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Consultations
Independent Review Panel on
Federal R&D
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As the voice of Ontario's 70,000 professional engineers, the Ontario Society of Professional Engineers (OSPE) is pleased to comment to the Independent Review Panel on Federal R&D Programs.

OSPE believes that support for research and innovation will facilitate job growth in the knowledge-based economy and the manufacturing sector. By identifying new innovations and bringing them to market, Canada can become a hub for cutting-edge, green technology. Engineers will have an important role to play in this regard.

In June 2008, OSPE established a Research & Innovation Task Force to help identify public funding opportunities for the commercialization of engineering technology and to propose solutions for stimulating engineering innovation. OSPE encourages the government to continue to extend financial incentives, currently available for academic research, to support development and commercialization efforts in the private sector.

Our task force also supports greater cooperation between the federal and provincial governments that will render existing innovation programs more effective, all the more important given the current economic climate.

With respect to the specific questions raised in the consultation document please see below:

1) What federal initiatives are most effective in increasing business R&D and facilitating commercially relevant R&D partnerships?

A: Consultants expressed support for programs such as IRAP, SR&ED, and Going Global Innovation (funding set-up of collaborative R&D initiatives) and linkages between academic institutions and industry whereby academia helps to resolve industry technology issues (e.g., various OCE programs).

We've also received feedback that recent experience with SR&ED is that the program has tightened up and more claims are being more scrutinized. EDC has good programs but can only assist with companies that have export content and not domestic opportunities. BDC does not bridge the gap that currently exists. Their programs only support mature businesses and are in the same category as all the Canadian chartered banks. They are seen as just another chartered bank. MITACS and NSERC programs have good programs to create collaborative research at universities; however, there could be some revamping of the programs to make them more accessible and help better bridge the gap. Collaborative research centres such as the Communtech Hub in Kitchener are great sources of collaboration for start up companies. There should be more centres for start-ups to foster growth.

2) Is the current mix and design of tax incentives and direct support for business R&D appropriate?

A: Canada has one of the largest R&D incentive programs in the world (~ \$7B), so there is a disconnect between Canada's poor ratings and the value of contributions made. The consultation document talks not only about an issue in R&D, but also in productivity growth. We have feedback that there is a strong feeling that subsidized capital productivity enhancements would be of significant benefit (e.g., subsidizing more efficient machinery, etc). Also, there may be a significant gap in funding for start-up businesses (while there are numerous funding programs for established corporations, it is extremely difficult for start-ups to obtain funding). While there is clearly higher risk for tax dollars on start-ups, as long as key criteria are defined and met (i.e. strong innovative technology, good business case), there should be a good case to help fund these start-up R&D and/or commercialization of the technology.

3) What, if any, gaps are evident in the current suite of programming, and what might be done to fill those gaps?

A: See answer to #2.

Consultation questions

1) In addition to the R&D activity defined by the OECD, should government be funding other business activities related to the commercialization of R&D? If so, what and why?

A: Funding for R&D activities generally support the economy. We are supportive of additional business activities being funded.

2) Does Figure 2, the model of business innovation presented above, capture the key structural factors and inputs to innovation? If not, what is missing?

A: It's not clear on the diagram (nor the article) how R&D directly contributes to increased productivity. There is truly no correlation here (we agree that sometimes R&D can help improve productivity, but not necessarily). We don't think the focus is clear enough.

3) Regarding capital, is there an adequate supply of risk capital for Canadian firms at each stage of their growth (start-up, small, medium, large)? If not, why not? Where returns on investments are low, what are the reasons and potential solutions?

A: See comments above, insufficient funding for start-ups (likely because of the higher risk associated with them). This can be mitigated by an effective vetting policy.

4) Regarding ideas and knowledge, do you believe it is important for Canadian firms to perform their own R&D and, if so, what do you believe are the key factors that have been limiting business R&D activity in Canada?

A: Yes. With manufacturing already largely outsourced, performing R&D may perhaps be one of our few opportunities to remain competitively viable as a country. Currently, a high Canadian dollar limits available funds for activities such as R&D. Also, we don't believe we integrate as deeply with academic institutions as other countries in our R&D.

5) Regarding networks, collaborations and linkages, what are the main impediments to successful business-university or business-college partnerships? Does the postsecondary education system have the right capacity, approaches, and policies for effective partnerships with business?

A: There needs to be better visibility to the availability of institutions to help resolve technical issues and conduct R&D for corporations. While the OCE programs strive to bridge this gap, it's not well publicized.

6) Regarding the creation of demand for business innovation, what role, if any, do you believe that government should play in being a “first customer” for R&D investments in Canada?

(no response)

7) Regarding talent, is Canada producing sufficient numbers of graduates with the right skills to drive business innovation and productivity growth? If not, what changes are needed? Where demand for advanced skills is low, what are the reasons and what changes, if any, are needed?

A: OSPE's task force reports that consultants feel they don't have visibility to whether there is a shortage or surplus. The experience is that the local colleges and universities are producing a sufficient amount of talent however, a gap is seen in finding the proper channels to tap into those resources. It takes a long period of time to find the appropriate researchers and develop the relationships.

8) Can you describe whether and how your firm employs students currently enrolled in community colleges, polytechnics and universities, and what government measures could make it easier to work with students during their academic programs and to recruit them after their graduation?

A: OSPE's task force reports that consultants currently do not utilize students due to a heavy requirement on technical experience by our consultants for our clients. In one example a company has had experience utilizing co-op programs for college and university undergrads and grads with the intent to hire them as full time employees. Some MITACS and NSERC programs were utilized for the university students. However, these programs are geared towards academic research mainly at the graduate level and at times there are restrictions and barriers - such as who owns the intellectual property that discourage the use of these programs. Currently there is a gap in supporting hiring college co-op students as there is no funding support. There could be a revamping of these programs to create more collaborative partnerships between companies and the universities and colleges.

9) With which federal programs supporting business or commercially oriented R&D in Canada do you have direct experience and knowledge? In your view:

a) Which of these programs are working, and why?

A: SR&ED helps foster continued improvement and innovation and overall helps industry remain competitive, although there are many companies abusing the program (need tighter controls). The rules around SR&ED have been tightened and this being a tax credit program is of limited use to start-ups as the process could take a long period of time to receive the benefits if the claim goes to audit. The program could be reviewed to see how it could better support true innovation and reduce the turnaround time.

b) Which programs are not working, and why not?

A: IRAP: Application rules not clear, program depletes funding each year and it is difficult to align project timelines with funding availability.
Going Global Innovation Fund – not well publicized
FEDNOR Applied R&D Program – not well publicized

IRAP is significantly under funded. They have the infrastructure to support industry and innovation however their funding window is extremely tight and they are typically out of funding before their year has even started.

10) If you have direct experience and knowledge of the SR&ED tax credit, what are your views in relation to the following:

a) Does the current structure of the SR&ED tax credit encourage incremental investment in R&D? Does it free up capital to invest in other aspects of innovation activities in the firm? Does this vary by size, ownership, sector or nationality of firm?

A: OSPE's task force reports many firms (especially small/mid sized) are currently using the funding to stay afloat and weather the challenges imposed by a high Canadian dollar. In many cases, the funding is not reinvested into true R&D. It would be ideal if there was a way the program could restrict the usage of the proceeds to continue R&D investments, but that would be a very difficult challenge to enforce/measure.

b) What are the strengths and weaknesses of the refundable portion of the SR&ED tax credit for Canadian-controlled private corporations and to what extent does it encourage the growth and commercial success of SMEs?

A: The refundable tax credit allows non-profitable companies to still benefit from the program. In a true capitalist society, we really would only want to provide funding for companies who are successful (i.e. whereby a tax credit would be beneficial), but in many cases, especially for recent start-ups, refundable credits are the only benefit and source of funding.

c) Bearing in mind the improvements being made by the Canada Revenue Agency, are there additional opportunities for change to simplify the administration of the SR&ED tax credit and facilitate the applications process?

A: Online application process would be straightforward and reduce the turnaround time on review as well as the audit process.

11) How could the Government of Canada lighten the administration requirements of its programs on recipients and improve outreach to business?

A: Single web site with funding programs specific to each industry, company size, application, etc. Companies simply don't know about the programs available. The programs also need to more tightly enforce/restrict funding to those companies truly investing in R&D that has a commercial application.

12) How could the Government of Canada be more innovative and responsive to meet new needs or opportunities, and try alternative service delivery-approaches in its programs?

A: To meet needs we suggest a web site with centralized, filterable list of programs, and online applications available. Having a large site with dozens of programs is useless unless there is a good filter system in place to narrow down applicability for a particular company. (i.e. company should fill in key parameters such as revenue, employee #'s, application they are seeking funding for (hiring technical staff, R&D, commercialization, hiring interns, productivity improvements, etc), and the system lists the programs for which they might be eligible.

13) Are there any gaps in the Government of Canada's support to business and commercially-oriented R&D? Do firms performing R&D in other countries have an advantage over Canadian firms because of access to programs that are not available in Canada? What would be the principal features of new programming to fill these gaps?

A: Unknown

14) What lessons and best practices can be taken from provincial business and commercially oriented R&D programs, and how should the two orders of government align their programming?

A: Ideally, the programs should be administered by a single government entity (i.e., federal or provincial). In many cases, there are programs that may overlap, and it is more difficult to promote programs on both a federal and provincial level. A single administrative hierarchy would be much more efficient.

15) Is there a difference between R&D and innovation? If yes, how are they different?

A: R&D is seen as more research-oriented in developing new products/processes, whereas innovation is less research oriented and more focused on more standard tweaks/improvements in products/processes, rather than being revolutionary.

16) Should government focus on R&D or Innovation? What should the balance be?

A: More focus on R&D (but where the R&D has commercial applications).

Thank you for the opportunity to provide input. We look forward to seeing the results of the independent review panel.

Yours truly,

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President and Chair
OSPE