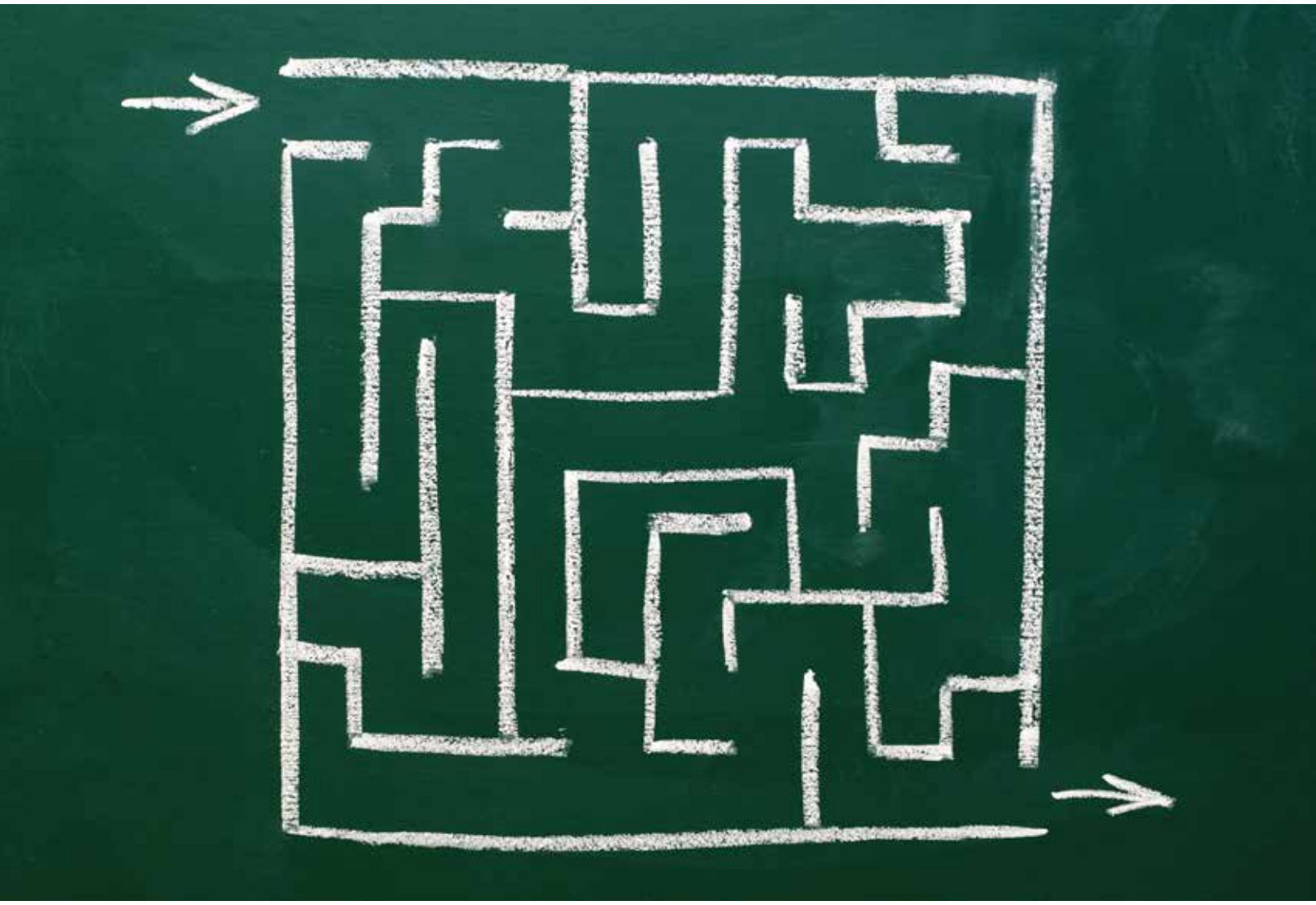
THE NEW INNOVATOR'S COMMERCIALIZATION DILEMMA

A Report on the CIGI International Intellectual Property Law Clinic

James W. Hinton and Kent C. Howe

SPECIAL REPORT



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67 Erb Street West
Waterloo, Ontario N2L 6C2
Canada
tel +1 519 885 2444 fax + 1 519 885 5450
www.cigionline.org

TABLE OF CONTENTS

ABOUT THE AUTHORS

James W. Hinton prepared this report as a CIGI research fellow with the International Law Research Program (ILRP). Jim is an intellectual property (IP) lawyer, a Canadian and US patent agent and a Canadian and US trademark agent. Jim supervised the CIGI International Intellectual Property Law Clinic.

In his role as research fellow, Jim examined international, transnational and domestic IP law within a practical and experiential context. He also studied how early-stage access to IP knowledge can affect Canada's global competitiveness in an innovation economy. Jim's research fostered productive and multidisciplinary collaboration among academia, business, private legal practice and governments to find practical solutions to navigating global IP legal systems.

Jim helps innovators protect their IP in his law practice at the Waterloo Region office of Bereskin and Parr LLP. Jim holds a juris doctor from the University of Toronto's Faculty of Law and a bachelor of engineering (mechanical) from McMaster University.

Kent C. Howe is an articling student with the ILRP at CIGI. From June to August 2014, Kent was a student with the CIGI International Intellectual Property Law Clinic where, under the supervision of Jim Hinton, he assisted early-stage innovators in the Region of Waterloo through the provision of pro bono IP legal services.

In his role as articling student, Kent lends legal research support to the ILRP's research streams, with a particular focus on international IP law. This includes examining the impacts of global IP legal regimes and the importance of knowledge mobilization as a component of developing national competitiveness in an innovation economy.

Kent holds a juris doctor from Queen's University's Faculty of Law and a bachelor of medical sciences from the University of Western Ontario.

EXECUTIVE SUMMARY

This report outlines the impetus behind the Centre for International Governance Innovation (CIGI) International Intellectual Property Law Clinic, which operated for three months in 2014. It consisted of a partnership among the CIGI International Law Research Program (ILRP), Communitech (the Region of Waterloo's hub for commercialization of innovative technologies) and leading intellectual property (IP) law firms.

The report describes the new innovator's commercialization dilemma — a multifaceted dilemma arising from lack of IP legal knowledge, lack of financial resources and the high costs associated with IP protection, all of which combine to place the new innovator in a vulnerable position at the early stages of their commercialization timeline. After briefly surveying the current environment for entrepreneurship-based clinics, the report describes the elements and structure of the CIGI clinic. The advantages for participating students as well as first-hand accounts of the benefits of the CIGI clinic are also detailed.

Taking lessons learned from the CIGI clinic, the report illustrates how an IP-focused law clinic can help to address the commercialization dilemma. The report describes the manner in which IP clinics might be structured, while reviewing the associated benefits and challenges for each structure. The report also makes brief recommendations for governments, law societies, law schools and IP offices to support the provision of IP legal services through the law clinic model.

INTRODUCTION

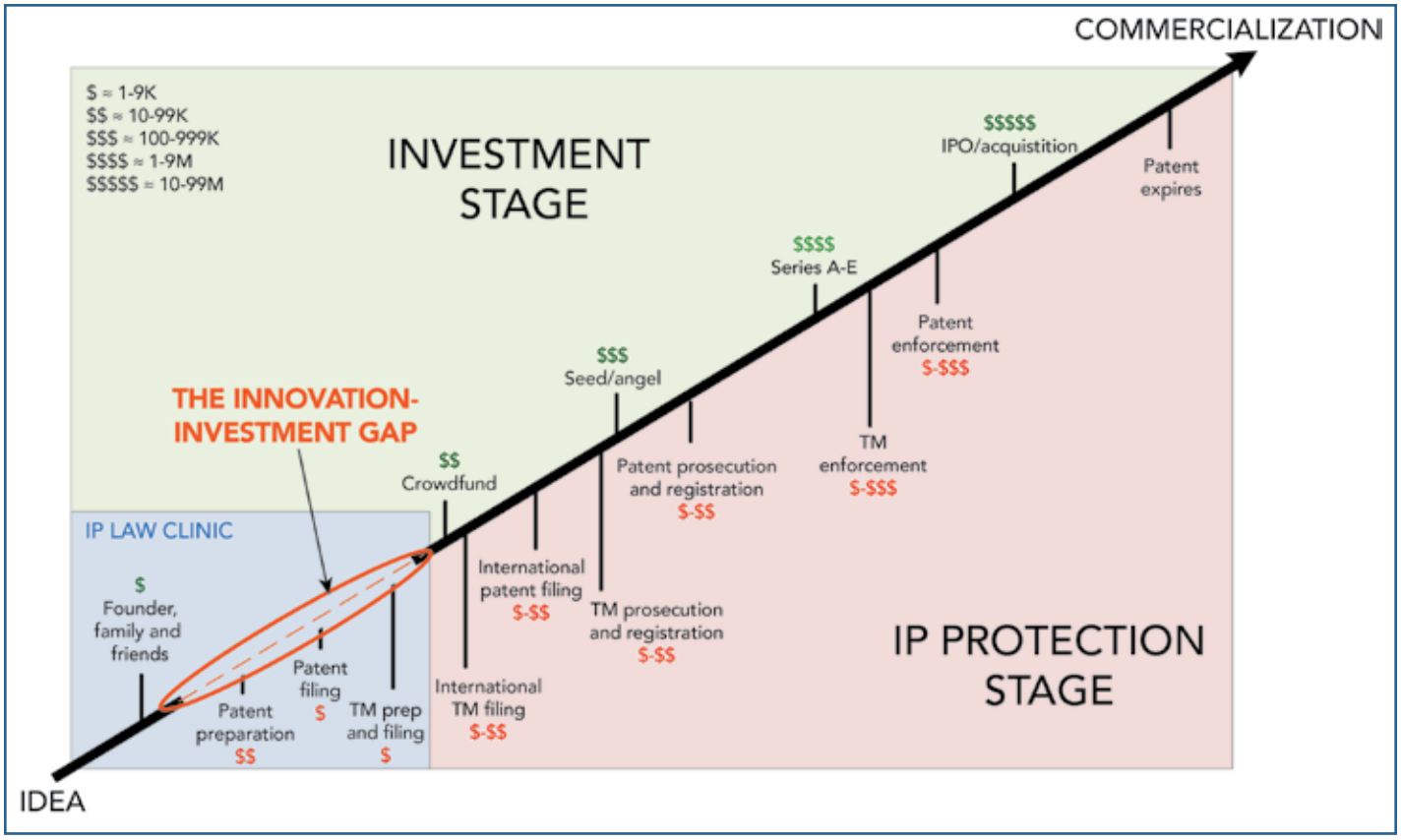
The commercialization of ideas is central to global competitiveness in an innovation economy. Being inherently intangible, ideas may be protected to some degree by rights conferred through the application of IP legal mechanisms, which include patents, trademarks, copyright and trade secrets, among others. Access to IP legal knowledge and guidance relating to these mechanisms are critical when navigating the complex international IP legal regime, yet early-stage innovators (many of whom are young and inexperienced in business) often lack both IP knowledge and the financial resources to obtain timely legal guidance, leaving them vulnerable at a critical phase of the commercialization process. We call this the new innovator's IP commercialization dilemma. We also point to limited access to affordable early-stage IP legal advice as a contemporary access to justice issue. With access to IP legal knowledge and mentorship, however, new innovators can form an appropriate IP strategy and improve their chances of entrepreneurial success.

The CIGI ILRP examined the effectiveness of addressing the IP legal needs of new innovators through creating, operating and studying an experimental law clinic model, the CIGI International Intellectual Property Law Clinic. The clinic ran as a pilot program over a period of three months, with an IP legal practitioner supervising law students in the provision of early-stage IP legal services to new innovators in the Region of Waterloo, with the aim of helping those innovators protect their IP internationally. The clinic was able to provide value to innovators through a range of IP legal services, including patent work, trademark work and general IP strategy advice.

The resulting success of the clinic suggests the law clinic model for the provision of IP services may be effective in helping new innovators access the IP knowledge they need to position themselves competitively in the marketplace. At the same time, CIGI's experience operating the clinic identified a number of challenges to be considered when developing a sustainable IP clinic model for the Canadian context.

This report will explain the potential value of an IP law clinic, address the challenges identified in setting up such a clinic and make recommendations for achieving an effective and sustainable model of delivering IP legal services to new innovators.

Figure 1: A Typical IP Commercialization Progression



Source: Jim Hinton.

THE NEW INNOVATOR'S COMMERCIALIZATION DILEMMA

A decisive factor influencing the development of a business's IP strategy — and correspondingly contributing to the existence of the new innovator's commercialization dilemma — is timing. To understand the critical importance of timing in the IP cycle it is necessary to consider how the patent and trademark protection timeline links up and interacts with the company investment cycle. Figure 1 shows the interaction between IP protection and investment funding for a new innovator. New innovators are unlike established players because they do not have the resources to commercialize and protect their innovations, and they lack experience in dealing in IP issues. The funding gap that the new innovator must successfully span in order to survive represents the crux of the new innovator's IP commercialization dilemma. An IP law clinic can potentially provide value in bridging this early-stage gap.

The Innovation-Investment Gap

The gap in the innovation-investment chain faced by new innovators is best understood by first highlighting some of the patent system's basic principles and embedded timing requirements. While similarly important issues surround the trademark system,[1] for simplicity this discussion will focus on the patent system. Generally, a patent is granted for a period of 20 years from the date the application is filed with a patent office for innovations that are, among other things, new and inventive.[2] As such, the general rule is that a patent cannot be granted for something that is not new — that is, for something that has been previously disclosed to the public in any form, by anyone, including a disclosure by the inventor.[3] This is consistent with one of the underlying precepts of the patent system as a means of encouraging and promoting innovation: in exchange for powerful exclusive rights over the invention, the innovator

1 Trademark protection can be important to new innovators to protect the goodwill in their brand. Trademark registration is often less expensive than patent registration. Trademarks may also be protected in some ways by common law.

2 *Patent Act*, RSC 1985, c P-4, ss 2, 28.2, 28.3; 35 USC § 102-103.

3 *Patent Act*, s 28.2; 35 USC § 102(a)(1)-(2).

is required to disclose his innovation, thereby providing the public with the benefit of new knowledge that might otherwise be kept secret in a manner that precludes public use and benefit. Where the details of the invention have already been made publicly available, there is no need to entice the innovator to contribute their knowledge with the allure of patent protection — it is already "out."

Understandably, public disclosure — and its potentially harmful effects — becomes a critical factor when new innovators look to patents as a means of protecting their IP. Often, unaware of the requirement not to disclose, new innovators will share the idea for their invention at a conference, a school presentation, a pitch competition or on their website. A company may also test the market by direct selling (for example, through online retailers such as eBay™) and in the process unknowingly disclose vital information about its product. The motivations for taking such steps are reasonable: the new innovator wants to share this information with the public in order to test the idea and gauge whether it is marketable. This situation is further complicated by the requirement that the entrepreneur move fast to start the business in order to have first-mover advantages and, at the same time, address IP concerns by ensuring they file for protection before any competitors.

There is some good news, however, for a new innovator who has publicly disclosed before seeking patent protection: in some jurisdictions, including Canada and the United States, there is a one-year grace period.[4] The bad news for these innovators is that they may have lost proprietary rights in many jurisdictions, including Europe,[5] that do not have a similar grace period. This difference in treatment of inventor-derived public disclosure reveals one element contributing to the complexity and unevenness of the international system of patent protection in the global economy.

At this stage new innovators may find themselves ready to disclose (and perhaps aware that they need to pursue IP protection) but financially limited to personal savings or funding that can be obtained from friends and family. Legal costs to protect an innovation through patenting include the preparation of a patent application, which can range from $5,000 to $20,000,[6] depending on the subject matter and the amount of time involved in preparation.[7] While some of these costs can be deferred by filing a provisional type application,[8] a formal patent application must ultimately be completed to secure protection. In many cases, particularly for new innovators, such as undergraduate students, there are almost no resources to devote to these legal costs.

These funding gaps, particularly germane to early-stage innovators, have been recognized and addressed, at least in part, by newly developed funding tools such as crowdsourcing (for example, online via Kickstarter™). Resorting to such tools can, however, present potentially serious consequences related to IP infringement. For example, it is advisable to seek IP protection before promoting the brand or invention on a crowdfunding website because once the promotion goes live, counterfeiters may be waiting to replicate the innovation. This breed of counterfeiters often has the means to get the new product to market much faster than the innovator, which can have a dire effect on the ultimate success of the innovator's business. Since counterfeiters may not be concerned with quality or reputation, knock-off goods and services are likely to be of much lower quality, which has a twofold damaging effect on the innovator: if the counterfeiter uses the innovator's brand name, it will tarnish the brand's reputation; and, if the counterfeit product is sold at a price point that is too low, it will be difficult for the original innovator to sell their own higher-priced, higher-quality product when it enters the marketplace behind the cheap knock-off.

Another way that some innovators may acquire financial resources to bridge early-stage funding gaps is through pitch competitions hosted by organizations such as universities, connector hubs and accelerators, where prize money is awarded to the most promising business.[9] While this may provide a small amount of funding that can be directed to legal costs, it may be too late if the pitch competition results in public disclosure of the invention; in other words, the resources for protecting the patent arrive, ironically, after the need for protection has arisen and by means that may render the product ineligible for protection. In any case, pitch competitions are not guaranteed streams of revenue for early-stage innovators,

4 *Patent Act*, s 28.2(a); 35 USC § 102(b)(1). The "grace period" is an exception to the requirement that the idea must be absolutely new. In these jurisdictions, innovators may publicly disclose their invention before filing for a patent as long as they ultimately file for patent protection within the one-year grace period from the date of public disclosure.

5 Convention on the Grant of European Patents, Part II, Chapter I, Article 54.

6 All dollar figures in this report refer to Canadian dollars.

7 For a more detailed breakdown of the legal costs associated with obtaining a US patent, see www.ipwatchdog.com/2015/04/04/the-cost-of-obtaining-a-patent-in-the-us/id=56485.

8 A provisional application is a patent application that does not need certain formal requirements at filing (such as a full set of claims). See *Patent Act*, 35 USC 111(b).

9 See, for example, the Velocity Fund at the University of Waterloo, http://velocity.uwaterloo.ca/velocity-fund/. The Velocity Fund is a grant program that provides start-ups and entrepreneurs with the opportunity to win funding through competitions held three times during a given year.

and thus do not represent a reliable manner of securing funds that can be dedicated to IP protection costs.

Once the decision is made to pursue patent protection, preparing and filing the patent application only initiates the process. The innovator must subsequently convince the patent office — in every jurisdiction, worldwide, in which they apply — that the application meets the requirements for patentability. This process often occurs a few years after filing and costs may range from $3,000 to $5,000 for each exchange. If the patent is ultimately allowed, a fee is often required upon issuance. Once in possession of a granted patent, the innovator must turn their mind to enforcement against potential infringers. Legal fees for enforcement can range widely, from a cease-and-desist infringement letter ($1,000) to litigation (up to and perhaps more than $500,000). Periodically, maintenance fees also arise ($500 to $2,000) that are required to keep the patent "active" (i.e., enforceable) until it expires (20 years from the filing date). At this stage, there should be money available from investment or business revenue to direct to these costs. If not, the idea underlying the innovation may not be commercially viable, with market forces dictating that the innovation is not a sufficiently valuable contribution.

Where the innovator has ongoing business and growing innovative activity, this patenting process will be considered and likely repeated for subsequent patent applications covering new improvements and innovations, resulting in similar associated costs.

The crux of the new innovator's dilemma thus lies at a point in time before substantial funding is received but after the idea underlying the innovation has been "reduced to practice" (to use patent terminology). It is at this time (or earlier) that the innovator must understand the patent system, consider the options and develop an IP strategy. Where a patent is appropriate — as is often the case for technological innovations — the innovator has three options: take no action; prepare and file an application on their own; or prepare and file a patent application with the help of a patent practitioner.

The first option, taking no action, is the least desirable. In these circumstances, patent protection is a proper course of action, but a patent application is not filed and the innovator foregoes any associated benefits. As a result, the innovator may be left open to unscrupulous copying in spite of their valuable contribution to the state of the art.

The second option, self-filing, is also undesirable, given the complexities of the patent system and the expertise required to describe and prepare a patent application. This situation is exacerbated by an innovator who is unfamiliar with the patenting system. In such cases, innovators might look to online resources for guidance, prepare an application themselves and file on their own, with adverse consequences. For example, innovators may file a provisional patent application they have prepared themselves containing fatal errors (for example, not including sufficient technical detail to meet the disclosure requirements of the jurisdiction) that could ultimately lead to loss of protection. Self-filing would also require diligently tracking the application filing date, since doing otherwise risks a loss of rights if critical future dates are missed. Furthermore, a poorly prepared application can have an impact on the ultimate scope of the protection that an issued patent receives, as well as an impact on business: investors doing due diligence will evaluate the patent and any identified deficiencies can have a detrimental impact on subsequent funding. Accordingly, a self-filed application presents considerable risk, including potential negative short- and long-term impacts on the viability of the business.

Alternatively, innovators may wait until they have sufficient funding to file an application through a patent practitioner and as a result put themselves at a disadvantage. Such a delay can, in a knowledge-based patenting system where the first party to file is entitled to protection, inadvertently allow a competitor who files during that delay to secure protection and prevent the other innovator from doing so. For example, in the fast-developing high-tech sector, patents may be invalidated or limited in scope by applications that were filed a matter of days or even hours before (famously, Alexander Graham Bell and Elisha Gray filed telephone patents on the same day in February 1876).[10] Thus, responsible innovators should file with the patent office as soon as they are able to do so properly. This is especially important for new innovators whose first patent is often their primary asset and subsequent innovations are merely improvements thereon.

Naturally, the third option is preferred: the innovator files an application prepared with the help of a patent professional. Unfortunately, as already noted, a new innovator with insufficient resources will not be able to take this course of action without some alternative form of legal service provision such as a law clinic. Aside from providing necessary legal guidance and expertise, this option also allows the innovator to dedicate their time to other business issues — frequently an important consideration for small companies.

Moreover, once innovators have navigated the patenting process successfully, they develop a better understanding of when patent protection should be pursued and what is involved in doing so. These benefits survive the company,

10 Bell filed a patent application entitled "Improvement in Telegraphy" on February 14, 1876. Several hours later, Gray filed a "caveat" for "Transmitting Vocal Sounds Telegraphically," which would have given him a 90-day grace period to file his own patent application, without other patent applications being considered in that period. Bell was awarded the patent. See Evenson (2000).

as the innovators' new knowledge and skills required to acquire IP protection and commercialize an idea will follow them throughout their career.

IMPROVING ACCESS TO IP KNOWLEDGE: IP LAW CLINICS IN CANADA AND THE UNITED STATES

The clinical model of legal education and providing legal services has existed for more than 50 years in a variety of forms (Macfarlane 2009, 35). In fact, in some areas of law, such as poverty law, there is a considerable history of law clinics being employed as a means of training students in legal practice and for delivering basic legal services to those who cannot afford them (ibid., 36). Historically, law clinics' offerings have been driven by the needs of the community in certain insufficiently serviced areas of law (for example, criminal, landlord-tenant or immigration), and have given law students the opportunity for a more experiential legal education.

In Canada, law clinics are becoming increasingly prevalent due to a trend toward adapting current models of legal education from the purely theoretical to a more client-centric, practical model. The natural extension of this new approach to the area of IP law presents an opportunity to increase the profile and application of IP law clinics, while realizing the goals of education and provision of accessible services in a socially beneficial manner. Law students in an IP clinic setting would have the opportunity to become familiar with IP law and practice while at the same time developing universal skills required for the practice of law. While traditional law clinics focusing on immigration, landlord-tenant and criminal law provide recognized social benefits, it is arguable that IP law clinics also provide social benefits by supporting new innovators in protecting their IP rights, and consequently stabilizing the foundation for developing entrepreneurship.

The application of clinical legal education for the purpose of providing more accessible services to the innovation community is, nevertheless, relatively new to Canada. There has been some recent success with IP clinics such as the Law and Technology Entrepreneurship Clinic of the University of Windsor's Faculty of Law (dating back to the IP Legal Information Network founded in 2004), and York University's IP Osgoode (founded in 2008), but the offerings have been sporadic and are often subject to limited grants that restrict their potential growth and impact.

By contrast, the United States has been quicker to recognize the needs of the innovation community. IP law clinics have been successfully functioning in the United States for at least 20 years,[11] with US law schools developing a robust network of IP law clinics. In 2011, the United States Patent and Trademark Office (USPTO) launched a pilot accreditation program granting clinic law students, under the supervision of a registered attorney or agent, the authority to file and register patent and trademark applications on behalf of innovators (USPTO 2015). The USPTO Law School Clinic Certification Program continues to expand, with 45 registered clinics in 2014 and participation increasing every year (ibid.). In recognition of the proliferation of IP clinics, the need to assist inventors and the value these clinics provide, on December 16, 2014, the US Congress passed a law to make the USPTO Law School Clinic Certification Program permanent (HR 5108 2014).

Outside of North America, the IP law clinic model is also garnering attention. Law schools in Europe are venturing into the entrepreneurship legal sphere with the launch of iLINC, a European network of "law incubators" which are, in essence, law clinics. Founded in 2013, iLINC aims to bolster the start-up community and increase the quality of future legal professionals by supporting legal training programs in Europe that offer law student assistance to entrepreneurs who are not able to afford professional legal counsel.

The CIGI International Intellectual Property Law Clinic was conceived as a response to a similar need for IP legal assistance in the Region of Waterloo's innovation community, with the goals of building strength in the local start-up community and giving quality, practical experience to future lawyers.

THE CIGI INTERNATIONAL INTELLECTUAL PROPERTY LAW CLINIC

As part of the CIGI ILRP, the International Intellectual Property Law Clinic operated at the CIGI Campus in Waterloo, Ontario, from June to August 2014. The clinic was a collaborative partnership among CIGI, Communitech and three local IP law firms that answered Communitech's call for participation in establishing the clinic partnership.

The clinic provided pro bono IP legal information and services to more than 50 new innovators, while delivering practical training to law students. The seven law students, working under the supervision of a licensed lawyer, had the opportunity to gain experiential training in IP law by delivering legal services to innovators, and simultaneously supporting entrepreneurship and innovation in the Region

11 The John Marshall Intellectual Property Patent Clinic filed US Patent 5,567,455 on behalf of an innovator on September 1, 1994. See www.jmls.edu/clinics/patent/patents.php.

of Waterloo. The clinic was not conceived as a replacement for services already available through the local IP bar, but rather to address a gap currently not served by the IP bar because the would-be clients cannot afford to pay for legal services.

The clinic was favourably situated in the Region of Waterloo, which is home to hundreds of new start-up tech companies (Communitech 2013). The Region of Waterloo is unique to the Canadian entrepreneurship landscape and has been recognized internationally by Startup Genome as a top-20 innovation centre worldwide (Hermann et al. 2012). With no law school in the region, the clinic did not operate in association with a law school; it drew its student clinicians from law schools across the province.

The mandate of the CIGI ILRP includes research into IP knowledge mobilization globally to advance international governance. The clinic provided practical IP legal support to innovators on the cusp of commercialization and internationalization of their business. By researching, training and increasing access to knowledge on international IP legal systems, the clinic contributed to the local innovation ecosystem.

The clinic also benefitted greatly from the involvement of Communitech, an organization devoted to helping technology companies start, grow and succeed. With its in-depth understanding of the needs of entrepreneurs and innovators in this region, Communitech's start-up services group was ideally positioned to provide support to the clinic. The Communitech Hub, in Kitchener's Innovation District, also served as the physical meeting space for seminars and clinic meetings.

Likewise, the clinic partnership benefitted from the participation and experience of the partner firms. Firms not only contributed to the design of the clinic, but also provided training and mentoring to the clinic's students.

Nabil Fahel, Communitech's director of business development, speaks to media at the launch of the clinic in June 2014.

The Clinic's Structure

In order to operate the clinic, the CIGI ILRP hired an IP lawyer and patent and trademark agent, as an independent contractor, to supervise the legal work done by the students. The students were hired and managed as employees by the CIGI ILRP. They were assigned to international law research projects and received reports on their performance from the clinic supervisor. To avoid any potential sharing of confidential solicitor-client information pertaining to the clinic with CIGI, a "confidentiality wall" was created and maintained, effectively separating CIGI from legal matters handled by the clinic. The clinic supervisor conducted work as a sole practitioner and was responsible for all records relating to clinic clients, with all client-clinic retainers specifying the client's status as a client of the clinic supervisor and non-involvement of CIGI in the file. The ILRP's role in the clinic was restricted to its creation and development with the community partners, engaging the supervisor and providing general direction on administration, staffing the student clinician positions, and reviewing the clinic supervisor's weekly summary reports of the clinic's activities (without reference to client-specific work).

The challenge of preserving solicitor-client privilege meant that the partner law firms also would not be privy to the clinic's client matters unless the client expressly consented to sharing information with one of the firms. The clinic supervisor was able to consult the law firms on general points of law only, not client-specific issues, and no confidential information was exchanged with them.

The Clinic's Students

The student component of the clinic consisted of seven law students from various law schools across Ontario. Law students were hired by CIGI to work under the supervision of the clinic supervisor. The students brought diverse educational backgrounds, although almost all shared undergraduate education in science and engineering. As well, the students had a demonstrated interest in IP law, having taken courses in patents, trademarks, copyright or IP law at law school.

The work undertaken by the students at the clinic fell into two broad categories: the dissemination of general IP legal information, and client-specific matters. Students disseminated IP legal information to local innovators (many of whom were clinic clients) through group seminars. Student-led seminars allowed students to hone their knowledge of IP legal concepts and practices, as well as develop their ability to communicate these concepts and practices in an accessible and comprehensive way. The topics covered included the international and foreign law dimensions of protecting IP (for example, describing the legal regimes in the United States, Europe and worldwide). Exposing the students to domestic, foreign

The clinic consisted of (back row from left): law students Damian Rolfe, Sam Anissimov, Kent Howe and Arsalan Mustafa; (front row from left) Tamana Hafid, Sean Mitra and James Cote, and clinic supervisor Jim Hinton.

and international law helped demonstrate the global nature of innovation and entrepreneurship. Tailoring seminar content to the concerns of new innovators also required students to look at the business needs of young companies and how they may influence IP legal decisions.

The nature of the client-specific work varied across the spectrum of IP-related issues and from student to student, depending on the files assigned to them. Though a significant part of the work was comprised of the preparation and drafting of provisional patent applications (due to Communitech's focus on technology-based companies), other matters included patent searching and patentability opinions, trademark searching and application drafting, trade secret consideration, IP ownership analysis, questions about non-disclosure agreements, trade secret analysis, copyright review and guidance on general IP strategy, both domestic and international.

Students benefitted greatly from carrying their own files. Frequent face-to-face client contact presented students with valuable client interaction. Students participated in and conducted client meetings, oversaw the progression of their files and kept client-innovators apprised of their IP matter's status. Among other IP-specific experience, students learned a great deal from participating in the early stages of drafting patent applications. Patent applications are highly technical documents, and exposure to their preparation is very useful in understanding the fundamentals of the rights underlying the patent system.

Perhaps the students' most valuable learning experience from the clinic was the opportunity for closer and more frequent client contact than they could reasonably expect in a traditional IP placement with a firm. This increased contact allowed students to develop an appreciation of their clients' business goals, and how knowledge and use of available IP legal mechanisms can help achieve those ends.

The Clinic's Innovator-Clients

Potential clients were directed to the clinic by Communitech, through a screening process designed to identify new innovators in need of IP legal guidance but lacking financial resources to pay for legal advice. While most of the start-up companies engaging the clinic had a preliminary understanding of IP, they had not yet developed a comprehensive IP strategy. In fact, a good number of the innovators were still in the process of completing their undergraduate studies and, as such, had very limited resources and business experience.

The clinic clients needed substantial assistance and found tremendous value in the process of patent drafting with the clinic staff. Often the innovators would have a draft one- or two-page document describing their invention idea for submission as a provisional patent application. The clinic was able to review these preliminary documents, guide the innovators on what a patent application requires and ultimately provide the innovator with a detailed draft patent application. This hands-on patent drafting fulfilled two of the practical objectives of the clinic: the innovators acquired valuable knowledge and understanding of when an application may be necessary and the basics of how to prepare one; and the students gained the practical experience of patent drafting, a complex skill that requires significant practice. The opportunity for the innovator-clients to engage and work with clinic staff underscores the potential value of the clinical model for providing tailored legal advice as well as IP legal information. Further, the innovator-clients' understanding of the available IP legal mechanisms increases by seeing those legal mechanisms applied to the facts of a particular case.

Without the clinic's intervention, there was a real possibility that clients would have filed their initial one- or two-page description as their application — or not filed at all. Although the clinic did not file any applications on behalf of clients with any patent and trademark office, a number of innovators were able to file on their own or through law firms after receiving help from the clinic in drafting their patent applications.

Experiences with the Clinic

Feedback from the parties involved in the clinic — including the innovator-clients, Communitech and law students — was uniformly positive. Communitech expressed its interest in having the clinic as a full-time, permanent program.

An informal survey, conducted by the clinic supervisor, gathered the following impressions and opinions from the innovator-clients on the activities of the clinic:

- issues were adequately addressed in the initial interview;
- clinic students and supervisor had the legal expertise to address the IP issues;
- innovators were comfortable having the issues dealt with by law students;
- the clinic promptly addressed the innovators' concerns;
- the clinic delivered on expectations;
- innovators would recommend the clinic to colleagues;
- innovators would engage with the clinic again if the opportunity arose;
- innovators believed the clinic should be a full-time and year-round program;
- innovators would have liked more involvement from local IP professionals; and
- innovators would have liked the clinic to file their patent or trademark application.

According to the innovators' self-reporting, had it not been for the clinic they would have done one or more of the following:

- written an application and filed it on their own;
- delayed their work;
- waited and made no decision on IP strategy;
- hired an IP lawyer;
- been much further behind on their patent status;
- delayed a long time until they had the funds to hire a law firm to prepare the documents; and
- avoided high legal costs by doing a lot of the work on their own and less efficiently, but still have spent a lot of money on legal costs.

Most innovators (78 percent) had not retained a lawyer in the months since dealing with the clinic.

Some of the innovators' comments included:

» "It is very helpful for start-ups, especially [those] with little funding; very useful at our stage of growth; [the clinic] did a great job and hopefully we get the chance to work with them again."

» "Amazing work."

» "The clinic helped me with preparation and filing of two provisional patents in a relatively short span of time. The ideas and testing were done over four years ago and when I approached a few law firms, I quickly realized that I did not have the means to retain them to help with preparation of the patent documents and filing. As such, it was put on the back burner for years. I learned about the law clinic through a friend and jumped at the opportunity and very glad that I did. I am now talking to a few corporations about the patents and hoping to pursue opportunities there. I am certain there are many innovative thinkers that are in the same situation as me and would greatly appreciate having the Law Clinic to support them. I think the Law Clinic is a catalyst for innovations to get to the market. I sincerely hope that either Communitech or CIGI (or combination thereof) can offer the law clinic on a full-time, year-round basis."

» "It was of great value to us. We would like to see it continue."

» "Legal engagements are one of the most ambiguous and costly areas for start-ups."

» "Through our participation in this program we have a much better understanding of patents and the patenting process and are confident that we can protect our product and maintain a sustainable advantage moving forward."

» "Through this exceptional experience we were able to file a provisional patent of our invention, which ultimately gave us freedom to operate. Since then, we have been able to attend multiple trade shows and technology conventions where we openly displayed [our invention]. Consequently, we now have various investment prospects and are back on track to launch in the new year."

» "Your help has been invaluable to our company's IP strategy."

LESSONS LEARNED FROM THE CLINIC

Despite the summer clinic's success, a short-term model has some weaknesses that make it generally less attractive than longer-term alternatives. Due to the requirements of training and starting the clinic from the ground up, it was not until about halfway through the summer term that the clinic began substantive work on client matters. The shorter term also limited the clinic's ability to provide complete service to clients who approached the clinic later in its operational period. This did not affect the quality of the work performed by the clinic, but it did limit the value provided to the innovators. On this basis, establishing a clinic with a longer operational period is preferred, and may be achieved in a variety of ways, including continuing a part-time clinic throughout the year, holding a regular summer clinic every year or establishing a full-time clinic that is operational year-round.

A year-round clinic would increase the clinic's capacity to respond to a greater range of IP legal needs faced by its clients. Some IP law clinic models could take on a broader range of functions, such as updating current provisional applications, application filing, application prosecution, select enforcement, helping with incorporation and longer-term application monitoring and service.[12] This may be most feasible when the clinic operates as part of a law school, as the range of services offered may be broader, considering their mandates are purely educational. Law schools are likely to have the capacity to implement a program of this nature and may have familiarity with the provision of legal services through the clinical model, including insuring against liability.

Participating law students would also benefit greatly from a year-round setup, as it would allow for a more complete IP practice experience to build on as a result of being able to see a file through to its natural end.

One drawback to providing more comprehensive legal services through an IP law clinic may be the perception that the clinic is serving as a no-cost replacement for the full range of services already being offered by local IP professionals. IP law clinics are designed to offer services to new innovators at the early stages of commercialization, innovators who do not have the necessary financial resources to pay for professional legal advice and who would otherwise not seek or receive IP legal counsel. This suggests that ideally the cut-off point between free clinic service and market-price legal service would be determined in such a way as not to leave a gap where early-stage innovators might forego getting IP legal service because of cost considerations. In this sense, the services of IP law clinics and private IP professionals would be complementary, ensuring that all those who are entitled to protect their IP are able to do so. In practice, the cut-off point may be determined by the availability of clinic resources and the capacity of clinic staff. The determination of the scope of clinic services is a matter that would benefit from discussion among government, private funders, the Law Society of Upper Canada, law schools and the IP legal profession.

Considerations for a Sustainable Clinical Model: Balancing Control and Liability

While IP law clinics present an attractive potential solution to the pressing issues faced by new innovators, it is necessary to examine the manner in which such clinics could be structured in a sustainable way, keeping in mind the management of associated risks and concerns.

In finding an appropriate corporate structure, clinic founders/funders often have to make a trade-off between maintaining a desired level of control and assuming liability for the actions of the clinic. This suggests two models representing opposite ends of the spectrum of control and liability. On one end, the founder/funder, concerned with issues of liability, may implement a model that creates some form of legal separation between itself and the clinic, thereby limiting its liability for the actions of the clinic. In this sense, the clinic is "independent" of its founder. On the other end, the founder/funder may be comfortable with carrying the risk of liability (such as those institutions with existing frameworks for dealing with these issues, specifically law schools or law firms) and instead is more concerned with having greater control over the activities and members of the clinic. In such a situation, the clinic is not legally separate, but a functioning part of the founding/funding institution.

An "independent" clinic is a separate legal entity comprised only of the clinic supervisor and participating students, with its separate status limiting liability of its founder. The separate clinic entity may take any permissible form that ensures the functional and operational independence of the clinic, such as a not-for-profit organization or a sole proprietorship (wherein the sole proprietor is the clinic director). This form of structuring is attractive because of its ability, when done properly, to insulate the founder/funder from vicarious liability for actions taken by the clinic.

Taking steps to establish a clinic as a separate legal entity would require effort to design the structure to create the

12 For example, the Michigan Law Entrepreneurship Clinic at the University of Michigan offers transactional and counselling legal services in the following areas: selecting and forming a legal entity and structuring ownership and capital; counselling concerning IP (e.g., copyright, trademark, patent and trade secret); drafting and negotiating contracts; advising on real estate matters; advising on employment law issues; and assisting on corporate fundraising and finance issues. See www.law.umich.edu/clinical/entrepreneurshipclinic/about/Pages/FAQs-About-the-Clinic.aspx.

desired independence, and to arrange a funding agreement with appropriate terms. Such an agreement could provide some control over dedicated funds through setting out various requirements and expectations, including details on administration of the clinic (for example, regarding number of students and other operational expectations and deliverables). The funding agreement could also resolve other potentially problematic issues, for example, restricting the use of confidential information to within the clinic and clarifying issues of liability and conflicts of interest.

A "dependent" model may be engaged by founders/funding sources that would like to maintain an increased level of control over the operation of the clinic, and are comfortable with liability risk. In essence, the clinic (and its operations) would exist as part of the founding organization. This type of model has its benefits, including the retention of greater control over the clinic's operation, while being capable of changing direction efficiently where necessary for the clinic's effective operation. This model also allows operational resources, such as IT systems and human resources, to be beneficially leveraged from the organization, reducing overall costs in the process.

Specific Liability Concerns

Any organization that operates a clinic (that is, adopts a dependent model) must be comfortable with the risk of liability that is associated with the provision of legal services through clinic activity. In a year-round clinic model using articling students, the clinic supervisor would need to be qualified to act as an articling principal to the articling students. It is important to note that, in instances where an articling principal is in an employment relationship with the founding organization and any articling students are under articles of clerkship with an employee of the founder (that is, the principal), that organization may be exposed to liability for practising law.

A dependent-type model would also require conflict of interest assessments between any clinic client and the main organization that operates the clinic. Managing these issues is feasible for IP law firms, which are already in the business of operating a multi-client law practice and equipped for the risks associated with providing IP legal services. Nevertheless, other organizations (such as law schools) can mitigate the risk through measures such as obtaining professional liability insurance and waivers of liability.

Professional liability insurance can insulate against risk; however, this can be expensive, especially for point-in-time coverage that may need to continue beyond a time-limited clinic. If a funder wants to operate a clinic for a limited period and continue to be insured for the acts carried out during the clinic, it may have to continue insurance coverage beyond the termination of the clinic.

Risk can also be curtailed by limiting the scope of services offered by the clinic, and by using a waiver in the clinic-innovator retainer agreement to limit the scope of work done for an individual client. This limited scope may be a reasonable and acceptable compromise for the innovator, as the work is provided pro bono and completed mostly by students. In other words, the clinic could present innovators with the option of accepting a more limited retainer agreement (restricting the scope of services) and providing a waiver of liability, in exchange for free legal services.

The liability risks could be curtailed by having a legislative framework established by the province and the Law Society of Upper Canada to define the services that may be provided by such clinics, under what conditions, and how the legal risk will be apportioned.

While the two models (independent vs. dependent) hint at possible structures on opposite ends of the spectrum of control and liability, many situations may not lend themselves to such straightforward approaches. The desired structure in a given situation is likely to be highly contextual, and will certainly depend on a variety of factors, including the risk tolerance of the organization, its location and community makeup. Accordingly, while the above models stake out opposite ends of the spectrum, a particular clinic structure could conceivably fall anywhere along that continuum. In the search for a sustainable model, it is important to emphasize that one size may not fit all.

RECOMMENDATIONS AND NEXT STEPS

Observing first-hand the challenges of early-stage innovators, and the positive effects that accessible legal services can provide to them, it is apparent that policy changes are necessary. Innovators need the proper tools to meet the IP commercialization dilemma head-on, allowing them to develop and commercialize their IP in a manner that enables them to compete and succeed globally. A useful starting point is to recognize IP law clinics as an effective instrument for fulfilling the needs of early-stage innovators for IP legal services when they are most needed.

Federal and provincial governments have a significant interest in the commercialization capacity of new innovators, given the potential societal and economic implications. Indeed, some provincial governments have recognized the stresses IP costs place on new innovators, and have created systems to subsidize an organization's first patent (Gouvernement du Québec 2013, 48). While this type of funding may be helpful to the innovator, the learning benefits for law students are lost without delivery of IP knowledge in a law clinic setting. It is recommended that law schools establish international IP law clinics

and form a network to share tools, templates and best practices, and that governments, corporations, community innovation hubs, law practitioners and community leaders support their establishment.

Governments should consider ways to fund and legislate frameworks aimed at facilitating IP law clinic models as a means of addressing growing innovative capacity and the currently unsatisfied needs related to IP expertise and services. A recent Canadian Bar Association report supports such action, recommending that law clinics of all kinds be facilitated by "Easing Restrictions on Law Students in Legal Clinics" (Canadian Bar Association 2014, 62). It goes on to suggest that "[w]here they exist, legal and other constraints should be minimized to broaden the participation of law students in appropriate services in legal educational clinics" (ibid.). In Canada, the Canadian government (through departments with relevant mandates, such as Industry Canada or Foreign Affairs, Trade and Development Canada) or the Canadian Intellectual Property Office should explore initiatives similar to that of the USPTO Law School Clinic Certification Program, as discussed above, to actively promote clinics. The USPTO model should be carefully examined, including how it addresses issues related to risk of liability, and appropriately adapted to the Canadian context.

An alternative approach might be to leverage the existing USPTO program. Canadian law schools could seek qualification under the USPTO program when acting for Canadian innovator-clients, though statutory amendment may be required. This may be a desirable option for Canadian innovators who seek IP protection in the American market. This option has advantages for the United States as well, since it would enable and promote access to its markets by Canadian innovators.

The Law Society of Upper Canada (LSUC) is encouraged to recognize and facilitate ownership of pro bono clinics by non-licensed entities. Currently, the rules of the LSUC are silent when it comes to the structure of IP- and entrepreneurship-based clinics. According to CIGI Senior Fellow Myra Tawfik and CIGI Research Fellow James Hinton, "this lack of clarity about the appropriate structure for the development of new clinics and clinical models is a real obstacle to future clinic growth" (2014). Without any special LSUC protection, IP law clinics are subject to the standard rules regarding legal insurance, which discourage and limit involvement of students. The Province of Ontario should consider amending the law to provide special protection for such law clinics and the LSUC should take measures to allow for ownership of IP law clinics by law schools, innovation hubs or philanthropic organizations.

From an international standpoint, the need to assist new innovators could be addressed on a global scale, through the involvement of certain international governing bodies. One such body is the World Intellectual Property Office (WIPO), which could, for example, help establish a pilot project virtual clinic focusing on the prosecution and administration of Patent Cooperation Treaty (PCT) applications. PCT applications are often the most expensive (approximately $4,000 in filing fees) and involve a unique international prosecution stage. Having a network of supervised law students, able and willing to help international innovators navigate the complexities of the international patenting system, could be beneficial in much the same way as a domestic IP clinic. In an era of rapid globalization, a PCT clinic could help facilitate worldwide IP commercialization and aid technology transfer across borders. This model could also be adapted or designed as a means of assisting particularly vulnerable groups, by geography or by need, or could focus on issues of emerging importance (such as green technologies). Exploring approaches to adapting the IP clinic model to address international or global problems, and investigating the role that WIPO or other international governing institutions can play, are areas ripe for further research.

CONCLUSION

Being able to protect ideas through IP rights is fundamental to commercializing innovations, since it is through the enforcement, management and transfer of those IP rights that innovators are paid for their ideas. Considering the importance of idea commercialization as Canada transitions from a resource economy to an innovation economy, it is apparent that supporting new innovators at the early stages of their commercialization process would have profound economic impacts.

A suitably robust strategy to support new innovators through the provision of early-stage IP legal services should be identified and implemented by various levels of government, in consultation with law schools and other legal experts, and with attention given to structural issues to reduce the risk of liability. Networked law clinics associated with law schools would be a particularly effective model to implement this strategy, with their dual focus on helping new innovators to span their early-stage funding gaps and on developing the pool of IP legal experts who can serve the Canadian innovation community at large.

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The Centre for International Governance Innovation is an independent, non-partisan think tank on international governance. Led by experienced practitioners and distinguished academics, CIGI supports research, forms networks, advances policy debate and generates ideas for multilateral governance improvements. Conducting an active agenda of research, events and publications, CIGI's interdisciplinary work includes collaboration with policy, business and academic communities around the world.

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CIGI was founded in 2001 by Jim Balsillie, then co-CEO of Research In Motion (BlackBerry), and collaborates with and gratefully acknowledges support from a number of strategic partners, in particular the Government of Canada and the Government of Ontario.

Le CIGI a été fondé en 2001 par Jim Balsillie, qui était alors co-chef de la direction de Research In Motion (BlackBerry). Il collabore avec de nombreux partenaires stratégiques et exprime sa reconnaissance du soutien reçu de ceux-ci, notamment de l'appui reçu du gouvernement du Canada et de celui du gouvernement de l'Ontario.

For more information, please visit www.cigionline.org.

CIGI MASTHEAD

67 Erb Street West
Waterloo, Ontario N2L 6C2, Canada
tel +1 519 885 2444 fax +1 519 885 5450
www.cigionline.org