



RESEARCH IN MOTION INPUT TO EXPERT PANEL ON REVIEW OF FEDERAL SUPPORT TO RESEARCH & DEVELOPMENT

February 2011

ABOUT RIM

In little more than a decade, RIM has grown from being a small Canadian startup company, into a leading global designer, manufacturer, and marketer of innovative wireless solutions for the worldwide mobile communications market. Through the development of integrated hardware, software, and services that support multiple wireless network standards, RIM provides platforms and solutions for seamless access to time-sensitive information including email, phone, SMS messaging, Internet and intranet-based applications. RIM technology also enables a broad array of third-party developers and manufacturers to enhance their products and services with wireless connectivity to data. RIM has the world's largest wireless design group dedicated to wireless data innovation. RIM's portfolio of award-winning products, services, and embedded technologies are used by thousands of organizations around the world and include the BlackBerry® wireless platform, our BlackBerry PlayBook, the RIM Wireless Handheld™ product line, software development tools, radio-modems, and software/hardware licensing agreements. Founded in 1984, RIM is based in Waterloo, Ontario, Canada and has extensive operations across the globe. For more information, visit www.rim.com or www.blackberry.com

OVERVIEW

Innovation has been at the heart of RIM's. It started off with an idea and a vision of where technology was heading. Once the opportunity was identified, it took a team of people who believed in the concept and were not afraid to invest in the idea. Early in our corporate history, RIM was helped incalculably by the federal and provincial governments. Whether it was the Industrial Research Assistance Program (IRAP), Technology Partnerships Canada agreements, or the ongoing benefits derived from the Scientific Research and Experimental Development (SR&ED) program, public sector support for innovative companies in Canada played a key role in our success.

We believe that Canada's key programs in support of innovation and commercialization can be enhanced to ensure they continue to address changing business models and changing global economic environments. We must also be careful however, to ensure that any changes do not undermine the unique scope or strengths of leading programs like SR&ED. Additionally Canada must address related policy challenges beyond its funded programs if it is to foster more successful companies that are prepared to compete globally.

What are federal initiatives most effective in increasing R&D? Are the current mix of tax incentives and direct support appropriate? And what gaps are evident in current programming and what can be done to fill these gaps?

We believe that the Government of Canada must provide leadership in fostering an economic climate that encourages business innovation. However, enhancing business R&D expenditures through government tax incentives and direct program support presents a complex policy challenge. While government support is an important element in addressing this R&D and productivity challenge, there are other policies that affect business innovation in less obvious ways.

The recent government measure to amend Section 116 of the Income Tax code may affect R&D spending in Canada, and is an example of a less obvious effect. R&D constitutes a large portion of expenditures for early stage technology companies, and venture capital funding is essential for early stage companies to grow. In its amendment of Section 116, the government removed a tax reporting burden on foreign investors, specifically in the tech and life sciences sectors. From all accounts, the pace of cross-border activity has increased since the changes.

While the issue of R&D support and its desired outcomes is complex, R&D funding and support models are not necessarily the most important part of the solution to address lagging commercialization and productivity. There are myriad indirect issues. An



excellent example is the issue of Canada's outdated and inefficient export controls rules as they apply to the ICT industry. We recommend that the government extend their examination in order to encompass other measures that affect private sector R&D activities in Canada.

Through this submission RIM seeks to highlight improvements that require a refocusing of some activities while removing and/or modernizing current policies that inhibit the areas the panel is examining.

SR&ED

For RIM, the federal government's Scientific Research and Experimental Development (SR&ED) program is an essential factor that facilitates our engagement in Canadian based R&D, while continuing to grow and compete on the global stage. Based on our global R&D activities, we strongly believe that SR&ED is the federal government's best and most effective public policy tool for encouraging domestic R&D spending. It encourages incremental spending on R&D because companies tend to reinvest tax savings in further development activities.

As with any program, SR&ED effectiveness can be eroded by the complexity of compliance, administrative costs, and the uncertain outcome of submitted claims. One weakness of the program is not a result of underlying policy objectives or even CRA's administration of the program. This is not a criticism of the caliber of CRA reviewers, however in some circumstances the technology is simply beyond the expertise of CRA.

It is unreasonable to expect a CRA auditor to be fully knowledgeable in very specific areas of leading edge science and technology and be able to subsequently assess whether the work being conducted is appropriate under the rules of the program. Furthermore, the requirement to provide ever more extensive supporting materials from an increasingly complex development environment complicates the auditing process.

Emerging economies are leveraging their labour, resources, and creativity to challenge traditional economic leaders. Canada needs to develop, attract, and retain well educated people. RIM employs such talent, but is only able to claim the efforts of individuals directly involved in our R&D activities. This issue is exacerbated by recent CRA efforts to reduce the eligible individuals to be the more "first-line" employees.

A more reasonable interpretation of the "directly engaged" and "directly supporting" definitions would recognize the importance of the "business drivers" to the R&D.

There is no incentive to recruit and pay top salaries to these individuals as they are considered "overhead". RIM has salary expenditures that contribute to the innovative culture of the company. Unfortunately, we cannot capture these individuals because of the restrictive definitions and interpretations. Business decisions drive what is researched. We need innovative thinkers to make these decisions.

A credit or financial acknowledgement of their contribution to the innovation process would help bridge the gap indicated in the panel's report.

There is a difference between R&D and innovation, but the two are inseparable since supporting one will support the other. R&D is evolutionary, seeking incremental improvements, whereas innovation takes a unique approach right from the start. An innovative idea may be implemented using known practices and techniques, but will likely require R&D at some point. Similarly, during the course of R&D it is expected that known practices and techniques will need to be supplemented by innovative ideas in order for progress to be made.



In terms of the administration of the SR&ED program, the need exists to establish more tax-payer centric policies such as timeliness of reviews, framework of delivery guidelines, specific turnaround service standards, and the appropriate resource allocation for CRA to administer the program.

ANGEL – VC INVESTING

Companies within the ICT sector evolve at different stages that require different stages of support. The Expert Panel has identified that seed capital (angel investing) and Venture Capital (VC) financing are essential inputs at the early stage of a firm's development. They often rely on these investments and knowledge from individual investors for business advice and relevant technologies. At even greater levels of uncertainty than traditional financing models, they require long lead times to commercialization and return on investment.

As an important tertiary benefit to accelerating private sector R&D financing, it is usually accompanied by the additional value of mentorship to the investment, which is often instrumental in determining a company's long term viability.

RIM has made its own efforts to address the gap in VC funding in 2008 by contributing towards a \$150M in 2008 in a fund that focuses exclusively on mobile computing. Early this year we expanded our efforts and made the lead contribution to another fund focused on the similar area. While our efforts are focused on a specific theme, there are many other ICT areas and sectors that could use government sector support.

A federal angel investor and VC tax credit would address a critical gap in financing early-stage R&D, making it easier for firms to raise funds that bridge the gap between start-up and traditionally financing.

POST – SECONDARY PARTNERSHIPS

As a research and development-driven organization, RIM is passionate about nurturing new talent and technologies at the academic level. RIM builds and maintains strategic partnerships with universities and academic institutions globally, through support for university research, educational outreach activities, and the BlackBerry Academic Program.

Collaborative research projects that are formulated by RIM's Research and Development teams and university researchers allow for joint exploration of ideas, while facilitating the development of specialized skills in the graduate students who conduct the research. The projects may originate from ideas in technical fields such as computer science or engineering, or the social sciences, industrial design, and business.

Our partnership with the Natural Science and Engineering Research Council (NSERC) is a good example of how government support of funding councils can result in commercialized products. One of the essential ingredients to the success of partnerships with NSERC and post-secondary institutions is the ability for RIM to maintain ownership of the intellectual property arising from research. Access to new ideas, researchers, and people talent is the primary incentive for RIM to partner. Without the ability to retain the resulting IP, the incentive is greatly reduced as limited resources could alternatively be deployed in other areas.

Ownership of intellectual property is the principal impediment to successful partnership between business and post-secondary institutions.

Multiple studies have examined why government support for post-secondary R&D has not resulted in levels of commercialization similar to that found in other countries. What is not entirely clear is the balance of responsibility for the commercialization of research between post-secondary institutions and researchers themselves. The University of Waterloo is an example of a post-secondary institution where researchers own their intellectual property and thus have responsibility for its commercialization. This model is worth further examination as it may create an incentive for researchers that will increase post-secondary R&D output.



FOSTERING AN ENTREPRENEURIAL CULTURE

RIM supports education by sponsoring student programs and outreach activities at all educational levels. An important goal is the attraction of more students to the math, science, and engineering fields, as well as the encouragement of entrepreneurial endeavours. RIM supports this goal by sponsoring engineering student technical clubs, high-school robotics competitions, and science fairs. In Fiscal 2010, the Educational Outreach team conducted over 44 workshops, reaching more than 1000 students. RIM's Educational Sponsorship Program has reached over 650,000 Elementary and Secondary students, and 12,000 college and university students in Fiscal 2010. This program continues to expand.

The BlackBerry Academic Program promotes mobile technology education, such as wireless networking and application development for mobile devices. The program also facilitates the training of the next generation of BlackBerry developers, technical support personnel, and system administrators. The program provides possible curriculum topics, as well as resources to enable colleges and universities to integrate mobile technology into their courses.

Similarly, the federal government should look at creating or building upon existing programs that foster the spirit of entrepreneurship in Canada.

Designating 2011 as the Year of the Entrepreneur, is a great start in highlighting the essential role they play in our economy.

OUTDATED & INEFFICIENT EXPORT CONTROLS

As noted earlier, in addition to government support of R&D being crucial in addressing Canada's productivity conundrum, there are other regulatory issues that inhibit increased domestic R&D investment. Increasingly, our nation's high-tech firms are being impeded by Canadian Export Control requirements.

Currently, companies that develop and/or manufacture products that contain encryption technologies are subject to Canadian Export Control regulations. Encryption has evolved from its early days when it was used to protect state communications. In today's digital age, encryption technology is found in everyday products such as BlackBerry smartphones, software, web browsers, oil and gas systems, and even garage door openers. Canada's onerous Export Control requirements have resulted in costly, multi-month delays for launching global products, and weeks navigating red tape just to share R&D information within a company because one of its locations is physically located outside of Canada. Some Canadian-based subsidiaries have even been shut out of R&D activities by their parent companies due to Canadian requirements, which results in the movement of high income, wealth generating jobs outside of Canada.

In the United States, where national security issues are given a very high priority, companies that export encryption technologies enjoy a more permissive and efficient export control system compared to their competitors in Canada. Export Control regulations were modernized in 2000 with a further major relaxation of cryptography rules in 2010.

To foster success in the face of global competition and encourage increased domestic R&D, Canadian companies must be on a level playing field with foreign competitors.

Canadian innovators driving a home-grown digital economy need a domestic export-control regime that does not create unreasonable restrictions and costly R&D delays compared to countries where their competitors operate.

ACCESS TO TALENT

The expert panel asked whether Canada is producing sufficient numbers of graduates with the right skills. Business R&D activities require both visionary producers and skilled end users. In short, people are at the center of business innovation. Canada requires comprehensive public policies to provide a sufficient supply of technologically-literate workers and citizens to



keep Canada's economy globally competitive. Canada's ongoing commitment to far-sighted public investment in universities, hospitals, and research institutions helps to attract world-class faculty, students, and research projects in addition to creating, attracting and retaining skilled workers, but federal and provincial governments must cooperate on these issues if the business community is to succeed in the global marketplace.

Enrolment in science, technology, engineering, and mathematics programs are declining while employment opportunities in these fields continue to grow. The choice to pursue a program of post-secondary education related to ICT would seem like a practical one, but it is a choice that Canadian students are making less frequently.

Across Canada, we should encourage youth to choose career paths that will lead to greater economic prosperity for all of us. We need to instill the excitement of discovery and invention in today's youth, by celebrating entrepreneurship in all its forms, and sharing the real-life success stories of Canada's technology innovators.

The issue of funding for post-secondary education and training is obvious; in order to create the workforce for a vibrant digital economy in Canada, students and teachers in our country's colleges and universities must have access to cutting edge facilities and equipment in order to reach their greatest potential. At RIM, we enjoy the benefits of past investments in education, but we also face ongoing shortages of the sort of talent required to generate tomorrow's innovations. Canada must continue to invest in a culture of excellence. Investment must increase at all levels.

The solution to the talent shortage in Canada will necessitate the full participation of new immigrants trained outside of the country.

Both immigration policy and professional licensing requirements should be modernized to recognize the shortage of highly skilled ICT professionals in Canada because cutting edge research and development will only occur where there are people with the skills to do it. Protectionist policies to the free movement of labour will only weaken Canada as capital moves where the talent is, and immigrants are prevented from participating to their full potential.

RIM hires many employees with Computer Science, Computer Engineering and Mobile Communications backgrounds. We must go where the industry exists in other countries to look for resources as RIM cannot survive in Canada alone, as the market is too small and competition is global. We specifically need people with mobile communications manufacturing experience and often these employees are from the US, Europe and Asia. RIM's strategy of integrating foreign workers is to provide full support to workers and their families who wish to apply for permanent residence status. Minor tweaks to the federal government's efforts in the area of Labour Market Opinions, Permanent Resident Programs, Federal Skilled Worker Program, and others would be beneficial. As submissions to the expert panel are limited to five pages, RIM would be pleased to discuss changes that would make it easier and more economical to attract R&D expertise to the country.

CONCLUSION

We congratulate the government for launching this important review and commend the panel for the work it is conducting. The task at hand is complex, but the recommendations will key in help to foster Canada's growing reputation as a place to conduct R&D.

Finally we strongly recommend that the panel not fall into the trap of recommendations that would water down SR&ED in attempts to cover and/or address more areas – such as refundability. It should be open, but not open ended so resources are diverted or diluted.