows another person or party to **use your work under certain conditions**, while you retain the ownership.

Reminder: Creative Commons licenses give everyone from individual creators to large institutions a standardized way to grant the public permission to use their creative work under copyright law (from: <https://creativecommons.org/about/cclicenses/>).



VALUE OF IP & USING IP STRATEGICALLY

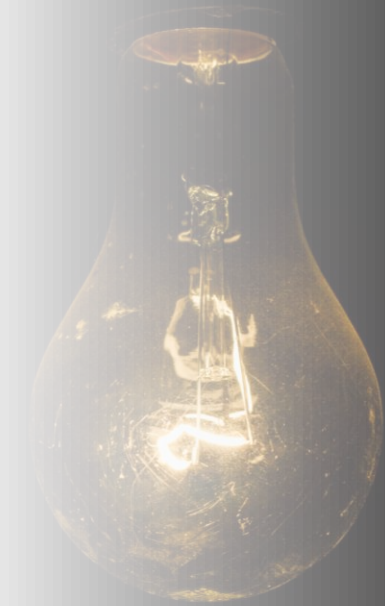
USING COPYRIGHT STRATEGICALLY – WAIVING MORAL RIGHTS

You should also consider **moral rights** when establishing agreements with creators.

Unlike other IP rights, moral rights cannot be sold or given away. Even in the case of a sale, an author retains their moral rights to the work, unless they choose to waive these rights.

Therefore, if you are the author, you retain credit for the work, and it cannot be modified or used in a way that can cause harm to your reputation.

A famous example of this was when the Eaton's Centre put Christmas bows on the geese sculpture. The artist was not happy as his geese were meant to represent Canada, not Christmas. He was not of the Christian faith. In the end, the Eaton's Centre had to take the bows off.



CHECKING FOR UNDERSTANDING

Which one statement below is **not true** about licensing?

- A. Licensing can provide a means for generating revenue from the IP.
- B. Licensing transfers ownership of the IP.
- C. The licensee receives the IP rights from the licensor.
- D. The licensing agreement will describe the financial considerations for transfer of rights.

CHECKING FOR UNDERSTANDING

Which one statement below is **not true** about licensing?

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- C. The licensee receives the IP rights from the licensor.
- D. The licensing agreement will describe the financial considerations for transfer of rights.

Answer: B. You can agree to transfer ownership of the IP by assigning the rights, but when you license IP, you as the licensor retain ownership.

VALUE OF IP & USING IP STRATEGICALLY

VALUE ADDED BY INDUSTRIAL DESIGNS

Industrial design is about how a product looks. It consists of the **visual features** of shape, configuration, pattern, ornament or any combination of these features.

Industrial design rights can be a **source of revenue**. You can:

- **Sell your design** for a 1-time lump sum.
- **License your design** by allowing another party to use it with specific terms and conditions set in a license agreement. By licensing your design registration, you continue to own it and earn royalties or a percentage of sales made using the design.

A registered industrial design strengthens your competitive position by deterring others from copying or imitating it.



VALUE OF IP & USING IP STRATEGICALLY

USING INDUSTRIAL DESIGNS STRATEGICALLY - EXPORT YOUR DESIGN AND COMPETE GLOBALLY

Industrial design registration provides an exclusive right for up to **15 years from filing (or 10 years from registration, whichever is later)**.

However, industrial design registration is **only valid in the country where the protection was sought**.

If you intend on exporting products to which your novel design is applied, or if you intend to license the manufacturing, sale or export of such products to other parties in foreign countries, consider protecting your design in the applicable countries. This can be done by:

filing directly with the IP office for each country

taking advantage of the **Hague System**, which allows applicants to acquire, maintain and manage industrial design rights in multiple countries through a single application filed with the World Intellectual Property Organization (**WIPO**)



VALUE OF IP & USING IP STRATEGICALLY

USING TRADEMARKS STRATEGICALLY - EXTEND THE PROTECTION OF YOUR DESIGN

In some instances, it may be possible to extend the protection for your novel design through a **trademark**.

Trademarks are used to distinguish the goods or services of one person or organization from those of another. The shape of a product or its packaging can be an aspect that distinguishes it from other products.

To qualify, your product's shape or packaging must have acquired enough distinctiveness in the marketplace that consumers across Canada can associate the design with your company brand.

VALUE OF IP & USING IP STRATEGICALLY

VALUE ADDED BY TRADEMARKS

A registered trademark can **deter counterfeiters** from copying your brand or causing confusion in the marketplace with a similar trademark to yours.

Without trademark protection for your goods or services, customers may be unable to distinguish your **genuine** product or service from a fake or a competitor with similar branding.



VALUE OF TRADEMARKS

VALUE ADDED BY TRADEMARKS

Trademarks help build your **reputation** and **goodwill** in the eyes of the public, which will make your brand attractive and maintain **consumer loyalty**.



VALUE OF IP & USING IP STRATEGICALLY

VALUE ADDED BY TRADEMARKS

A registered trademark can **boost investor and stakeholder confidence**.

You can also **establish partnerships** within your investors' network and other companies, which can help build your company's reputation.



VALUE OF IP & USING IP STRATEGICALLY

VALUE ADDED BY TRADEMARKS

Registered trademarks can also be a **revenue source**.

Secure **licensing** or **franchising** agreements, so that a third party can use your registered trademark in exchange for royalties or a percentage of all sales.

Successful companies in the food industry, such as McDonald's, Subway and Tim Hortons, are great examples of this business model with trademarks registrations valued in the millions and billions.



VALUE OF IP & USING IP STRATEGICALLY

USING TRADEMARKS STRATEGICALLY - EXPORT YOUR BRAND AND COMPETE GLOBALLY

Trademark protection is territorial. Consider strategically **filing for trademark rights in countries where you plan to do business** and hire a registered Canadian trademark agent to assist with an international filing strategy.

Use online tools and databases to search for trademarks in countries where you plan to do business. Make sure no one else has the legal rights to your trademark or to a trademark that could be confused with yours.

Consider licensing agreements with overseas entities, as they are one of the quickest ways to **expand across global markets**.



VALUE OF IP & USING IP STRATEGICALLY

USING TRADEMARKS STRATEGICALLY - COMMERCIALIZE YOUR TRADEMARK

Use your brand to grow your business.

Consider getting exclusive legal rights to your trademark with a **registered trademark** that will serve as evidence of ownership.

Consider commercializing your trademark, which you can do, for example, by setting up licensing agreements. What might you gain from it?

Avoid a competitor's registered trademark from blocking your market expansion

Reaching new markets by expanding through your licensee's marketing and distribution channels

Increasing brand recognition by appearing on new products and in new channels

Establishing strategic partnerships where both parties work together toward common core business goals



CHECKING FOR UNDERSTANDING

Match the desired business goal below with the **most appropriate type of IP protection**. (Patent, Industrial Design, Trademark, Trade Secret)

- A. Ensure long-term protection for a product that is difficult to re-engineer and central to your business
- B. Maintain long-lasting brand loyalty by creating an easily recognizable identity
- C. For a period of time, exclude competitors from selling a product that incorporates your proprietary technology that is easy to re-engineer
- D. Differentiate your product from competing products that are similar technologically and functionally but not visually

CHECKING FOR UNDERSTANDING

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(Patent, Industrial Design, Trademark, Trade Secret)

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- C. For a period of time, exclude competitors from selling a product that incorporates your proprietary technology that is easy to re-engineer
- D. Differentiate your product from competing products that are similar technologically and functionally but not visually

ANSWERS: A. Trade Secret, B. Trademark, C. Patent, D. Industrial Design

OPEN SOURCE

OPEN SOURCE DEFINED

In some cases, students may want to use open source in the IP that they create at the university.

What is Open Source?

The term "open source" really refers to the openness of source code for inspection, but colloquially now is commonly understood to equate to free use of a particular licensed IP.

It ALLOWS AUTHORS TO GRANT RIGHTS TO THIRD PARTIES TO USE, MODIFY AND SHARE COMPUTER SOFTWARE CODE so anyone who wants to contribute can do so by making a submission or by suggesting changes.

Note: a particular IP does not need to be "free" to be "open source". Indeed, some "open source" software is free for particular uses (e.g., personal use) but might have a license fee for other uses (such as commercial use).

OPEN SOURCE

USING OPEN SOURCE

Can I use open source software that I created at the University?

The answer varies depending on HOW it was created.

- If you created it on your own, and no third party has rights to the software (for example, sponsor, or your employer if you are on paid work placement), it is likely that you can use open source without raising many issues.

Caveats:

- You must ensure no other third party has pre-existing rights to the software before you decide to open source.
- You must ensure you do not open source software that you do not own on your own (your co-contributors, for example, may not wish to open source) or that contains confidential information of a third party.

OPEN SOURCE

OPEN SOURCE LICENSING

Open Source licenses are contracts that specify the terms the user is agreeing to when using or copying the source code. The vast majority of businesses do utilize open source libraries, so it is important to understand what licenses apply to each of the open source libraries it uses since licenses actually vary significantly in terms of what is permitted and under what conditions.

The main considerations in the licenses are (1) the allowable uses of the software; (2) the main obligations on the licensee (user).

In some instances, some open source licenses are not compatible with others. That means, for example, a user cannot comply with one license and a second license at the same time. If the user integrated two libraries into its product under those two existing licenses, it would breach one license.

OPEN SOURCE LICENSES & RESOURCES

Wikipedia provides a good [breakdown comparison of the various open source licenses](#) available. The [Open Source Initiative](#) also lists many common open-source licenses for software:

- [MIT license](#)
- [GNU General Public License \(GPL\)](#)
- [GNU Library or "Lesser" General Public License \(LGPL\)](#)
- [Apache License 2.0](#)
- [BSD 3-Clause "New" or "Revised" license](#)
- [BSD 2-Clause "Simplified" or "FreeBSD" license](#)
- [Creative Commons License](#)
- [Mozilla Public License 2.0](#)
- [Common Development and Distribution License](#)
- [Eclipse Public License version 2.0](#)

OPEN SOURCE LICENSING - EXAMPLE

There are more permissive licenses (MIT, Apache, BSD) where the user has very few obligations and broad usage rights. Then there are more restrictive (reciprocal or copyleft) licenses where the user either has to grant back any derivative works (reciprocity) or open up its own derivative works for others (GPL) under the same terms as the first license.

The use of GPL code is particularly troublesome for startups for that reason. There is a strong possibility that if the startup integrates quite fully the GPL code into its product, then by implication it has agreed to attach the GPL license to its product, which might not have been its original intention. The result of this is likely that the startup, if it does not release its software under GPL, is breaching the underlying license and has liability.




COMBINED USE OF IP

Video Description: In this video, Tamara O'Connell (BEng, JD), Registered Patent Agent and Patent Portfolio Manager at the University of Toronto's Innovations & Partnerships Office, provides an overview of the various ways that IP rights can be combined to provide comprehensive IP protection.



COMBINED
USE OF
IP RIGHTS





Now that I understand the options available to commercialize my IP, how does one commercialize IP at the University of Toronto?

Where do I go for support and guidance on the University Inventions Policy?

In this section, we will explain the University Inventions Policy, the Innovations & Partnership Office, and the Technology Transfer Process

THE UNIVERSITY'S ROLE IN COMMERCIALIZING IP

UNIVERSITY INVENTIONS POLICY

For research students and faculty, inventions created using **university-administered funds and/or resources** triggers **the University Inventions Policy**.

The Inventions Policy establishes:

- How ownership and rights to use inventions developed at U of T is determined and managed
- The process for identifying, evaluating, protecting and managing inventions developed at U of T
- The framework for commercialization of U of T Inventions, engaging with commercial partners and sharing and distribution of any economic benefits



THE UNIVERSITY'S ROLE IN COMMERCIALIZING IP

UNIVERSITY INVENTIONS POLICY

Under U of T's Inventions Policy, there is an obligation to submit an Invention Disclosure for all inventions and developments that you feel may solve a **significant problem** or have **significant commercial value**.

Disclosures should be filed when the invention or work is clearly conceptualized and as soon as you can **fully describe** your new product or process so that someone else familiar with the field could use it.

To secure IP protection, you **cannot publicly disclose** your invention (e.g., conferences, abstracts, scientific publications) prior to patent filing.

It may also be important to submit a disclosure if a research partner or sponsor has funded the research and was granted an option to license inventions from the funded research. If you are in doubt, **contact Innovations and Partnerships Office (IPO)** to discuss the invention.



CASE SCENARIOS – CHECKING FOR UNDERSTANDING

SCENARIO 1: Ramin is a fourth-year undergraduate engineering student doing a multidisciplinary capstone design project to solve a real business need for an industry partner developing autonomous vehicles. His work on the project is done onsite at the company.

During the course of the project, Ramin invents a new sensor component that improves on the company's current geospatial mapping technology, an advancement that will have great commercial potential if developed.

Does the U of T's Inventions Policy apply to Ramin's situation?



CASE SCENARIOS – CHECKING FOR UNDERSTANDING

ANSWER: NO. The U of T's Inventions Policy does NOT apply to Ramin's situation.

In this case, Ramin did not use U of T resources and therefore, U of T does not have an ownership interest in the invention. As well, the company likely required U of T to sign an agreement waiving any possible rights to any invention made by Ramin at the company's premises.



CASE SCENARIOS – CHECKING FOR UNDERSTANDING

SCENARIO 2: Ariel is a doctoral student in computer science whose dissertation project is funded largely through a research grant.

Working in her supervisor's lab, she invents a new machine learning algorithm that will not only solve the pattern recognition problem she's investigating but that may also have commercial applications in areas such as biometrics, speech recognition, medical diagnosis, and fraud detection.

Does the U of T's Inventions Policy apply to Amy's situation?



CASE SCENARIOS – CHECKING FOR UNDERSTANDING

ANSWER: YES. The U of T's Inventions Policy DOES apply to Amy's situation

She jointly owns the invention with U of T. Ariel may choose to offer the invention to U of T, or she may choose to take personal ownership and full responsibility for patenting and commercializing the invention, including licensing it to a company or creating her own start-up.

Considerations: In this scenario, because the invention was created in a U of T facility using funds that were administered by U of T, the Inventions Policy applies. Specifically, Ariel and U of T jointly own the invention. There are several options open to Ariel. The Innovations and Partnership Office (IPO) can help her navigate these choices.



THE UNIVERSITY'S ROLE IN COMMERCIALIZING IP

INNOVATIONS AND PARTNERSHIPS OFFICE (IPO)

The IPO is U of T's Technology Transfer Office and part of the Vice-President, Research & Innovation's portfolio and mandated to:

- Manage the University's IP portfolio, including activities related to assessing invention disclosures and protecting IP such as inventions
- Facilitate commercialization of University IP
- Facilitate relationships between the University, private sector and government for socioeconomic benefits

The IPO should be your first stop for information and questions about research inventions, patents, or the technology transfer process and commercializing IP at the University of Toronto.



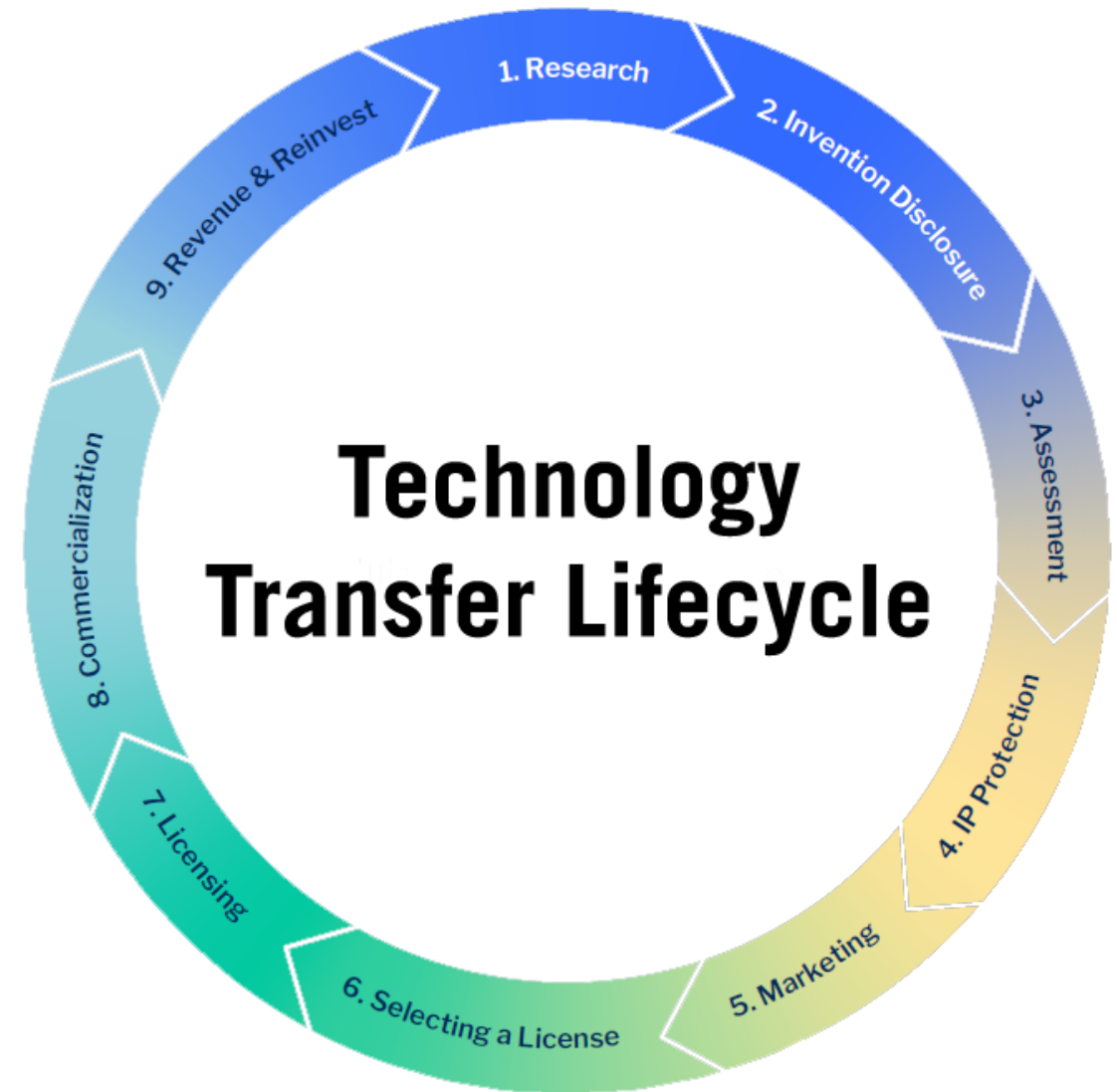
COMMERCIALIZING IP AT THE UNIVERSITY

TECHNOLOGY TRANSFER PROCESS

Technology transfer is defined as the movement of knowledge and discoveries from the University to benefit the general public.

Technology transfer can occur through publications, graduates entering the workforce and relationships with government entities, not-for-profit organizations, and industry, among others.

It also refers to the licensing of inventions to a third party that can commercialize the knowledge and discoveries, as depicted on the right.



THE UNIVERSITY'S ROLE IN COMMERCIALIZING IP

UNIVERSITY SUPPORTS AND RESOURCES

Innovations & Partnerships Office	<ul style="list-style-type: none">• Invention Disclosures• Market research, Commercialization, Patents, Licensing, and Startups for U of T Inventions• Inventor and Startup guides and templates	<ul style="list-style-type: none">• https://U of T.me/start-ups• https://U of T.me/commercialization• https://research.utoronto.ca/inventions-commercialization-entrepreneurship/inventions-commercialization-entrepreneurship
U of T Entrepreneurship	<ul style="list-style-type: none">• Courses and programs• Events• Newsletter	<ul style="list-style-type: none">• http://entrepreneurs.utoronto.ca/• Email: Entrepreneurs@utoronto.ca
U of T Entrepreneurship Library	<ul style="list-style-type: none">• Market research• Events• Newsletter	<ul style="list-style-type: none">• https://guides.library.utoronto.ca/entrepreneurship

THE VALUE OF IP

The takeaways from this module for students and faculty are:

- Students and researchers need to be aware that there are many ways to protect IP, each with its own strengths and limitations, including varying years of protection. In many cases the best line of defense is to use a combination of IP protections together to provide more complete coverage.
- Patenting, licensing and assigning ownership are just a few ways to commercialize and maximize the value of your IP. As outlined in the module, the Technology Transfer Process is the movement of knowledge and discoveries from the University to benefit the general public, and the University's Innovations and Partnerships Office (IPO) is available to assist and guide inventors at the University through the process.
- The University of Toronto has an Inventions Policy for research students and faculty, inventions created using university-administered funds and/or resources. This policy establishes how ownership and rights to use inventions developed at U of T is determined and managed. Students and researchers should become familiar with this policy as they develop IP at the University.



END OF PRESENTATION



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Entrepreneurship