



INNOVATION + PARTNERSHIPS

McGill Spinoff Handbook

Innovation + Partnerships (I+P)

McGill Spinoff Handbook

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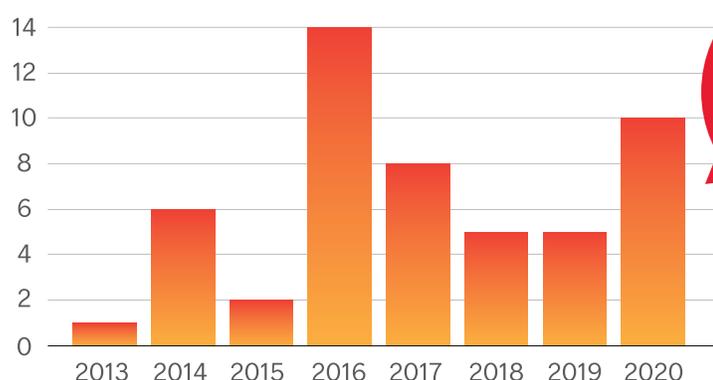
OVERVIEW

The McGill Spinoff Handbook is a resource for McGill researchers, staff, and students who are interested in starting a company based on intellectual property (IP) developed at McGill University and aligned with the Policy on Inventions and Software.

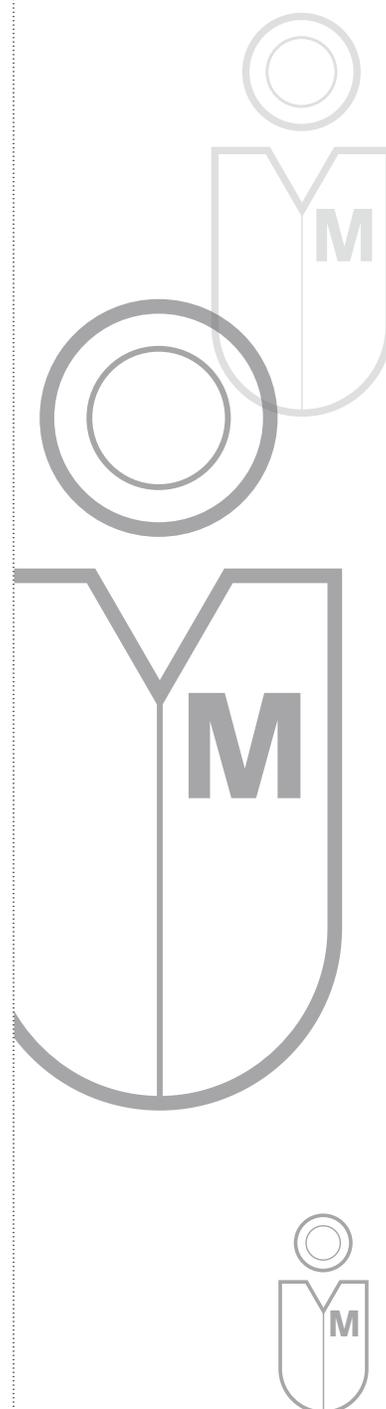
The information is meant to provide general guidance and best practices. For more detailed information, please contact a member of the technology transfer team in Innovation and Partnerships (I+P). I+P is the primary resource at McGill for bringing researchers and industry partners together for the generation of knowledge and technologies, including spinning out companies based on McGill inventions.

McGill believes in the translation of technology developed at the University into benefit for society. Often, the best way to ensure that innovation positively affects the lives of others is through a partnership with the private sector. One way to achieve this is by starting a company based on McGill intellectual property (a spinoff). McGill is seeing a significant increase in the number of spinoffs created and the trend is only likely to grow, as more researchers and students are interested in entrepreneurship and being involved in the technology they develop. I+P works with these spinoffs in numerous ways, offering support and guidance along their journey.

No. of Startups launched from McGill



McGill created 10 of the 24 university-startups launched in Quebec in 2020

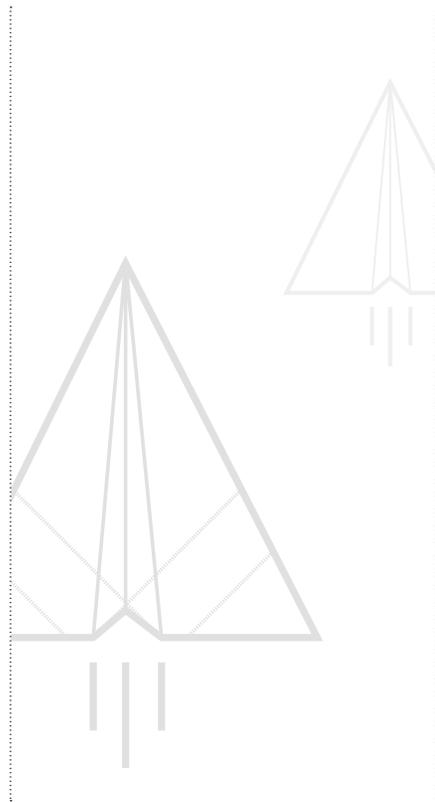


PROCESS TO LAUNCH

Starting a company and then having it become a success requires a number of things, including dedication, perseverance, timing, and, sometimes, just plain good luck.

Each successful startup forged their own unique path, but there are elements that are consistently found throughout: addressing a real market need, having a sustainable competitive advantage, generating a solid business plan, finding necessary funding, and building a strong management team.

University-based inventions can provide a strong technical foundation to base the company. However, the inventors need to determine whether they wish to be involved in the tasks required to launch the spinoff. Some inventors want to be part of the company team while others prefer to maintain their role at McGill and let others run the business. The level of involvement will have an impact on the time commitment required, especially for professors who maintain an active academic research and teaching portfolio. An advisory or consultant role may be a better fit in such cases.



The following steps should be considered when launching a spinoff from McGill:



1. Develop a commercialization plan and IP strategy

I+P undertakes due diligence on inventions reported to McGill. As part of the process, there is a discussion regarding potential avenues to commercialization. These may include a license to an existing company or perhaps to spin off a company from McGill. Having these discussions early in the process is helpful to understand the appetite for the inventors to be involved in a spinoff. In some cases, the inventors may already have experience in a spinoff and be open to starting another company. Many graduate student inventors are interested in bringing their technology to market and pursuing a career path as an entrepreneur.

Intellectual property is often the backbone of the spinoff. Investors will want to know that there is appropriate protection of the IP and that proper agreements/assignments are in place for IP rights. I+P works with the inventors to file patent applications as appropriate. As publications are a necessary component of university research, it is important to have attempted to file intellectual property before making a public disclosure. If a disclosure is made prior to filing, it will not limit the potential to obtain a patent in many jurisdictions. In the worst case, patenting may be completely impossible because of the disclosure. The IP strategy should also evaluate the potential to file for formal copyright protection in the case of software or design patents if warranted.

2. Network and Seek Feedback

Those thinking about spinning off a company should obtain feedback on their invention from experienced entrepreneurs, business professionals, and potential customers. Developing a broad network of reliable advisors and mentors to provide guidance and advice is a necessity. These individuals can open doors and introduce you to funding opportunities or new markets. Social media can play a major role in expanding your network, as can more traditional channels such as trade shows, conferences, and industry organizations. I+P can be of help in establishing your network, and there are other resources available at McGill and through local incubators to expand your circle of connections.

3. Analyze the Opportunity and Generate a Business Plan

Before launching a company, careful analysis of the opportunity and market is necessary to establish a value proposition. This involves consideration of the potential size of the market, the competitive landscape, and the funding required. The result should be a business plan that provides a road map for developing the technology and generating sufficient revenue to obtain the necessary funding and manpower to achieve success. The business plan is an “evergreen” document and should be updated frequently to properly reflect the current state of the company.

4. Build a team

There is an image of entrepreneurs as being independent businesspeople who are highly self-motivated, but the truth is all entrepreneurs need to be good at building teams. Although the core technology behind a successful company may be based on the discovery of a single researcher, running a company that can effectively bring that technology to market requires a team of people.

But building a team is more than just assembling a group of like-minded people to accomplish a given task. It is important to create a balance of strengths in the team, so that skillsets are complementary to one another, not overlapping. And while a company’s revenue is an important part of its long-term survival, it shouldn’t be the main reason for its existence. Working life is composed of many other facets, and financial considerations are only one among many. Having a motivated team willing to put in the effort to take an idea all the way to a successful business endeavor requires establishing a strong culture and mission, vision, and values that the team can believe in.

5. Find early customers

Before launching a company, it is only natural to want to have some certainty that there is indeed a viable future for the business. And it is only natural that every business needs customers. For early-stage spinoff companies, the relationships with your early customers can be crucial in helping to develop the future success of the company.

Early customers should be viewed more as business/development partners. Their requirements can help shape all aspects of a company’s business, from design to production and distribution. This can be vital insight, especially in helping the company repeat this with other customers. However, in some cases, early customers can be too demanding and lead spinoffs down a path of customization that is difficult or even impossible to reproduce elsewhere. They may also ask for exclusivity or other restrictions that could be detrimental to the growth of the company. Getting this balance right can have a dramatic impact on the long-term prospects of a new enterprise.

6. Prepare a funding strategy

One of the key concerns of growing a business is achieving a sustainable scale. And although a new spinoff may have found those necessary early customers, in almost all cases the revenue derived from these early sales is not sufficient to drive the required level of expansion. In other words, some kind of external investment is necessary. But where this investment comes from, and what is the cost to the company, are important considerations.

It may be surprising to learn, for example, that although Venture Capital (VC) funds are a prominent source of financing, they often are not involved in the initial funding of a startup. According to industry data averaged across all startups, it is actually family and friends who contribute the most funding to fledgling companies, followed by banks, angel investors and crowdfunding. These alternative sources of financing should be considered when launching the startup.

The most common approach is to obtain as much non-dilutive funding (i.e., financing that does not require releasing equity in the company) as possible through grants, loans, and competitions. Some resources are indicated in the appendix of this handbook. But non-dilutive funding can only go so far, and is often limited in terms of total dollar value. Eventually, securing the participation of private investors will become a necessity. This can be a challenging phase for spinoffs, as investors may wish to have more say in how the company functions. They will also take a larger portion of the company’s equity in exchange for their investment. Thus a funding strategy is required before starting this process. Understanding what investors expect, and knowing which investors to approach are two aspects to consider in developing such a strategy.

Top countries by venture capital funding per capita in 2022*

COUNTRY	CAPITAL RAISED	POPULATION	VC FUNDING PER CAPITA
Singapore	\$4.1B	5.9M	\$695
Israel	\$4.5B	8.9M	\$506
United States	\$119.4B	334.8M	\$357
Switzerland	\$2.4B	8.8M	\$273
Finland	\$1.3B	5.6M	\$232
United Kingdom	\$13B	68.5M	\$190
United Arab Emirates	\$1.7B	10.1M	\$168
Sweden	\$1.6B	10.2M	\$157
Canada	\$4.5B	38.4M	\$117
France	\$6.8B	65.6M	\$104

*Countries with \$1B+ in VC capital raised
Source: PitchBook/World Population Review Data as of May 23

PITFALLS/RISKS OF STARTING A COMPANY

Launching a new business is exciting, and the opportunity to bring your technology to market through a startup can be extremely rewarding. However, there is significant risk involved with taking an invention from the laboratory all the way to commercial reality.

Some startups achieve success, but many do not survive the journey out of the university. The following is a high-level summary of some of the factors that result in the failure of many companies.

1. The technology does not meet a market need

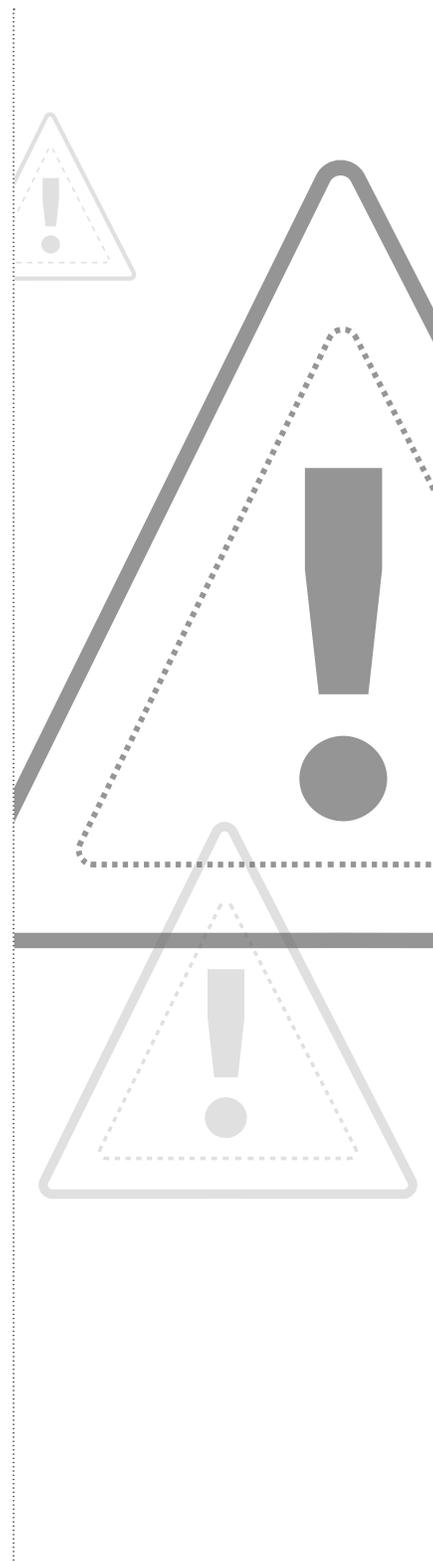
Universities work on cutting-edge science, and often develop inventions that are a “solution looking for a problem”. The technology may be brilliant from a scientific point of view, but may not actually meet a market need. There needs to be a match between the invention and the ability for it to be utilized broadly in the marketplace.

2. Adoption of the technology is too risky

The invention may meet a market need, but the existing technology solution could be adequate. For companies to switch to a new technology, the risk-reward scenario needs to be sufficiently compelling. Often university inventions are very novel and could require significant investment by companies to get to the market. The potential rewards may not justify the financial commitment.

3. Timing

The technology may meet an identified need and be somewhat de-risked, but may not be aligned with the timing of market demand. Getting to market requires that all elements come together and be ready at the appropriate time.



4. Management team

Having a management team with the right blend of personalities, experience, and skills is critical to startup success. Often spinoffs from universities have management with strong scientific background but do not have the requisite business knowledge. It is recommended to have a team with a range of qualifications, including people with experience in starting new ventures.

5. Funding

Starting a company is capital-intensive. Without sufficient funding, a startup will not be able to achieve the necessary technical and business milestones to become investment ready. Companies need to understand the funding required to get to the next phase of development and reflect this in their business plan and pitch.

6. Intellectual property

Some startups see intellectual property (IP) as a cost to the business rather than something of value. Consequently, they fail to adequately protect their IP and lose their business advantage. Intellectual property can take several forms, so having an IP property strategy that is sound and provides the appropriate coverage for the business is necessary.

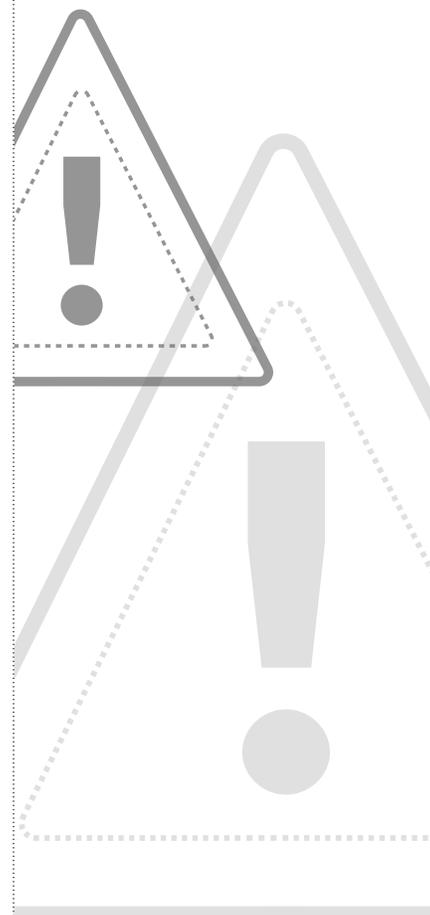
7. Business model

The company business model is basically how the company will operate and how it will generate value for itself and its customers. For your company to be sustainable, you need to attract customers that will pay for your product or services. There are many different ways to reach this goal, but not all are a fit for your technology and the market. Choosing the proper business model for the startup is critical to achieving success.

8. Bad luck

Sometimes companies fail due to events outside their control. This comes with the territory when starting a new venture.

Any one or more of these pitfalls may cause the company to fail. However, the learnings obtained can be valuable; many entrepreneurs have achieved success on startups launched after initial failures.



COMMON MISTAKES MADE BY INVENTORS

Inventors are understandably enthusiastic and motivated when starting up a company based on their research.

However, they can make decisions at the outset that may be detrimental to the long-term stability and success of the company. These are several mistakes that are commonly made by inventors as they spin out a company from the University:

- Having the principal investigator negotiate the license with McGill on behalf of the spinoff. Being a McGill professor and the lead negotiator for the company in the licensing discussions is a conflict of interest. It is best to have a lawyer represent the company in the negotiation.
- Constantly changing revenue share on the report of invention. McGill will split the revenue obtained from the license to the spinoff per the Guidelines to the Policy on Inventions and Software: www.mcgill.ca/secretariat/files/secretariat/policy_on_inventions_and_software.pdf 60% of the revenue will go to the inventors and contributors named on the report of invention and 40% to McGill. A frequent cause of friction is when the principal investigator decides to add new inventors or contributors to the invention. These changes should only be made if there are substantive contributions that need to be recognized or if the claims in the patent application warrant changing the list of inventors. By making modifications to the inventors/contributors, the revenue share must be updated. If the spinoff appears to have promise or has already received financing, it can be extremely difficult to obtain agreement from all parties on a revised revenue distribution. While it is important to properly recognize people, this should be done before the company is spun out. Any changes afterwards should only be for inventorship purposes.
- Underestimating the amount of time required to run a company. Some inventors want to be involved in the spinoff, but cannot devote enough time to actively participate in the company. A professor who also runs a research operation and has teaching and administrative duties may simply not have enough bandwidth to devote to the spinoff. It is better to admit this reality and find others who can better help the spinoff succeed. An alternative can be to act as an advisor to the company so that your network or scientific knowledge can still be leveraged.
- Allocating too many shares in the cap table to inventors who are not involved in the ongoing operation of the company. The equity in a cap table serves two purposes: rewarding past performance and incentivizing future performance. The original inventors should definitely be recognized for their contribution in creating the technology. However, if they will not be an active part of the operation of the spinoff, they should not receive a large number of shares. As well, it is important to leave enough shares for future investors and new employees. Working with a seasoned advisor will help avoid giving too many initial shares to inventors who are passively involved in the company and will not contribute significantly to its growth.

Addressing these situations before spinning out the company will avoid numerous headaches and reduce the time necessary to get the spinoff up and running.

CONFLICT OF INTEREST/CONFLICT OF COMMITMENT

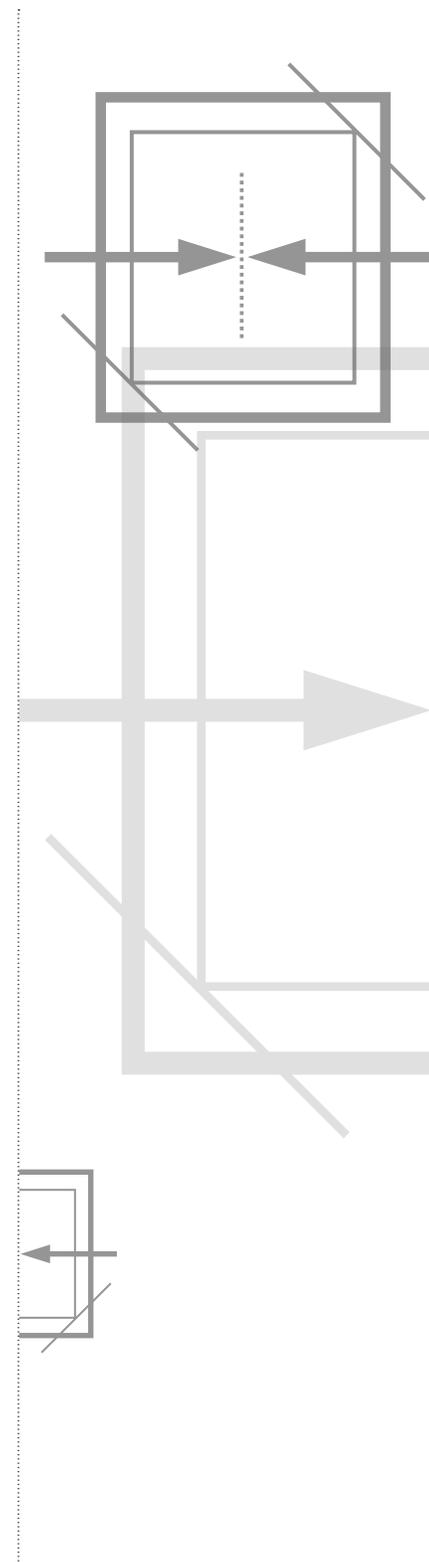
Conflict of interest (COI) and conflict of commitment situations can arise when a faculty member is actively involved in the spinoff company.

There can be financial conflicts of interest, as the professor who developed the original technology may be receiving compensation, such as equity, for their continued role in the company. Such compensation may lead to the appearance of a conflict of interest, as an independent observer may question whether the professor’s actions or decisions are guided by potential personal financial gain. Thus it is important to address these situations through the McGill conflict of interest process and develop a proper mitigation plan.

McGill’s conflict of interest process and documentation is available at www.mcgill.ca/apo/forms/conflict-interest-reporting

Faculty at McGill shall be primarily engaged in their academic duties. Professors need to be aware that involvement in a spinoff can result in COI and/or conflict of commitment issues; be sure to follow correct procedures as defined by the University. Further information can be found in the Regulations on Consulting and Similar Activities by Academic Staff.

www.mcgill.ca/secretariat/files/secretariat/consulting-similar-activities-by-acad-staff-regs-on.pdf



FREQUENTLY ASKED QUESTIONS

The terms startup and spinoff seem like they are referring to the same thing. How does I+P at McGill define them?

The two terms are similar and are often used interchangeably when describing early-stage companies. I+P distinguishes them as follows:

- A startup is an early-stage company founded on a business idea that was generated outside of the university.
- A spinoff is a company that is created by McGill researchers, postdoctoral fellows, or graduate trainees, based on McGill-developed intellectual property, and licensed from the university.

The most significant difference between the two is that the founders in a spinoff are McGill researchers/trainees. Spinoffs that license technology from McGill are eligible to apply for a McGill spinoff designation, which allows them the opportunity to continue to use University resources after incorporation. If the company's technology is not licensed from McGill but rather is a result from a transfer of rights of the intellectual property, it cannot be considered a McGill spinoff and is not eligible to use University resources at all. Further information is provided later in this document.

I would like to commercialize the technology I have developed through my research at McGill. What do I need to do?

The first step before any commercialization activities start is to submit a report of invention (ROI) to I+P. The ROI will include all the scientific details regarding the invention itself (how it is novel, non-obvious, and has utility), along with the funding used to generate the invention. For more details, please refer to the inventors' handbook. www.mcgill.ca/research/innovation/inventors/ip

I have reported the invention to McGill and continued development of the technology. I would now like to commercialize the invention by starting a company. What do I need to do?

McGill has a long history of spinning out companies through licensing arrangements. The license will include the necessary terms to ensure the company has the proper rights to practice the technology and clarify the roles and responsibilities of all parties. A signed license with McGill is a well-recognized document that will be required for investors to fully understand your company's rights to a technology developed at the university.



What are typical licensing terms for a spinoff?

Since each technology is unique and has its own timeline and pathway to commercialization, the terms are always specific to each technology. In general, the following terms are typically included in the license:

- Payback of patent costs incurred by McGill to the date of the license. The timing for the payback is negotiated for each license. As well, any future patent costs become the responsibility of the spinoff.
- Royalties, including minimum annual royalties.
- A small amount of equity in the spinoff.
- Financial milestones payments to McGill if the technology is successful in its commercialization efforts.
- Performance milestones to ensure that the spinoff is using best effort to bring the technology to market.

Does McGill always receive equity in the spinoff?

While equity is often included in the license to the spinoff, it is not required. However, companies at this early stage generally have limited financial resources and a small amount of equity is often substituted for other cash considerations. Note that McGill typically takes on the order of 5% equity or less, and generally does not ask for a board seat. In some cases, I+P can take an observer position on the board in order to provide feedback and networking opportunities, but McGill will never take an active role in managing the company.

Can the spinoff obtain an assignment from McGill of the patented intellectual property?

McGill does assign patents to the spinoff if appropriate. The conditions for such an assignment will be negotiated in the license agreement and will only occur once the company proves that it has a source of financing and is meeting performance milestones for the development of the technology.

What happens if future IP is developed by McGill or the company?

If the IP is developed at McGill, conditions regarding its ownership will be specified in either the license agreement or in a sponsored research agreement. Note that licensing of original IP from McGill does not guarantee a license to future IP. If the company develops IP on its own and independently of McGill, it will belong to the company. As the spinoff matures, it will generally have a combination of licensed IP and company owned IP in its portfolio.

If McGill licenses IP to the spinoff, can I still perform research on the technology?

McGill always reserves the right to perform research on the technology and will include this condition in the license to the spinoff. Note that continuing research with the spinoff can result in conflict-of-interest situations, therefore it is advised to review the relevant McGill Policy on Conflict of Interest if you wish to pursue a research relationship with the company.

McGill has licensed my invention to a spinoff. As an inventor, I could ultimately receive revenue from the license. I have no role in the company, so do I still need to declare a financial conflict of interest?

When McGill receives licensing revenue, regardless of whether it is based on equity, royalties, or some other form of compensation, it is shared among the inventors and the University per the McGill Policy on Inventions and Software. If the inventor is a professor who has no role in the spinoff, then any revenue received does not constitute a financial conflict of interest and no submission is necessary. However, if the professor enters into a research relationship with the spinoff, then they must submit a conflict-of-interest declaration and a proper mitigation plan. There must not be the appearance that the research project may be influenced by potential financial gains for the professor. As well, any research must be governed by a proper agreement, negotiated by I+P and the spinoff.

What support does I+P provide to McGill spinoffs?

I+P is pleased to work with McGill spinoffs to help them improve their chances of success. The support provided by I+P comes in several forms:

- **Networking.** I+P has a strong network of contacts, including service providers and consultants. We can connect you to these specialists and often are able to obtain reduced rates for their services on your behalf.
- **Communication.** I+P lists all McGill spinoffs on our website and we frequently write articles on the spinoff companies. We will amplify your announcements on our social media feeds when we are made aware of your achievements.
- **Funding opportunities.** I+P manages the McGill Innovation Fund, which has a stream to provide non-dilutive funding to worthy spinoffs. The McGill Innovation Fund is a competition, so there is no guarantee of success, but only McGill spinoffs are eligible. As well, I+P manages other funding calls that provide government support for companies. These calls often require a cash and in-kind contribution from the spinoff, but offer good leveraging opportunities.
- **Use of laboratory space.** McGill has developed guidelines regarding the use of space for McGill spinoffs). www.mcgill.ca/secretariat/files/secretariat/guidelines_for_university_spin-offs.pdf
This could be an attractive option for certain technologies where specialized equipment may not be easily accessible. Only spinoffs that have licensed the technology from McGill are eligible for this support.

I wish to commercialize my research on my own. Can I just take the invention and start a company?

McGill recognizes that some inventors will want to commercialize their technology independently of the University. Such an approach is allowed per the Policy on

Inventions and Software. However, the invention must still be reported to I+P with a request to transfer McGill's rights in the technology to the inventors. Even with the transfer of rights to the inventors, McGill still retains the right to receive net income for the commercialization of the invention and to perform research for non-commercial purposes.

The transfer of rights documentation will be necessary to prove to future investors that the chain of title for the invention is clear. If an invention developed by researchers at McGill or its affiliated hospitals does not have a proper chain of title showing assignment of the technology, it will become problematic when seeking outside funding. Investors want to know that they are putting their capital into a company that truly has rights to the invention. We have seen cases where the chain of title was not clean because the inventors struck out on their own and did not obtain a license or a transfer of rights. Obtaining funding became difficult and sorting out the chain of title after the fact was expensive and time-consuming.

I wish to take a transfer of rights for my invention. What support can I receive from I+P?

I+P does not discourage inventors from choosing the transfer of rights option if they feel they have the capability to best manage the commercialization of the technology. The transfer of rights does mean that the inventors are pursuing commercialization independently of McGill. Therefore, these activities must take place outside of the university facilities and the company is not eligible to use McGill laboratories for company business unless it is through a research or service agreement. As well, the company may not be eligible for certain internal funding opportunities managed by I+P. Other supports (e.g., networking, communication, etc.) will also not be available.

MANAGING IP: TRANSFER OF RIGHTS VS. SIGNING A LICENSE AGREEMENT

The following table offers a quick overview of the benefits and drawbacks of each approach to managing your Intellectual Property.

	TRANSFER OF RIGHTS	LICENSE AGREEMENT
Initial costs of patenting covered by University (e.g., US, Canada international, patent renewals, maintenance fees, etc.) *	No	Yes
Eligible to be considered a McGill spinoff, per the guidelines (link)	No	Yes
Receive communication support from I+P Eligible to apply to McGill Innovation Fund (and certain other funding)	No	Yes
Receive networking invitations from I+P	No	Yes
Eligible to apply to McGill Innovation Fund (and certain other funding)	No	Yes
Assignment of IP	Yes, but to the inventors and not the company	Possible, when agreed-upon milestones are met by the company
McGill receives income from IP if commercialized	Yes	Yes
McGill retains the right to perform research on IP for non-commercial purposes	Yes	Yes

* McGill bears all initial costs for patents but once a license agreement is signed, these costs must be repaid to the University. Also, it is possible to take a Transfer of Rights after initial patent fees have been covered. In such case, these fees will also need to be repaid to the University.

RESOURCES

There are a variety of web resources for entrepreneurs.

Note that the following list is by no means exhaustive as government programs can change frequently.

McGill resources

- www.mcgill.ca/research/innovation
- www.mcgill.ca/innovation
- www.mcgill.ca/desautels/stories
- www.mcgill.ca/dobson/
- www.mcgill.ca/engine/
- www.mcgill.ca/skillssets/framework/entrepreneurship
- www.mcgill.ca/osas/entrepreneurship
- www.mcgill.ca/hbhl/neurosphere
- www.mcgill.ca/science/research/rio
- www.mcgill.ca/medhealthsci/about/faculty-awards-prizes/clic
- www.building21.ca/
- www.libraryguides.mcgill.ca/entrepreneurship

Government resources

- www.ressourcesentreprises.org/
- www.infoentrepreneurs.org/en/
- www.investquebec.com/
- www.pmentl.com/en
- www.bdc.ca
- www2.gouv.qc.ca/portail/quebec
- www.economie.gouv.qc.ca/accueil/

