



Project IP Guide

All NGen Project Funding Streams

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Overview

This Project IP Guide provides prospective project partners with:

- A high-level definition of intellectual property (“IP”) and its different types;
- Some general best practices to enable them to comprehensively reflect on the IP aspects of their project; and
- Guidance for the preparation of an application that demonstrates due consideration of these aspects to the Assessors.

Intellectual property as a business toolbox

IP generally refers to intangible assets created by the human mind. Note that NGen extends this broad, traditional definition of IP also to include digital intangible assets that may not necessarily result from immediate human intervention. Just like tangible assets, IP assets may hold commercial value, even though their value may not be as readily ascertainable as that of the former. Compared to tangible assets, however, IP assets are more subject to being inadequately characterized and managed by their owner and thus end up underutilized as a business tool. Numerous types of IP exist. Familiarity with the main IP types and their associated use is essential for top management to form an accurate account of the company’s IP asset portfolio, to factor IP into business plans and operations effectively, and to identify needs and opportunities for strategic partnerships (e.g., licensing arrangements, collaborative projects, etc.).

The IP assets used or produced in NGen projects are expected to leverage one or more of the IP types presented below - depending on the subject matter and the business objective, certain IP types can be more suitable, either as used on their own or complementarily with other types.

Definitions

IP asset

For NGen’s purposes, an IP asset is a subset of a company’s IP portfolio consisting of a technology development (e.g., a solution, capability, system, process, or product) that can be used as a discrete business asset on the basis that it can be individually owned, practiced, licensed out or sold. As such, the IP encompassing a technology development can in many cases be broken down into several IP assets. Moreover, an IP asset may combine several IP types.

Background IP/Foreground IP

The IP assets associated with an NGen project are characterized as either Background IP or Foreground IP, depending on the timing of their origin.

- Background IP (BIP) refers to IP assets that were created before the start of the project and are being contributed to the project by a project partner, either to be used or to be improved upon during the project. Background IP may include third-party owned IP assets that are used under license by a project partner.
- Foreground IP (FIP) refers to IP assets that are expected to be or have been produced over the course of the project.

Statutory/Non-statutory

Each IP type listed below is characterized as either statutory or non-statutory. Whereas statutory IP types are protected by country-specific laws, protection of the non-statutory IP types strictly depends on *ad hoc* contractual obligations and/or access restriction measures implemented by their owner to control their use and dissemination. Also, a statutory IP type may not be applicable to all subject matter. On the other hand, non-statutory IP types are generally applicable regardless of the subject matter.

IP types

The following IP types are those believed to be most relevant to NGen projects. More information on these and on other IP types (e.g., integrated circuit topographies, plant breeder's rights and geographical indications) can be found on the websites of the Canadian Intellectual Property Office¹ and of the World Intellectual Property Organization².

Know-how (non-statutory)

Know-how is technical, actionable information that forms part of a company's corporate memory. As some amount of know-how is involved with most types of IP, NGen reserves know-how to refer to information which is not the subject to any specific confidentiality measure or statutory protection, is likely to end up disclosed publicly and/or is fair for a former employee to keep using post-employment. This type may also be used to refer to IP that is made available on an open-source basis.

Confidential information (non-statutory)

Confidential information is technical and/or commercial information owned by a company and whose disclosure is restricted by contractual obligations. Such obligations are typically found in employment agreements, non-disclosure agreements, contractor agreements, consulting agreements, license agreements, etc. They may also be imposed by law in some instances.

¹ [CIPO - Canadian Intellectual Property Office](#)

² [WIPO - World Intellectual Property Organization](#)

Trade secret (non-statutory³)

Trade secrets are a subset of specific, confidential information that is of particularly high criticality to the business. To legally qualify as a trade secret, the information must have commercial value derived from its secrecy, be secret/known by a limited group of persons and be subject to reasonable measures to keep it secret. In case of unauthorized acquisition, use and/or disclosure, the burden in litigation is on the owner of the information to establish secrecy and value. To be able to demonstrate this, companies should have a wide range of robust measures in place, combining physical, electronic, organizational, and contractual measures. Courts will look at these measures and a multitude of other factors to determine whether and how the owner of the information should be compensated.

Patent (statutory)

Via a patent, the patent office, a governmental body, grants the patentee the right to exclude others from making, selling, or using the invention claimed in the patent within its territory for a maximum of 20 years from the day on which the first corresponding patent application was filed. What is granted is not the right to make, sell or use the claimed invention, but the right to stop others from so doing. The nuance is important - a patent may be granted for an improvement to a base technology that is itself within the claimed scope of another active patent (likely owned by a third party). In such a case, the owner of the "improvement" patent practicing the improved technology would infringe the third party's patent rights in the base technology in the absence of a license granted by the latter to the former.

To obtain a patent, relatively detailed technical information about the claimed invention must be disclosed in the application for a patent, which itself becomes public typically 18 months after the date on which it is filed. Typically, in order to provide sufficient disclosure, the patent application must teach a person of ordinary skill in the related technical field how to make and use the claimed invention. This is the bargain that underpins the patent system: a patent provides a time-limited monopoly over an invention, and, in exchange, disclosure in the patent application ensures that after the patent expires, the invention can be made and used by the public. Keeping this in mind, when contemplating seeking patent protection for a given technology, consider whether trade secrecy might be leveraged in combination as well; i.e., whether some details should be omitted from the description and treated as a trade secret (for example, details that are not essential for the invention to work but are key to economic viability).

Patentable and non-patentable types of subject matter vary from jurisdiction to jurisdiction. In Canada, a patentable invention can be "any new and useful art, process, machine, manufacture or composition of matter, or any new and useful improvement in any art, process, machine, manufacture or composition of matter"⁴. Non-patentable types of subject matter include scientific principles and abstract theorems, methods of medical treatment, higher life forms, etc.

³ Trade secrets are statutory in some jurisdictions, for example, the United States' *Defend Trade Secrets Act*, 18 USC §1836.

⁴ *Patent Act*, RSC 1985, c.P-4, s.2

Industrial design (statutory)

Through a registered industrial design, the patent office, a governmental body, grants the applicant an exclusive right to prevent others from making, selling, and importing for commercial purposes within its territory an article that embodies a design which is the same, or substantially similar to the registered design, for a maximum of 15 years from the day on which the first corresponding application was filed.

This IP type generally applies to the visual aspect of an article or product. Registrable subject matter includes three-dimensional features of shape and configuration as well as two-dimensional features such as pattern and ornament, including colour, as applied to a finished article, as well as graphical user interfaces as displayed on a screen. Protection may be obtained for the design of the entire finished article, or for only part of it. Non-registrable subject matter includes ideas, methods of construction, and features dictated solely by function.

Trademark (statutory)

Trademarks are one or more of letters, words, sounds or designs that distinguishes one company's goods or services from those of others, within a given territory. Trademarks can be registered with the territory's trademark office (governmental agency) or can be unregistered in some jurisdictions. In Canada, a registered trademark is one that has been entered into the Register of Trademarks; which comes with a certificate of registration as objective evidence that the registrant owns the trademark. By registering the trademark, the registrant obtains the sole right to use the mark across Canada for 10 years in association with the goods and/or services appearing in the registration. The registrant can renew the trademark registration every 10 years. Any trademark that complies with the *Trademarks Act*⁵ can be registered. Typically, trademarks that are unregistrable include proper nouns, statements that are merely descriptive, places of origin, and marks identical, or likely to be confused with, a registered or pending trademark. In some jurisdictions, by publicly using a trademark for a certain length of time, one gains rights at common law despite the absence of a registration for the trademark.

Copyright (statutory)

Copyright consists of a bundle of rights associated with "works", including both "economic rights" and moral rights. Economic rights provide the *owner* with the exclusive right to produce or reproduce a substantial part of a work in any form, as well as other rights, such as performance and publication of the work and the making of derivative works. Moral rights include that of "*association*", giving the *author* the right to be identified with a work under their name or a pseudonym, or to remain anonymous; and "*integrity*", which is the right to prevent a work from being modified or associated with goods or services in a way that is prejudicial to the author's reputation. Whereas economic rights can be assigned (i.e., sold) by the author/owner, moral rights can only be waived by the author.

Generally, an original work is automatically protected by copyright from the very moment it is created. In Canada, copyright lasts for the life of the author, the remainder of the calendar year

⁵ *Trademarks Act*, RSC 1985, c.T-13

in which the author dies, and for 70 years following the end of that calendar year. The term of copyright varies by jurisdiction. Copyright can optionally be registered, which provides a certificate of registration of copyright as evidence that copyright exists, and that the person registered is the owner of the copyright.

Digital assets (non statutory)

Digital assets, such as data (e.g., original & derivative datasets), software and algorithms (e.g., untrained and trained AI/ML models), are often said to be assets without a legal home, as many IP types can play a role in their protection. Indeed, any one or more of confidentiality, trade secrecy (e.g., for encrypted or otherwise obfuscated code), patenting, industrial design registration (e.g., for a graphical user interface) and copyright (e.g., for software code or even to data if its compilation involved sufficient skill and judgment) can potentially be leveraged. It is important that companies identify these assets with sufficient granularity so that the most appropriate IP types can be selected and applied.

IP planning and management pointers

Responsible personnel

IP planning and management requires the enrollment of competent and empowered personnel. As IP considerations generally find their way into most, if not all, components of a business plan, the knowledge base and set of competencies needed to plan and manage a company's IP largely corresponds to those needed to develop and execute the company's business plan. For example:

- business and market acumen;
- technological understanding;
- legal awareness (which can be supplemented by professional counsel), including familiarity with the main IP types; and
- executive authority.

Depending on the size of the company, the above can be provided by a member of the executive management team or by committee (which may be referred to as an IP management unit, team or department). By having the above profile within its IP management unit, a company will have the ability to form an accurate and detailed account of the IP assets that it owns, to identify needs, objectives and risks associated thereto, and to plan and act accordingly.

To enable the maintenance of an up-to-date, actionable view of the company's IP assets, needs and opportunities, each business unit or project team ideally would be represented in the IP management unit or at least take part in an IP reporting process to provide input into an IP review process run by the IP management unit.

Policy

A company can benefit from having one or more IP-related policies to practically govern how its own IP and that of others is to be handled by all personnel. These can also be used to communicate the extent of autonomy regarding IP matters as well as situations requiring support/approval from IP management and/or executive management.

For example, a company-wide policy may cover:

- The IP management roles, including the individuals they are assigned to and the underlying responsibilities;
- Guidance & expectations for handling the company's own IP;
- Guidance & expectations for handling third-party IP;
- Matters which require sign-off from IP management;
- Reference to an IP reporting process;
- Etc.

On the other hand, more sensitive/strategic matters may be covered by a policy accessible on a 'need-to-know' basis:

- The frequency, scope, input, and output requirements of IP reviews;
- The company's tolerance to certain types of IP-related risks;
- Suitable IP type(s) and handling for new/projected IP assets (for example based on market, technology, product line, etc.);
- Etc.

Business objectives

IP-related business objectives should be established and periodically revisited such that the appropriate IP type(s) can be leveraged for each of the company's IP assets. Such objectives can include:

- Securing market share by blocking out the competition;
- Crystallizing technology development into tradeable commercial assets;
- Deriving additional revenue streams through licensing;
- Increasing acquisition or investment attractiveness by discouraging the "build" option in the "build vs buy" assessment;
- Increasing the company's reputation as innovative and ground-breaking;
- Using first-mover advantage to develop brand recognition;
- Etc.

Identification of project IP assets and partners

Although readers may have formed their project consortium prior to reading this guide, IP planning may begin prior to the identification of potential partners. Companies may start by preliminarily listing the key IP assets they need in order to develop and commercialize (or commercially leverage) their technology. This preliminary list can then be earmarked as to

whether each asset corresponds to Background IP or Foreground IP from the company's perspective. This exercise is best performed early in the technology development process (e.g., in some cases as soon as TRL 2⁶, whereas NGen projects typically begin at TRL 4 or later) to determine whether each of the Foreground IP assets can be developed internally, co-developed or licensed-in, and to select the best approach in view of available resources and opportunities. In many cases, a well-suited partnership can fast track a technology development process either by virtue of:

- Complementarity, whereby an IP asset initially identified as Foreground IP by one partner is made available as Background IP from the perspective of the project consortium as it is brought to the table by another partner; and/or
- Synergy, whereby the development of a desired Foreground IP asset can benefit from inputs by multiple project partners.

Development of an NGen project application

In most cases, IP typically factors into all of the components of an NGen project application⁷, i.e., the *Assessment Questions* and the *Supporting Documents* (the *Project Plan*, the *Risk Register*, and the *Financial Workbooks*). **Up until Assessment, the desired outcome for the IP planning exercise is two-fold:**

- **Lay down the bases of a comprehensive and common understanding of the project's IP aspects** to inform project development and facilitate the transition into project contracting and execution.
 - This is accomplished by reflecting on the IP assets and partners required to execute the project and reach its commercial objectives, and by documenting these assets and how they are to be governed during and after the project (see *IP Tables* below).
- **Convince the assessors** that the project partners are reasonably knowledgeable about IP, have jointly and thoughtfully considered their project's IP aspects and can be reasonably expected to meet their IP-related deliverables.
 - This is accomplished by addressing IP where appropriate in the answers to the *Assessment Questions* and in the *Supporting Documents*, in a coherent and consistent manner.

⁶ [Technology Readiness Level \(TRL\) Assessment Tool \(canada.ca\)](#)

⁷ For more details, refer to the Application Guide specific to the Funding Program being applied for: [NGen Funding Programs](#)


IP Tables


Ideally early in the development of the project application, the prospective project partners must form common, comprehensive lists of the Background IP and Foreground IP assets associated with the project. This must be done using the *IP Tables* template provided on the landing page of the program being applied for.

As they complete the *IP Tables*, the prospective project partners should:

- Describe each IP asset clearly and concisely;
- Identify the IP types they intend to leverage for each IP asset;
- Establish ownership and access terms and verify their alignment with the partners' respective IP policy, business objectives and commercial plans; and
- Explore the option of incorporating and/or substituting project partners to remove technological roadblocks.

NGen requires that the resulting *IP Tables* be provided in support of the project application.

 Although the *IP Tables* are the sole IP-related requirement of the application, it is highly recommended to address IP aspects wherever appropriate in your answers to the *Assessment Questions* on the Application Portal and in the *Supporting Documents*.

 IP-related expenses are eligible for reimbursement for SMEs⁸ (and SMEs only). NGen thus recommends that SMEs identify and budget for IP-related expenses during application development, so that these can be factored into the project's *Financial Workbooks* (and thus in the financial support sought from NGen). NGen recommends that, at a minimum, \$50,000 should be budgeted for IP costs for SMEs ("Patents & IP" line item in the *Financial Workbooks*). Thus, if IP-related costs are unknown at this stage, NGen recommends that an SME budget \$50,000.

Upon positive assessment

Should your project be recommended for funding, your application will move onto the contracting phase of NGen's application process. By then, the project consortium should have firmed up the identity and roles of its members, as well as the definition of the IP assets associated with the project (including ownership and access) in the *IP Tables*. These form the backbone of a project *IP Plan*, which is to be fleshed out to further inform and interrelate how IP is addressed in the different project documents and to set out how project IP will be managed during the project and in the future.

The preparation of an *IP Plan* will also allow NGen to fulfill its role and meet its goals with respect to IP, which are to:

⁸ Refer to the Financial Guide specific to the program you are applying for.

- ensure the program requirements with respect to the contribution of background IP and the creation, protection, sharing and commercialization of foreground IP are respected;
- increase the level of IP knowledge and IP sophistication of NGen project partners;
- ensure that IP risks are properly identified, managed, mitigated; and
- ensure that the level of IP risk to the project is acceptable for NGen to justify the investment of public funds.

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NGen's IP staff can help you with the development of the IP aspects of your project application upon request. Should the need arise, please reach out well in advance of the application deadline as resources will be allocated on a first-come, first-served basis.

If the project is recommended for funding following an independent assessment, NGen's IP staff will assist you in completing and improving your *IP Plan* as necessary as you proceed through the contracting and execution phases of your project.