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CIPO as Innovation Catalyst

Gilles Paquet and Jeffrey Roy

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Mandate

The mission of the Canadian Intellectual Property Office is to accelerate Canada’s economic development by fostering the use of intellectual property systems and the exploitation of intellectual property information; encouraging invention, innovation and creativity in Canada; administering the intellectual property systems in Canada; and promoting Canada’s international intellectual property interests.

A challenging question is whether CIPO could do more in contributing to Canada’s knowledge-based economy. This paper assesses the broad context within which CIPO operates, the future directions one may conjecture as being of import for CIPO, and the prospective roles of CIPO in contributing to and nurturing Canada’s knowledge-based economy.
“... la propriété intellectuelle sera-t-elle frappée d’obsolescence face aux réseaux numériques ou peut-elle, à l’inverse, servir de socle au nouveau droit de l’information qu’il va falloir construire pour réguler la future société du savoir?”

Bertrand Warusfel [2001]

Introduction

CIPO’s mission is to help foster Canada’s economic progress by ensuring the highest and best use of intellectual property systems, and of intellectual property information; encouraging invention, innovation and creativity in Canada; administering the intellectual property systems in Canada; and promoting Canada’s international intellectual property interests.

This mission is increasingly difficult in a turbulent economic environment characterized by an ever faster pace of innovative activities, and accelerating technological that have transformed not only the innovation patterns themselves, but also the nature of the coordination and governance processes underpinning them. Public authorities must also transform their role to adapt to these new circumstances.

The central question is whether CIPO should modify its role, add to the array of services it performs, and increase its range of capabilities to contribute as effectively as it might to the progress of Canada’s knowledge-based economy. This paper will try to answer this question.

The challenges facing exclusive rights are becoming ever more critical and vexing in the 21st century as e-business, digital products and new financial services become more important (new context), as ethical and environmental concerns become more encompassing (new concerns), and as consumer and stakeholder interests occupy a larger place in the forum (new stakeholders). For CIPO, such a transformed, dynamic, and fast-changing environment - characterized by heightening competitive pressures to innovate, stronger client responsiveness, and growing strategic discussions by all stakeholders around the role of intellectual property regimes (IPR) - poses fundamental challenges.

In this turbulent environment where guideposts are constantly being modified by evolving circumstances, the new centrality of social adaptive learning, and the new importance of collaborative networks as the necessary tool of accelerated social learning, together with the emergence of a new digital infrastructure that transforms the rules of the game by increasing the capacity to connect with or to disconnect at will, are likely to modify considerably the margins of manoeuvrability of CIPO. CIPO must therefore become a learning organization and adapt as fast as possible to these changing circumstances.

Section 1 explores the underpinnings of the emerging knowledge economy, the role of IP as a strategic determinant of innovation activities and industrial competitiveness, and the new governance challenges associated with these circumstances. Section 2 focuses on the IPR as a learning system in this dynamic setting and examines how it requires ongoing transformation to fulfil its critical role. Section 3 reviews very quickly how different countries have met these challenges. Section 4 puts forth a set of strategic options for the Canadian agency.
1. Governance and the IPR in a learning economy

In a knowledge-based/learning economy (KBLE), wealth creation is rooted in the capacity to mobilize and to make the highest and best use of collective intelligence in the production and dissemination of knowledge: learning is harnessing the collective intelligence of the community of practice or team as a source of continuous improvement. This in turn commands new modes of production of knowledge and new modes of collegiality, alliances, and sharing of knowledge, a degree of cooperation to take advantage of positive externalities, economies of scale and scope, and strong cumulative experience-learning processes.

The knowledge-based/learning economy modifies dramatically the rules of the game vis-à-vis what prevailed in the industrial age. One may identify three important ways in which the tonus of the new economy is affected: (1) the performance criteria are transformed, (2) the spatial coordinates are modified, and (3) the adoption/adaptation dynamics are dramatically altered. Each of these features carries impacts for intellectual property and how IP is created and disseminated within a particular jurisdiction.

(1) The drift toward a knowledge-based/learning economy has also transformed the performance metrics. In a resource-based economy, competitive advantage is derived from national endowments, and in an industrial economy, it is derived from productivity and efficiency. In the KBLE, these factors retain some importance, but competitive advantage must be earned much more fundamentally through creativity, capacity to transform and learning. Learning and innovation are at the heart of economic success.

For the individual entrepreneur, the IPR sets the rules of the game that provides the necessary incentive and reward mix (when it works well) to creation and invention activities. The same may be said about corporations - where innovative activity is a key driver of corporate performance. Patent portfolios are a key source of market credibility for emerging companies - and key source of revenues for larger ones who are increasingly pursuing IP infringement as a source of revenue.

This entails a change in the metrics to be used. Since the creative commons is the source of competitive advantage, one must take into account the health of the creative commons in allocating property rights and privileges. Impact studies to ascertain whether some action is likely to aid or hinder innovation must be given some prominence in defining the scope and ambit of regulation (Lessig 2001:255).

(2) For governments, there has always been pressure to be responsive to industrial clients and their changing needs, but these responses pertained largely to domestic issues. But as globalization prevails, new roles are emerging for national governments. The emergence of a transnational environment which seeks to expand rules based governance regimes through global institutions such as the WTO is forcing national governments to work at developing a fair understanding of how differences across the still-dominant national systems may impact productivity, competitiveness, and innovation.

In a small, open, and trade-dependent nation such as Canada, private companies must feel confident that their domestic setting provides an adequate base from which to seek and penetrate foreign market. The new transnational setting poses challenges to IP rules that focus largely on the national context. Part of the challenge is extra-mural compliance to national rules, but an equally important part, perhaps more so, is competitive intelligence - the need to understand what other countries are doing and why they are pursuing particular paths in order to determine what adjustments must be made to Canadian rules to ensure that Canadian enterprises (private, public and civic) are able to compete effectively.
While global rules have been slow in crystallizing, regional and continental rules have emerged. Given Canada’s trade concentration in North America, NAFTA and NAFTA-based governance rules (with or without the ominous shadow of the FTAA) are likely to bring immense pressure for continental harmonization, or at the very least better coordination across countries on a widening range of policy issues regulatory processes.

Nonetheless, these new cognitive realities are not confined to individuals or corporations. Innovation is increasingly nurtured through synergistic flows of knowledge that encompass networks of private firms, public institutions and civic intermediaries. Moreover, these systems of innovation are increasingly localized in nature, meaning that while there may be national parameters to keep in mind, the main drivers may tend to be much more localized. These new local systems of innovation obviously create new challenges and new opportunities for IPR that are nation-based but that increasingly recognize the erosion of national boundaries.

(3) It is insufficient to deal only with creativity and invention. One must strike a balance between rewarding invention and fostering dissemination. This balance is all the more important in the context of the KBLE since value-added may be less than optimal if new capabilities are prevented from being widely used, or if knowledge about new capabilities is not widely shared. There are often disagreements across cultures and across industries as to the precise nature of this balance.

The choice of national rules in any particular country will have an important impact on this balance. An undue bias on rewarding invention and protecting the interests of those inventors may translate into a very poor use of these innovations (in a shared and systemic fashion) by other parties. Similarly, an undue bias on dissemination will reduce incentives for parties to invest in research and more substantial innovations - for fear that insufficient protection may not allow for a sufficient payback.

In a reasonably static socio-economic environment, such a balance is easily arrived at through rule setting, compliance and enforcement, and a shared understanding of these rules and procedures across a limited range of key stakeholders. In a more turbulent setting, such as the KBLE, this balance is more fragile and in a constant state of flux - its definition requires learning and the challenge is primarily one of governance to enable such learning to occur.

The centrality of learning drives a need for an expanded usage of partnership-based governance. These new partnerships call for a subtle governance process in dealing with the production, protection and dissemination of new knowledge. The result of this shifting governance context is that coordination within the IPR is an increasingly complex and consequential challenge.

Governance connotes processes of effective coordination and decision-making in an environment where information, power and resources are widely disseminated. In the KBLE, the governance of the IPR underpins the performance of the socio-economy as a whole, as well as the performance of its individual organizations. This performance link is ascribable to the centrality of knowledge and learning, and the resulting complexity of coordination due to the relational dynamics of governance for the learning and innovation systems evolving within an IPR.

For an agency such as CIPO, the new governance challenges are tied to the need to find ways to cope effectively with four prevalent and inter-linked sets of forces - all of which are likely to reshape the governance of an IPR. They are globalization, commercialization, diffraction, and e-linkage.
Globalization - CIPO must effectively align its own procedures and processes with the international contours developed by a global rules-based regime. Moreover, CIPO can provide critical services to Canadian clients (particularly smaller companies) to increase their readiness for global competition.

Commercialization - Those seeking IP protection via CIPO do so in an increasingly competitive environment, and the process costs (i.e. search, maintenance, enforcement etc.) can play an important role. Moreover, the information accumulated by CIPO may be an important source of value for other clients in the economy, seeking to make choices about their own potential paths to invention or simply incremental innovation and improvement.

Diffraction - To improve its own learning capacities and service-delivery abilities, CIPO must continuously consult with a variety of stakeholders, including direct and indirect clients, as well as intermediaries. This process challenge is crucial to the systemic effectiveness of the IPR.

e-linkage - The rise of e-governance is driving new opportunities for both online service delivery and stakeholder consultation, and it is beginning to raise new challenges and debates about the nature of IP protection in the KBLE1.

The specific impacts of these forces on CIPO are addressed in sections three and four below; yet, what is clear is that a new and increasingly strategic role is required in this governance setting, more focussed in being a catalyst for knowledge, innovation and collective action. The specifics of such a transition require a broader understanding of learning governance, and how the intellectual property regime functions as a learning system.

1 A recent example of this latter challenge is the decision of The UK Patent Office to study the feasibility of patent protection for software programs and internet-based trading methods. Following a public and stakeholder consultations process, the study concluded: i) that there should be no significant change to the patentability of software; ii) the law is not clear enough, and urgent European action is required to clarify many points; and iii) business methods should remain unpatentable.
2. The IPR as a learning system

In the new KBLE context, learning is a critical element of good governance. This entails a triple challenge: first, to understand the learning dynamism in the new cognitive division of labour it wishes to interfere with; second, to master ever better the ways to facilitate knowledge production and dissemination in this system; third, to improve CIPO’s to learn faster about how to deal with the first two challenges. Therefore, it is crucial for an agency whose mission is to enhance the performance of systems of production and dissemination of new knowledge to build on a good understanding of the learning system it is purported to be helping.

a. Knowledge management as the basis

Knowledge management (KM) is fundamentally about how an organization and/or a more encompassing governance system (such as a region or country) recognizes, captures, processes, and deploys both information and intuition, and makes the highest and best use of it to produce and disseminate new knowledge.

Many proponents of KM distinguish between “information” on the one hand, and “knowledge” on the other. The former term refers to all sources of data, useful and relevant or not, whereas the latter term denotes something that represents or possesses a potential source of value. In other words, information can be about noise, particularly in a digital world where its availability is growing in exponential terms while knowledge is a subset of information that captures something more important because it is value-adding.

KM is the capacity to sift through information, decide what is relevant, and transform selected information into knowledge. Knowledge is then deployed to add value to the organization - perhaps through creating new efficiencies, generating new innovations, or adding to organizational learning.

Intuition is also an important part of knowledge management - adding a critical and complex dimension to the KM equation. Intuition is sometimes referred to as “tacit knowledge” because it is non-codified: this means that it is accepted and used, often unwittingly, even if it is not and cannot be recorded in an explicit manner.

A central challenge is to determine how such tacit knowledge can be made explicit, and can be more effectively tapped and shared. An important component of the emerging role for a public authority such as CIPO is to manage knowledge flows across the economy - seeking positive learning externalities for potential innovators along with adequate protection for the inventor.

This underlines the triple-looped social learning of CIPO: the genius of the patent system is (1) to ensure in a decentralized way that an ever greater amount of new information and intuition is transformed into explicit transferable knowledge; (2) to ensure that this knowledge is ever more effectively transferred to all organizations capable of value adding with the help of such knowledge; (3) to ensure that CIPO itself as knowledge manager becomes capable of learning faster how to transform and re-invent itself to be able to accomplish both these contrasted tasks.
b. Social learning as the objective

A learning system is an information system that has the capacity to produce new knowledge. The importance of social learning is beginning to permeate discussions around IP strategy and the role of public authorities in particular - both in a direct and relational sense. For instance, the Journal of International Law has recently organized a Symposium on Intellectual Property, and the conceptual framework underpinning these discussions emphasizes the importance of self-enforcement, on the part of private parties, to the sustainability of an IPR.

At the heart of the discussion is the need for not only rules but also shared values. This underlines the dual nature of an intellectual property regime capable of being resilient; first, a basic sociality or ethos underpinning the capacity to build conventions and adherence to norms; and second, a governance system or an incentive reward system capable of ensuring a willingness to partake in the process and to honour one’s commitment.

The fostering of a shared ethos will be a critical determinant to the functioning of an IPR and its contribution to innovation and prosperity - and it will underpin the definition of acceptable and useful behaviour on the part of an agency like CIPO. To put this argument another way, public authorities must view their services and strategies as elements of more encompassing system - within which interdependencies and relational governance drive their role.

Since one cannot presume that the sociality/ethos is very deep when the different constituencies have irreconcilable interests (i.e. since one has to presume that the ties are weak) the burden on the governance regime is heavy. It must succeed not only in balancing these interests (against one another and against those of other generations) but also in providing the right incentive reward system ex ante capable of generating the requisite self-enforcement of the IP rules.

This will require extensive dialogue with all the stakeholders in order to ascertain what mechanisms might be missing to ensure the requisite compliance.

In this connection, it is useful to distinguish between organizational learning and collective learning. Organizational learning examines the internal adaptive capacities of private, public or civic entity to manage different forms of knowledge (i.e., tacit versus codified) and transform them into innovative strategies. In an environment of market uncertainty and technological change, adaptive capacities allow organizations to reach out to continually update the organization’s knowledge base and to integrate that new knowledge to strengthen its internal performance.

Building on the work of Camagni [1991] and others, and the dynamics of an innovation milieu, Lawson and Lorenz suggest that collective learning is the product of linkages between tacit knowledge flows and the region's innovative capacity. In other words, production and innovation systems are interdependent elements of a form of learning that rests almost exclusively on mechanisms for knowledge management [1999].

This underlines the two fronts on which the IPR must build the required mechanisms to effect the most effective social learning.
c. CIPO as animateur

In such an environment, an IP office such as CIPO must reframe its role as one of *animateur* within an fluid environment of uncertainty and change: what may be as important as which services are offered is the way in which such services are offered and the degree of learning that flows across stakeholders in a shared governance setting as a result of these services.

In a sense, the greater turbulence in the environment has transformed dramatically the role of CIPO. Instead of being a simple gatekeeper or a guardian of static privileges or entitilements, CIPO, in order to play its role properly, has to become a player in a game without a master. It has to intervene strategically in full awareness that its activities will trigger adjustments by stakeholders both in Canada and elsewhere.

Moreover, CIPO’s role is not simply to act as an enforcer of rules that are more and more fluid and volatile, but as a pro-active agent trying to intervene on behalf of national actors in a global game without absolute set rules, but also equally active in ensuring the maximum emergence of explicit patentable knowledge from the national cognitive base, and the best protection of it.

Ryan [1999] provide a useful and effective discussion of the new context of an IPR, which is one of overlapping and interdependent institutional layers that shape innovation, competition, productivity and development. Ryan points out that “know-how and learning capabilities tend to become institutionalized as sector-specific knowledge, organizing principles, and governance structures, and these patterns of sectoral competitiveness tend to establish their own path-dependent trajectories [ibid].

Thus, a critical aspect of public action as a source of value creation (or positive externalities in the language of economists) is not only to provide a stable, transparent and responsive IP regime for those seeking protection, but also the ways in which it helps tacit knowledge to emerge explicitly, it provides ways to optimize the utilization and dissemination of the knowledge gathered from these processes, and it fosters sharing of this knowledge.

In other words, there is a critical knowledge management function emerging for public authorities that has yet to be fully exploited.

d. The e-governance world as an daunting challenge

The new digital environment built around the Internet is both a disturbing element in so far as it shakes formidably the foundations of the present IPR, and yet it is also an enabling force to the extent that it might foster a more effective knowledge management strategy.

As digital property and “informational goods” become more prevalent, the old IPR regime based on the protection against the reproduction of the intellectual property would appear quite deficient. It is not only a matter of the cost of copying being reduced from quasi-zero to zero. The very quality of the reproductions has improved in such a way in a digital world that the differences between the original and the copy have been trivialized. Moreover, the “copying” being de-territorialized, it renders the traditionally territory-based IPR immensely less effective.

To what extent can a system designed to protect against the unauthorized material reproduction of a virtual object be extended to a world in which there is no necessary “material reproduction”? What is required is the development of a law of informational goods to enrich the present legal system pertaining to material objects, and to the challenges of de-territorialization.
The IPR as a learning system calls for effective coordination across stakeholders to raise awareness about what is available, how it can be accessed and at what cost, and the expected benefits to stakeholders such as individual entrepreneurs who might otherwise be unaware of the opportunities. This entails nothing less than a redefinition of the “moral contracts” among producers, distributors and users in order to avoid appropriation systems that might turn out to be socially undesirable.

The shift from a language of rights to the language of moral contracts is not innocent. It underlines the need for CIPO to shift its focus from the simple implementation of a regime of rules defined elsewhere to the active negotiation and re-negotiation of the very nature of the regime of relations among stakeholders. This transforms considerably the role of CIPO: from the role or registrar to the role of animateur.

But there is no reason to believe that such negotiated settlement will necessarily materialize. Different other solutions are equally plausible that would side swipe the IPR system. One such set of circumstances might be the case if technical encryption means were substituted for IPR and were providing a much more exclusive right structure for the producers than what is available at present. Another possibility is the emergence of new economic and legal models based on access and personal relations and marginalizing dramatically the role of intellectual property rights, which might translate into pay-per-view systems that would again marginalize the IPR but would constitute also a form of robust exploitation that copyright maximalists have been dreaming about for quite some time (Warusfel 2001:106-108).

For public authorities, the e-governance challenge is to strike a negotiated balance between the rights of producers, distributors and users that will neither unduly discourage inventive activity nor unduly limit the diffusion of useful information. The digital world is forcing CIPO to modify completely then relative importance of its two roles – as designer of the IP regime and as an implementer of these rules. In the more static and less ethereal world of industrial intellectual property, the second role was paramount; in the more ethereal digital world, the former role becomes the central one since the balancing act between the stakeholders need to be constantly and continually revisited as technology finds ways to unbalance them.

This shift in the focal role of CIPO is largely ascribable to the fact that, in the digital world, the ground is in motion: one cannot count on the same material and territorial benchmarks that were in good currency in the old economy. This will require a refurbished definition of the role of CIPO and new joint communication-cum-consultation strategies: for communication, as a one way process of providing of information or knowledge to educate, raise awareness and potentially shape behaviour, if it is to be effective, can only emerge from meaningful and legitimate consultations - with all relevant stakeholders.

The growing trend of IP offices to pursue aggressive consultation exercises is indicative of movement in this direction. The United States, Australia, the United Kingdom and Denmark are among those engaged in efforts to spark and expand dialogues in these central directions.
3. A comparative review

What is crucial to CIPO’s evolving and changing role should not mainly be dictated by a sense of what other countries are doing now, but rather by the sense of what a national IP office should position itself to do in a e-governance world where multi-level processes and jurisdictions are bound to prevail.

a. Toward an asymmetric multi-level regime

Although an IP regime has traditionally been defined as part of a national strategy, this reality is changing. A national agency is increasingly forced to consider its performance as a question of alignment with both transnational and sub-national realities. The new governance regimes include global, regional, national, and local, policy regimes.

From a global point of view, although there is no such thing as a world patent, intellectual property protection is certainly moving in the direction of an increasing amount of international coordination. In particular, the insertion of IP into the framework of the WTO is likely to continue to lend strength to a global legal regime, even if a single global market remains an elusive goal for the foreseeable future. Copyright is almost there; industrial property rights are bound to follow.

Yet, notwithstanding the absence of a global patent, a widening scope for international protection is being facilitated by the Patent Cooperation Treaty, an agreement administered by the World Intellectual Property Organization (WIPO). Statistics provided by WIPO show a steady rise in the number of international patent applications - seeking protection coverage across a range of countries. The potential benefits of this wider scope are such that they would seem to more than compensate for the costs of doing so (increased transaction fees and increased processing times as the application must pass through each country requested on the application). It has been argued that each additional country in which a firm files patent protection generates an increase in the expected value of the total foreign patent rights of 44% [Putnam 1996].

The degree of cooperation across the patent offices of The United States, Japan and The European Union (accounting for a combined proportion of over eighty per cent of the world’s patent activity) represents the early sign of an emerging global IP regime - as the rules and approaches agreed to by these regional parties are bound to carry considerable weight within global institutions.

The major impact of this type of global cooperation is to downplay the importance of agencies operating within relatively small-sized socio-economies such as Canada. Large companies who may well be operating in Canada, irrespective of their nationality, are unlikely to file for IP protection in Canada when they are already protected by regional leading agencies. Larger companies are likely to be targeting the American market, and will be inclined to seek protection there or via a country providing international searching authority capacities so as to ensure that its protection will be vouched for by smaller countries almost as a matter of course. But since Canada does not presently provide such a port of entry, it is unlikely to be used as such.

As rules tend to converge, it is less likely that formal differences in IP rules will contribute much to overall economic performance for a country such as Canada unless international concerns choose to enter the newly defined consensus through a Canadian portal. And they would not choose to do so unless CIPO could provide both a faster and more efficient service, and a greater capacity to ensure transnational recognition and protection.
Consequently, the most challenging task for Canada is the highest and best use of the interplay between the international and regional frameworks, and the better capacity for Canada to position itself in a North American (and perhaps eventually an all-American) setting. This points to the need for CIPO to adopt an explicit transnational pro-active strategy if it is to serve the Canadian interests well.

b. Regional sets of rules

Canadian companies are first and foremost nested in the North American market. As synergies, alliances and cross-ownership of the most innovative sectors continue to become more important, it is likely that Canadian companies will think primarily about their place in the United States market as they make their IP decisions. Corporate choices are likely to be in this direction if the venture capital market is predominantly skewed toward American companies. Then, an American patent portfolio would be favoured as a matter of course.

The current European experience is enlightening. Differences between the political systems across the two continents suggest that, in the short to medium term, the lack of political integration means that a separate Canadian system will continue to serve the interests of a national market much more than the sort of parallel experience in Europe might suggest.

In Europe, there is an important differentiation occurring between larger companies (increasingly European or international in both identity and operations) and smaller companies. This trend is particularly consequential in the area of IPR: the establishment of a single European patent office creates an attractive scenario for companies with the possibility of a single patent extending across some 19 countries (EU plus signatory countries in various reciprocal agreements).

In North America, this development poses a particular challenge for CIPO. Can it become a port of entry into North American intellectual property protection that might carry the same weight that the US patent office carries? What transformation in the role of CIPO might provide it with either some source of competitive advantage for enterprises? How could it provide the sort of services that the US office might not provide? Is this port-of-entry potential leading to CIPO specializing in the service of certain types of firms both Canadian and foreign that might require such services?

The real challenge is to determine what might be done efficiently though a small-country portal that could not be accomplished by the dominant portal. There are dual directions that must be viewed as complementary in scope: first, the challenge to become a port-of-entry of choice in North America, and secondly, the challenge of helping Canadian firms.

c. The role for the IPR of small and mid-sized countries

The question raised about CIPO within North America faces many small socio-economies in Europe and Asia. Is there a meaningful role left for national IPRs in small satellite countries? Denmark is a case in point and its experience may harbour some lessons for Canada. Australia faces the same sort of challenge in the Asia-Pacific region.

(1) The Danish IP office, in studying this environment and its impacts, feels a threat to its existence. The Danish position is not to reject European integration, which is viewed as a positive force in achieving efficiency and productivity gains for key European industries (consistent with the notion of a single market). But, for smaller companies, the costs of the European process are often viewed as prohibitive in the early stages of growth, and so national protection remains an important vehicle.
The Danish analysis is particularly relevant for Canada, for it has been established that the Danish innovation system makes poor use of a potentially strategic role on the part of the IP office. The Danish strategy offers a vision of the “IPR authority of the future” which is essentially characterized as a transformation of its traditional passive, ex post processing role, into one that is more pro-active, ex ante and dynamic, more focussed on being a catalyst for “cultural” improvements in innovation and corporate performance across the economy.

In the Danish context, this shift in role is central to the growing focus on new economic clusters, such as medical research and biotechnology. The innovation intensity of such industries is a critical source of growth in the Oresund region (linking together Copenhagen in Denmark and Malmo in Sweden), and the IPR represents a crucial variable in its development - particularly for the emerging small-to-medium enterprise (SME) base that represents the source of future growth.

To help guide their efforts and show the gaps in current operations, the Danish office commissioned an in-depth study of the most innovative and IP-intensive companies in the Danish company, examining “the management and evaluation of patents and trademarks”. The findings of the study are particularly important for the SME context - as they revealed a poor level of awareness and execution with respect to the ongoing maintenance and valuation of IP.

While smaller companies recognized the need for IP protection, and its potential value as asset recognition to outside parties such as market investors and potential research partners, the overall thrust of the IP portfolio is to simply seek protection, such as patents, with little strategic thinking about their role and value.

This lack of awareness of the more strategic role of IP may reduce the maximum potential of innovation activity for emerging companies. From this concern arises the strategic opportunity being pursued aggressively by the Danish office to essentially evolve into a knowledge broker for Danish companies. Such a role involves more intensive training and education programs - particularly for smaller companies, greater links to post-secondary institutions and research facilities with interests in IP issues, and an aggressive new strategy exploring the ways in which SMEs can most benefit from the information and knowledge generated by the Danish IP process.

The Danish perspective of responding more effectively to local concerns and opportunities, while repositioning itself within a broader European system (and a European patent office) presents an interesting and relevant comparison for Canada in the North American context. While the comparison cannot be exaggerated (as there is no North American patent office, for example, and large companies operating in Canada still rely on the Canadian office and system of IP protection), the growing focus on innovation in Canada and SME development creates an opportunity for an IP office to play a more strategic role in these emerging directions.

(2) Within the Asia-Pacific region, a similar dynamic is apparent in the Australian context where the IP office (IP Australia) has aggressive and clearly laid out plans to pursue these parallel roads: a global orientation, through their international search authority; a regional strategy, designed to foster a stronger IPR across Asia; and a more domestic and localized emphasis on smaller companies through the creation of a new strategy known as The Innovation Patent.

The Innovation Patent (introduced in May 2001) replaces the previously used petty patent system – a system essentially offering protection for a shorter period of time through easier qualifying and maintenance requirements. This new vehicle is designed to protect inventions that are not sufficiently inventive to meet the inventive threshold required for standard patents. The main audience is smaller
companies, seeking a relatively quick and cheap form of protection (its protection term is 8 years rather than the standard 20).

The key difference between the previous system of petty patents and the new innovation patent lies in the respective threshold of invention: whereas a petty patent required an inventive step (similar to a standard patent), the innovation patent requires only an innovative step. Moreover, whereas an examination was automatic in the case of a petty patent, it is entirely at the request of the applicant in the case of an innovation patent - and not obligatory (nonetheless, subsequent enforcement does require having passed through an examination).

While the duration of a petty patent was 6 years (as opposed to 20 for a standard patent), the innovation patent carries a maximum life of 8 years. Another critical difference with the new innovation patent lies in the relative ease of issuance. Essentially, with no examination required, only a basic check of formalities is required to gain approval. The process is so user-friendly that an SME located in a remote part of Australia can simply register and purchase (with a personal credit card) a petty patent online. The company is then in possession of a (innovation) patent.

One important aspect of this new service/product is the fact that it is the direct result of stakeholder consultation. Part and parcel of their Customer Charter and their focus on performance orientation reflects the view put forward earlier of the IPR as a learning system.

On this point, learning capacities across most countries are becoming an increasingly apparent and visible component of the IPR - and the specific role of an IP office. There is growing recognition that the fostering of such capacities will represent an important source of competitive advantage for companies, industries and nations. While there has always been close working relationships between the main players in the IP process such as large companies, patent experts and government staff, what is changing is the recognition of a broader dialogue encompassing new stakeholders that may not have otherwise been engaged in efforts to view IP as a strategic dimension of either corporate or collective performance.

This translates again into a significant reframing of the role of IP offices. Instead of being ex post registry offices charged with passive protection assurance, the IP office becomes an important partner in the innovation system. It is ex ante, dynamic and pro-active and its role is to educate the stakeholders, to help in transforming tacit knowledge into patentable knowledge, to improve the capacity to use the IP regime, to provide new services likely to be important to provide competitive advantage for local firms (especially SMEs), and to act as an adjuvant to the learning economy.

Such priority on learning is the only way to keep the eyes of IP agencies on their original mandate – doing some social good – and to force them to modify the IPR in line with the objective of maintaining as much free access as possible to ideas and intellectual objects while protecting the creators from commercial piracy of their output and maximizing the tonus of creativity.
4. Strategic Options for CIPO

If CIPO is to play fully its role, it cannot do so without putting in place a series of transformations to enable it to be effective on multiple fronts. Accordingly, the agency must undertake to redefine sharply its theory of what business it is in. From intellectual property registrar, CIPO has to become a partner in knowledge management. This entails a modification of its technologies and structure, if it is to be effective in intervening to improve knowledge use.

In terms of options for CIPO in this dynamic environment, our premise is that work is necessary on three planes.

a. Reframing: from intellectual property protection to intellectual resources management

A critical component of CIPO’s efforts to ensure its relevance and improve its importance is the need to redefine its role in a fundamental way as a partner in knowledge management, and to create a basis for social learning between itself and its various stakeholders. An online presence and new online capacities are already moving many national IP authorities in this direction. In terms of online capacities, CIPO presents itself as an extremely effective communicator in providing information about the IP process and the traditional services it delivers, but more can be done to harness the input and feedback of stakeholders.

Currently, most countries would appear to be at an early stage in developing broader learning forums. For example, if one visits CIPO online and inquires about consultation and discussion, the posted message that “there are no public consultations at this time” may send the wrong signal. While such a message is undoubtedly not indicative of the networks of engagement that exist between CIPO and its existing stakeholders, the questions around online engagement speak to whether there is value in expanded forums of public and stakeholder participation - and if so, how is such value captured.

While online engagement may hold some promise, the real sources of social learning must arise from an agency reaching out to stakeholders and fostering processes of real-time engagement and ongoing conversation. Designing an effective multi-stakeholder platform must be an essential task of defining the way ahead, and such consultation should be institutionalized in the operations of the agency. Aside from the importance of being increasingly responsive to clients (a goal CIPO has already identified and is striving toward improving) such consultation linkages are also key enabling forces for CIPO to fulfill its potential as a knowledge and innovation catalyst for the KBLE.

As the Danish case study makes clear, national IP authorities have not traditionally viewed themselves as partners with a role to shaping business and innovation culture. Such a shift is not likely to be an instantaneous transformation and it thus requires a shared effort.

It may be said that some of the stakeholders – i.e., the large corporations – already have access to all the information and intermediaries they need to ensure a sound management of their knowledge base. This is not the case for small and medium sized firms that continue to under invest in knowledge management because of a lack of awareness and resources.

Therefore, a particular emphasis must be placed on the SME component of the KBLE. As Industry Canada and Statistics Canada have demonstrated, small companies represent the backbone of new economic activity today – and they are destined to shape Canada’s growth and innovation prospects of
Statistics Canada reports, for example, that small companies represent 75 per cent of the biotechnology sector in the country. Yet, it is precisely this client group who may well be the most disconnected from CIPO due to the formality of the IP protection process and its costs. Moreover, these SMEs are those most likely to be the most vulnerable in the face of large corporations equipped with strong IP teams and deep pockets. Such a disconnect leads to the importance of intermediaries (i.e. IP specialists) who play an important role in this process (and are often endorsed by national authorities as necessary actors in this process).

It seems unlikely, given the huge number of patent filings across an increasingly global environment that the need for such intermediaries will diminish. As a result, the process of better engaging entrepreneurs, researchers and small companies should not be perceived as a threat by this particular constituency. In fact, a strengthening environment of more innovation will only increase the need for specialized services and their providers.

What is at play, then, is a new type of role - a knowledge management role which centres less on specific IP services for those actors seeking protection and more on making better use of the tremendous intellectual capital accumulated from such processes. The existence of such information alone does not ensure its utilization – particularly, when the information exists in highly technical and tedious fashions that carry significant transaction costs for those seeking to make use of it.

Similar findings are evident in both Denmark and the United Kingdom. In the latter case, the Quinquennial Review of The Patent Office, released in January of 2001, provided this assessment on the importance of learning and awareness – derived from consultations with individuals inventors and small companies:

*It was suggested that inventors require direction. Whilst they may have an underlying sense of the need to protect their invention they often lack understanding of the different forms of intellectual property rights and of the alternatives...this confirmed the need for awareness training and education...(pg.50).*

b. Restructuring: from passive registration to active intermediation

What forms of knowledge could be of use to individuals and organizations? Will small organizations ever make use of this potential knowledge? What are the barriers to better usage? What is the role for other intermediaries and institutions in the innovation process in making use of such information? Can other levels of government play a role in an effective dissemination strategy?

(1) On the first three questions, our own interviews with entrepreneurs and smaller companies reveal a near-unanimous view that presently, IP protection is a crucial and increasingly important variable in their growth prospects and performance. For most companies and entrepreneurs, the process of seeking and maintaining IP protection is viewed as both complex and costly, and the most likely course of action is to rely on external agents to fulfil this role.

The result of this situation is that in the present context and architecture, smaller companies are unlikely to view CIPO as a source of new knowledge and information: instead, CIPO is a valuable partner, albeit one step removed via an external agent, in ensuring protection for what is being invented and created already.

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Nonetheless, interviews also reveal that in innovation-intensive industries, smaller companies and start-ups understand that information gathered within the IP process is a potential source of value, but they stipulate that in its current form it remains simply information - or data. The distinction here is that IP applications and maintenance reports contain significant amounts of information codified in a highly technical manner - and accessible only to experts or individuals with significant amounts of time available to devote to filtering and processing. In order to be useful, such information - or data - would need to be transformed into a more knowledge-oriented form, meaning quickly accessible and useful in the context of existing research and production processes.

In a country such as Canada, with a certain stigma for under-investing in research and development relative to many other countries, the corresponding emphasis on knowledge sharing is crucial for dissemination. While more effort would be required to study the precise impacts and outcomes, there is every reason to believe that a source of economic stimulus exists within IP information and its transformation into strategic knowledge.

(2) If such a role is to be exploited, the subsequent two questions must also be addressed - what is the role for intermediary institutions, and is there a potential role for other levels of government?

In terms of intermediaries, CIPO should perhaps consider the development of a national network of local and regional agents linked to CIPO either formally or informally. Today, the growing advent of partnership models creates opportunities for doing so, perhaps via universities, public research centres and other private sector associations, or other levels of government.

With respect to universities, these research institutions are increasingly focussed on both technology transfer and commercialization processes. Although many SMEs have been created as spin-offs from universities in key research centres across the country, the set of proactive and reactive responses across the country from post-secondary institutions varies dramatically. There is no coherent innovation strategy applied by all universities, and IP is often a differentiating factor.

Where the need is most acute is in entrepreneurial awareness and support for IP policies and protection options. For example, our own interviews with companies and those parties, such as provincial Centres of Excellence, engaged in research partnerships between education and industry, reveal two points of relevance to this discussion: first, for larger companies, IP is nearly always one of the most contentious issues in creating research partners; secondly, for smaller companies, IP protection is often an after-thought for entrepreneurs and there is rarely sufficient support in place to guide entrepreneurs toward a better understanding of IP (a situation which, de facto, provides an advantage to larger companies with sophisticated organizational provisions).

In terms of research centres and private sector associations, the National Research Council (NRC) and The Canadian Advanced Technology Alliance (CATA) provide two prominent and relevant examples.

The NRC is an interesting example of a federal research facility that has undertaken a concerted effort to federate their operations around regional and sectoral lines. The emphasis has been on decentralizing resource and research decisions and inserting NRC facilities into local and regional systems of innovation – and the key clusters located in these systems.

The relevance of such a model for CIPO lies in the fact that it is extremely unlikely that a single, homogeneous strategy will apply across the country for any aspect of IP service delivery. In fact, CIPO recognizes the importance of national outreach and responsiveness:
The Office has a network of partners, or intermediaries, across Canada. These innovation centres, provincial research organizations, industrial associations, universities, and other provincial and federal agencies can help you learn more about intellectual property. They assist researchers and small and medium-sized businesses by arranging lectures and information sessions (www.cipo.gc.ca).

These linkages may well have played a passive role - providing information and seeking feedback of a general nature. Yet, over time there is every reason to believe that these networks will, in fact, underpin CIPO’s capacity to itself innovate in order to spur greater innovation at local and regional levels.

In Australia, the national IP office has satellite offices in each state, and is aggressively expanding the service capacities of these centres to better respond to regional realities (coupled with growing online capacities there, such as the possibility of purchasing an innovation patent online with a credit card, the intended effect is to foster new synergies with potential users and clients - of which SMEs are identified as the priority segment not well served by traditional administrative channels).

Similarly, CATA has not taken an active role in discussions of the relevance of Canadian IP practises for smaller companies. As the voice for emerging companies in the knowledge-based economy, a partnership of sorts between CIPO and this private sector association could spark a greater dialogue on what sorts of mechanisms and measures are most required.

In the future, CIPO’s transformation will continue to be a fundamental shift from largely a passive role of preserving rights and responding to requests to a much more enabling role where the agency will be a catalyst for knowledge and innovation management and learning. New organizational capacities and individual competencies will be required for this role, as the agency seeks to balance traditional functions (which will remain) with emerging opportunities.

The commonality across both the capacities and competencies is an emphasis on new forms of collaborative governance: consultation mechanisms will be expanded and strategies collectively designed. As such, CIPO’s own staffing mix will need to evolve in line with its future directions, and many of the new skill requirements are similar to those facing the public service as a whole - organizational designers, facilitators and negotiators, and those able to best adapt to change and uncertainty will be as important as the technical experts that, nonetheless, shape the core competencies of the agency.

c. Retooling: product differentiation and service delivery

It is not sufficient to transform one organization’s perspective or to develop collaboration with other stakeholders. What is also required is to modify the toolbox of specific techniques and programs in order to ensure that the knowledge management task can be performed. Some key areas stand out for consideration in the short term.

(1) There is clearly a need to broaden the range of options open to firms in dealing with intellectual property. The notion of a petty patent - a lower-tier form of patent protection - does not currently exist in the Canadian context, and its feasibility should be carefully considered. It may also be that the form of any such product may vary; for example at a time when the concept is disappearing from the Australian context, a Canadian launching may not make a good deal of sense. Yet, the Australian view is that there is clearly a need to tailor something new and specific to the SME segment (innovation patent) and the same argument may hold considerable merit in Canada as well.
Companies, of all sizes, will increasingly seek various forms of recognition, and it may well be that for the smallest, most early stage start-ups, quick and partial forms of protection offer a useful alternative to standard patent measures. The Australian response has been to replace the petty patent with a new product, entitled the innovation patent. Based on research undertaken by the Australian government, although the previous system of petty patents failed to achieve their objectives, this type of product is viewed as necessary:

Through a wide consultation process the Advisory Council on Industrial Property (ACIP) identified a demand for industrial property rights for those incremental or lower level innovations that would not be sufficiently inventive to qualify for standard patent protection...ACIP concluded that Australia would benefit from adopting a second tier patent system to provide cheap, fast, limited rights for lower level or incremental inventions, particularly as Australian SME would be the main users of this system.

The defined rationale for moving in this direction is the strategic attention being devoted to the SME community – and the belief that a niche product granting quicker recognition in exchange for more limited protection would serve smaller companies well through expanded efforts at innovation:

By providing an exclusive right for lower level inventions, the innovation patent should encourage Australian businesses, particularly SME, to develop their incremental inventions and market them in Australia. Increased use of the system will also increase the amount of technological information available to businesses, as the invention covered by each application is published. Moreover, modifying the petty patent system so that SME find it cheaper and easier to use should not add to the regulatory burden on third parties above what is already imposed by the present patent system...the proposed changes will decrease the compliance burden on the direct users of the system.

From the point of view of companies, the Australian review process provides some limited evidence to suggest that this type of niche product is likely to be of interest to SME (a group who are aware, by and large, of the importance of IP, often in an indirect manner via a professional intermediary). The Australian experience over the past few years shows a steadily declining level of activity for petty patents – a trend that the innovation patent is meant to reverse.

From the point of view of professional patent agents and other intermediary actors, one might expect a level of interest in new products – since it would generate more business opportunities via increased demand of their specialized services. Yet, the user-friendly aspects of the system, implying a process free of intermediaries might lead to some concerns of dis-intermediation by experts. Such concerns are nonetheless offset by the reality that currently SME are not the primary target market for most specialists and perhaps more importantly, that greater activity by SME would ultimately expand the need for professional services - as emerging companies grow.

From the point of view of the public interest and the economy as a whole, the central question, then, is whether the existence of a petty or innovation-type patent would spur greater IP awareness and knowledge – particularly across the SME community. Our assessment is that there is little existing evidence to demonstrate conclusively such a positive correlation – but what is of central importance is the need to experiment with either new products and services, or new channels of engagement and delivery.

The Australian case will, of course, be an important source of learning. Already, the Australian conclusions about their own lack of success in serving and stimulating the SME community are consistent with our own interviews with emerging companies (for reasons discussed above). They also appear
consistent with the current reflections of CIPO on how to find new ways to better serve SME, particularly in the new challenges of the knowledge economy.

One significant risk of introducing an innovation patent-type product in Canada would be its place and perception in a North American context. With an eye to growth via North American markets a reality in nearly all parts of Canada, would this type of lower-level protection be viewed as an inferior form of protection relative to standard patents –(and international protection of a multi-country variety)?

More consultation and market research is clearly required - but the point that seems to resonate through most mid-sized countries, such as Denmark and Australia in particular, is the need to innovate (in serving SME) to spur more innovation collectively. The existence of such a product in Canada is - itself - unlikely to lead entrepreneurs to locate elsewhere, and there is some potential rationale in presuming that instead of the more expensive and time-intensive process of applying in the US for a standard patent, a milder form of protection may provide a useful interim step. If such a step is promoted and accepted, it could serve as an important source of recognition for the innovators and companies themselves, and an important source of knowledge exploitation for the Canadian economy as a whole.

(2) Another area of concern is the lack of an international search authority for international patent applications within Canada. It would seem clear that either such a capacity will be required over time, or in its absence of some form of strategic alliance with the United States office might also be explored.

In the EU, the European patent office offers this capacity. In the absence of deepening North American political integration, and therefore of the likely emergence in the short term at least of such joint politico-administrative structures as a joint patent office, this lack of international search capability in Canada could create a handicap for Canadian industry.

In terms of offering the services associated with being an international search authority, it would seem that CIPO has three options in positioning itself within a North American context: first, the status quo; secondly, become an ISA unilaterally; or third, explore some form of strategic alliance with IP authorities in the United States.

If there is an advantage to the first route, it lies in its simplicity and lack of resources, as large Canadian companies today are clearly able to find this service elsewhere. Nonetheless, the drawback of the status quo is the considerable risk that innovation-related knowledge will shift elsewhere, as more and more patent applications - particularly those international requiring search processes - are handled there. The trend toward a growing number of international patent filings, consistent with globalization in general, suggests that such a danger may become more pronounced over time.

There are many reasons why some local ISA might be advantageous for Canadian firms: it would lower the cost of obtaining international patent information; it would especially help the SMEs on this count as it would provide more convenient service; it might help trigger some clustering of firms built on similar capabilities in Canada; it might also facilitate local innovation remaining in Canada and generating exports.

The second route may well be the most expensive and risky in terms of CIPO’s capacity to develop an in-house ISA in a unilateral fashion: the risk lies in the possibility that many large Canadian companies will continue to use American or international search routes, minimizing the target market for such a services. Conversely, the opportunity lies in the growing SME community that may well benefit from such a service capacity closer to home - and it could be an important strategic dimension of promoting Canadian-owned emerging companies in the new economy.
For Canada, the third route may be the most compelling option. To explore the viability of a strategic alliance between CIPO and its US counterpart may be step one in a two-step strategy leading to Canada later becoming a search authority itself.

The logic of such an alliance from the American perspective might be to alleviate the growing workloads flowing into authorities there, as well as the possibility of establishing an alliance for French language processing of IP applications (perhaps not a huge consideration for the United States since most companies undoubtedly seek to apply in English in North America - from the Canadian perspective, however, having such a channel may be an important access point for Francophone companies in Canada seeking access to the North American market). As the United States seeks to operate globally in a triangular alliance with Japan and the European office, such a regional affiliate strategy may offer some appeal.

From the Canadian perspective, the North American alliance can reinforce the capacity of smaller Canadian companies in particular to seek IP protection on both a continental and global scale. Clearly, export flows dictate the predominance of the US market for the growth of Canadian companies, and on a global scale the danger is that an increasingly congested WIPO, weighed down by growing numbers of international applications with search components, will likely extend its processing times - extending the period of uncertainty for Canadian firms.

Although more manageable for larger companies, such waiting could be strategically pivotal to the growth prospects of emerging Canadian companies - particularly start-ups in knowledge-based sectors whose IP portfolio may serve as a significant element of their abilities to raise capital, retain talent and prepare for ongoing growth and expansion.

(3) In terms of emerging opportunities, there is a clear public interest at stake in generating greater awareness generally about IP within Canada, and also in ensuring the existence of a critical mass of IP experts in the domestic market. The former may be most urgent, given the North American penchant for litigation - and the real threat posed by large American companies who literally view IP enforcement as a source of revenue generation. CIPO can play a role in raising the collective intelligence of all stakeholders in the KBLE in terms of how to prepare and protect interests in such an environment.

A separate, albeit related viewpoint is the general degree of confusion that characterizes many small businesses in today’s economy who are quite a different segment than those traditionally defining themselves as “inventors” (as this group often has a good grasp of IP possibilities and why protection should be sought). For many small companies, IP competencies may be weak and yet costs of accessing specialists are often high, and as a result more effective communication and consultation can lead to more informed choices about how to proceed.

The present situation suggests the need for more aggressive training and education programs aimed at all segments of Canadian society. This would entail an educational/epistemic function for CIPO, one that might be developed through partnerships with universities, research laboratories, city-regions, technological associations, etc., to develop a better grasp of knowledge management in general, and of the array of tools available to catalyze the social learning processes. This could be done through public seminars, on-line tools and partnerships, etc.

Clearly, delivering knowledge more effectively, and in more effective forms can be viewed as both a service and a capacity issue. New services may well be required, but they are most likely to be defined when underpinned by a capacity for engagement, learning and adaptation. For this reason, it is not
possible to separate out capacity issues with specific service delivery initiatives - better processes will lead to better outputs.

This section has underlined the central importance of CIPO in changing mindsets and frames of reference in dealing with knowledge management. CIPO’s role, through consultation and dialogue, is not only to enable firms to make better use of knowledge but to act as an agent of change to ensure that intellectual capital is given its appropriate place within the management of enterprises.

Providing new instruments and fostering new alliances may be regarded as intermediate outputs. The real ultimate output is to educate a new generation of leaders in taking seriously intellectual capital.

5. Recommendations

Based on the preceding analysis we can provide a set of recommendations which nonetheless must not be taken as definitive solutions to the complexities of the topics and challenges at hand. Indeed, for each recommendation proposed there are a number of outstanding issues that can only be resolved through ongoing dialogue and reflection – both within CIPO and amongst the various stakeholders in Canada and elsewhere.

**Recommendation 1 – A renewed CIPO vision must be collectively defined by all stakeholders. Central to this vision is an emerging role as an innovation catalyst through partnerships to increase capacities for knowledge management and social learning.**

One step toward better learning capacities between CIPO and its various stakeholders is the establishment of an advisory body. An example includes the UK Standing Advisory Committee on Industrial Property (SACIP), comprising a wide array of organizations that provide impartial advice on all aspects of intellectual property. Similarly, IP Australia also hosts two meetings a year with the Advisory Council on Industrial Property (ACIP). The Council is composed of members from industry, academia and the industrial property profession, and it reports to the Minister for Industry, Science and Resources – providing specific advice on performance.

Other more specific suggestions include:

- An expansion of client surveys and outreach programs specifically aimed at SME’s, to better understand their perspective on innovation and invention and identify their particular needs. The UK Patent Office has performed similar surveys and IP Australia undertook an extensive consultation exercise in order to launch its new innovation patent.

- Routine and regular follow-up with clients after delivering services. This is an effective means of gathering feedback for improvement. The UK patent office performs such consultation regularly.

- Mechanisms for recording formal and informal client complaints. Highlighted areas can then be explicitly addressed and feedback provided to the users (practiced by the UK Patent Office).

- Staff suggestion schemes within CIPO might be further leveraged as means to encourage new insights aimed at fostering a culture of response and a commitment to growth and improve internal business learning (an approach also practiced by the UK Patent Office).
While our own consultations reveal strong and positive ties between CIPO and traditional stakeholders, namely IP specialists, the critical challenge is to broaden the dialogue to include affected parties that may not otherwise give thought to IP-related issues. Such an outreach is hardly a threat to those specialists and agents with existing ties to CIPO based on services provided to clients; an expanded culture of innovation and an expanded set of users of CIPO services can only expand the need for specialized services as well.

**Recommendation II** – To better facilitate both continental and global reach for Canadian innovators (particularly small businesses), CIPO should undertake a detailed study of the costs and benefits of becoming an international search authority.

As reflected by the creation of new relationships between the EPO and various national offices across the European Union, globalization is creating new alliances across various jurisdictional levels. Sweden and Spain already have strategic alliances with the EPO and Denmark has recently commissioned a review of its own capacities to potentially subcontract portions of quality control work from the same organization.

The question for CIPO is what type of role makes the most sense within the North American context, and whether there is potential in becoming an international search authority in such a setting. First, an international search authority capacity, even in the domestic context may well serve the public interest by better engaging a broader range of SMEs in IP readiness (and by extension, international awareness for their innovations and market opportunities).

Yet, as discussed, there may also be significant opportunities through potential alliances with continental IP authorities, specifically in light of growing processing volumes in the United States as the American market represent a key target country of many applicants. The specific parameters of such arrangements, and the rationale and potential cost and benefit flows are beyond the scope of this study, but our assessment is that they merit further reflection and analysis – and careful consideration.

**Recommendation III** – As CIPO operates within a multi-level context, responding to global and regional alignment internationally, and provincial and local differences domestically, an expanded set of partnerships must be central elements of CIPO’s ongoing efforts to improve capacities for both information dissemination and knowledge management.

CIPO must obviously take into account the actions of WIPO. WIPO’s actions will of necessity impact on innovation processes in Canada. However, WIPO is bound to remain for quite some time an ex post traditional registrar organization. CIPO must work hard at the level of this global institution to defend the interests of Canadian firms but also to ensure that the appropriate margins of manoeuvrability are protected for agencies like CIPO attempting to acquire a more dynamic national role.

Yet, one of the most critical shifts in the KBLE is the increasingly strategic importance of intellectual property for companies of all sizes. In order to more effectively engage the SME community, CIPO should consider strategic opportunities for working in a concerted fashion with local, provincial and federal authorities engaged in efforts to assist in new business creation, entrepreneurship and SME development.

A practical starting point, in embarking on such a path is a horizontal discussion across Industry Canada, and indeed the federal government, as to how CIPO’s own efforts in this regard may be best aligned with a broader strategy on business development and innovation activity. An additional priority for CIPO should be the undertaking of a detailed study of current information flows within the Canadian intellectual property regime. A consultation process aimed specifically at the SME community and individual inventors may be warranted.
Recommendation IV – In line with the examples of many other countries, most notably Australia and Denmark, CIPO must further improve its efforts to better serve the SME community via existing and yet to be created channels for doing so.

Although further consultation and analysis is warranted, the notion of an innovation patent, along the lines of what is now being introduced in Australia, carries considerable appeal to further innovation across Canada, and the SME community in particular. The Australian example also presents an important source of learning for other countries – and one of the key measures of its success will be the degree to which this new instrument is successful in broadening the involvement of young companies in seeking IP protection and widening the body of knowledge of about innovation activities more generally across Australia.

Other countries, like the Netherlands, have gone the opposite way and have simply abandoned their patent office. While this might be a useful route for a small country that has had an immense success at building a transnational empire, this would not appear to be a desirable strategy for Canada. However, one should not discard other ways to stimulate creativity besides the information-animation-regulation role of CIPO. The Innovation Agenda might provide an opportunity to explore these parallel roads.

Recommendation V – Within Canada, CIPO must expand its efforts to foster a culture of innovation (as well as invention) and an expanded degree of appreciation of the strategic value of IP in the 21st century economy.

CIPO should expand its development of partnerships and networks with professional and academic institutions for the purpose of preparing and delivering seminars and workshops on the topic on intellectual property. For example, IP Australia and the Danish patent office offer a variety of seminars for private organizations and academic centers on the following topics:

- Using intellectual capital as an asset
- General information on IP and protection mechanisms
- Watching competitors
- Information session on legislation
- Patent strategy in a business enterprise

The growth of the internet as a platform for online communication and learning means that while not a panacea for all training needs, select segments of training initiatives could be delivered through an expanded online presence of such activities at CIPO. Once again, other stakeholders providing support and information for small companies should be engaged in the design of new initiatives in this area.

Recommendation VI – In line with the Canadian government’s agenda for government online, and the broader expansion of the Internet, CIPO must carefully examine both the new service delivery capacities and the new policy and IP quandaries emerging in an increasingly digital world.

As a starting point, it is clear that the web portal will become the face of service delivery agencies such as CIPO. Its effectiveness in interacting with those well versed in IP as well as novices is paramount. A few observations of relevance for CIPO based on our online review of other jurisdictions include:
• A critical goal for public authorities in designing web portals is to effectively educate the stakeholders and the general public by providing simple, straightforward and complete information.

• Access to online learning and awareness can be improved by the creating an online library of publications, similar to the one available on IP Australia’s web site (where a consolidated reference section contains relevant information on intellectual property, as well as online manuals and application samples).

• Online consultation forums can be enhanced to better educate and involve stakeholders as well as receive feedback. The consultation and discussion forums can be upgraded to include more interactive tools such as a survey form, a discussion area, and a comments board.

• Targeting individual innovators and small businesses: This segment of the population requires access to non-technical yet complete information, including background information on patents, trademarks and copyrights. CIPO might explore specific channels of information catered to specific needs of independent inventors and entrepreneurs.

• The web portal of the US Patent and Trademark Office also includes an interest section for children – a welcoming introduction to innovation and protection and a useful gateway for young students seeking information and background. Such seemingly mundane steps are nonetheless important in an ongoing process of cultural evolution.

The growth of e-commerce and the expansion of e-government mean that new opportunities for service delivery mechanisms, and rethinking the nature of such mechanisms are timely topics for consideration. CIPO would certainly not be misguided in investing resources now in thinking about the new opportunities for online transacting, consulting and managing in a digital world.

**Conclusion**

Undertaking new roles is never a straightforward challenge. Taking on such new knowledge management responsibilities in a turbulent world, where intellectual property has growing importance in today’s economy, is all the more difficult because of two conflicting trajectories: the first seems to call for a rigid, transparent and legalistic set of rules designed to ensure fairness in balancing protection for the inventor and the value of knowing and utilizing for other parties; while the second emphasizes the potential benefit in creating a dynamic learning system where IP is a loose, flexible and strategic asset to be created, nurtured and shared.

The most challenging task facing IP offices around the world is to address both of these trajectories in a synergistic fashion. Yet, what is called for by the first set of imperatives would appear to clash with what is required by the second. Therefore there is much need for reframing of perspectives and creativity. This amounts to a major governance challenge as the resources, power and information necessary to moving forward in this game without a master are in no one party’s hand.

In order to continue to adapt and design an organizational architecture that is capable of responding to these multiple pressures, CIPO is right to say loud and clear that what is needed is “changing the way we do business”. 


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Country-specific resources

Australia

What is Intellectual Property? IP Australia.
q About IP Australia. IP Australia.
q IP Australia Organizational Structure. IP Australia.
q 2001 Corporate Profile. IP Australia.
q 1999 Corporate Report. IP Australia.
[Available online: www.ipaustralia.gov.au/library/L_resrc1.htm#org]
q Industrial Property. IP Activity in Australia and the Asia-Pacific Region. IP Australia.
q Library: IP Australia’s library of forms and publication. IP Australia.

Canada

Denmark


Europe (European Patent Office)


Japan

Netherlands

Sweden

Trilateral Cooperation (Europe, U.S., Japan)
q About trilateral Cooperation. Trilateral Cooperation.
q Trilateral Project. Trilateral Cooperation.

United Kingdom
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[Available on-line: www.patent.gov.uk/about/reports/index.htm]
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[http://www.patent.gov.uk/about/reports/index.htm]

United States
[Available on-line: www.uspto.gov/web/offices/pac/dapps/pct/]


United States Copyright Office: A brief History and Overview. United States Copyright Office.
[Available on-line: http://lcweb.loc.gov/copyright/]


Other resources:

World Intellectual Property Organization
www.wipo.org

World Trade Organization – Agreement on Intellectual Property (TRIPS)
www.wto.org/english/tratop_e/trips_e/trips_e.htm