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Fédération des cégeps

PREBUDGET CONSULTATIONS – FEDERAL BUDGET 2017

Brief by the Réseau Trans-tech
in Collaboration with the Fédération des cégeps

At the outset, the Réseau Trans-tech would like to confirm its support of Colleges and Institutes Canada's (CICan) brief submitted in response to these prebudget consultations.

The Réseau would also like to present a project that can be used very effectively to help Canadian organizations, including SMEs, become more innovative in all sectors over the short term.

Réseau Trans-tech

The Réseau Trans-tech brings together 49 college centres for the transfer of technology and innovative social practices (CCTTs) located throughout Quebec. Since 1983, colleges have developed CCTTs that help carry out applied research, technical assistance and training activities. Each centre specializes in a specific field ranging from advanced manufacturing technologies to immigrant integration, agriculture, nordicity, advanced materials, the maritime sector and a host of other fields associated with the key social and economic issues of Quebec society.

CCTTs form an extensive network of 1,300 experts who support companies' innovation efforts. In 2013-2014, CCTTs completed 8,858 innovation projects in over 3,900 organizations, 66% of which were SMEs.

Demonstrable economic benefits

More productive and innovative companies are a society's key economic strengths.

In Quebec in 2012-2013:[1]

- CCTTs' contribution to increased profitability for client companies and organizations has helped support more than 10,000 jobs and generate nearly $1.3 billion in annual added value in Quebec's economy;
- CCTTs' spending has helped generate over $66 million in added value in Quebec, as well as $18 million in tax and incidental tax revenue for the Government of Quebec, and $7 million for the federal government;

[1] KPMG-SECOR, The economic contribution of cégeps and college centres for the transfer of technology, November 2014

- 93% of clients feel that they have improved their ability to innovate thanks to the services provided by CCTTs, including through the acquisition of new knowledge, new expertise or know-how, as well as through the upgrading of staff skills.[2]

In Canada, a few years ago, NSERC created Technology Access Centres (TACs) inspired by the CCTT model. To date, 14 TACs have been established in the other Canadian provinces, and 11 Quebec CCTTs benefit from the Technology Access Centres (TAC) Grants of the College and Community Innovation (CCI) Program. The Réseau Trans-tech dislikes the fact that no competition is planned for 2016-2107 under the TAC grants component.

CCTTs and TACs are college bodies with close ties to the community with which they collaborate on projects with a direct impact on various areas. Some examples in social innovation include self-sufficiency of Aboriginal people, immigrant integration and integration of people with disabilities. On the technological side, robotics, connectivity in the manufacturing sector, new products, new technologies and electronic commerce are also innovation sectors those centres invest in. We also want to mention sectors such as health, renewable energy, agriculture, aerospace and mining. The need to consider the human dimension in technology sectors is becoming increasingly prominent, and that is why it is important to develop "human-technology-health" intersectoral projects.

In addition, under the College and Community Innovation Program managed by NSERC, colleges still do not have access to the Research Support Fund, or to SSHRC's Community and College Social Innovation Fund. The Réseau Trans-tech and the Fédération des cégeps would like the latter pilot program to be made permanent with some changes made to align it with the reality of college research.

Recommendations:

Work toward an improved recognition of colleges' role in providing support and innovation integration for organizations and companies, including SMEs, by:

- Continually improving the TAC grants program*;*
- Ensuring better financial support for colleges in terms of applied research in partnership with the community both in social and technological innovation;
- Allowing the funding of intersectoral projects through the three federal research funds—NSERC, SSHRC and CIHR;
- Making NSERC's College and Community Innovation Program, as well as SSHRC's Community and College Social Innovation Fund, eligible for the Research Support Fund;
- Maintaining the SSHRC Community and College Social Innovation Fund, with some changes to reflect the reality of college research.

[2] Ministère des Finances et de l'Économie, ministère de l'Enseignement supérieur, de la Recherche, de la Science et de la Technologie. Rapport d'évaluation de la performance du dispositif des centres collégiaux de transfert de technologie (CCTT), May 2013

Development of a new offer of complementary services to support companies in the transformation of the economy

Over the past year, the members of the Réseau Trans-tech began considering the challenges presented by their clients' changing needs, CCTTs' current capacities and the measures to be implemented over the next five years.

Societies must quickly adapt to a changing economy. That is an inevitable transformational challenge facing industrialized countries. To effect that change quickly, it is imperative to immediately start deploying qualified and highly operational resources in a systematic, coordinated and organized manner across the country.

CCTTs want to participate in that shift in the culture of innovation. CCTT assets in terms of qualifications, both in technology sectors and concerning innovative social practices, their ties to the community, as well as the special relationship between colleges' technical training departments and companies, make CCTTs the preferred stakeholders to support and guide industry, including SMEs, in the accelerated integration of innovation.

Project developed by the CCTT network

Integrated support system for companies and organizations in a changing economy – Towards a globally connected and low-carbon economy

The project has six components:

Support and guidance for businesses, from the design phase to the marketing phase, in an integrated, global, multidisciplinary and strategic vision of innovation:

- Integration of all experts from the concept value chain, from project development to alignment with client needs (design thinking), as well as marketing and funding;
- Development of innovation programs rather than isolated and individual projects.

Coordination of sector or regional mobilizing projects as part of a collaborative approach:

- Coordination among a number of sector or regional stakeholders in order to attain strategic positioning and widespread recognition, which are impossible to achieve by a single company (industry clusters, precompetitive projects, critical masses leading to significant economic benefits, etc.).

Workforce training and balance between training and market needs:

- Developing greater synergy between the education community and businesses;
- Supporting the development of new content development strategies and knowledge transfer to students, so that they would consider themselves as and become the drivers of innovation and change within companies.

Support in the integration of new sustainable development technologies, in clean technologies and in new trends: bioeconomy, economy of proximity, circular economy, etc.:

- Guidance and support for companies and organizations in their use of more environmentally friendly methods, especially in the areas of sustainable development, green chemistry, biotechnologies, bioproducts, biofuels and renewable energies such as agroforestry biomass and wind power.

Support in the integration of best technological and digital practices:

- Guidance and support to improve both productivity and sales;
- Implementation of new additive manufacturing technologies, connected objects, cyber-physical spaces, 4.0 industries, etc.;
- Optimization of internal processes, data processing systems and, potentially, all approaches.

Support for the international positioning of businesses:

- Implementation of practices that reflect new paradigms: markets are international and open in nature, but so is competition (best practices in competition analysis and market validation, new marketing approaches, including those provided by electronic commerce, etc.).

The project presented to the Government of Quebec has garnered a lot of interest. A $16-million envelope over three years was allocated to the CCTT network in the latest provincial budget announced in March to gradually launch the project, beginning with the first component—Support and guidance for businesses, from the design phase to the marketing phase, in an integrated, global, multidisciplinary and strategic vision of innovation.

Canada needs mechanisms dedicated to adapting its economy to a knowledge-based economy. That new support model is part of a collaborative effort with expert partners (NRC-IRAP, CED, BDC, Emploi Québec,[3] etc.) for each of the components of the innovation process (funding, human resources, technical and digital expertise, sustainable development, exportation, etc.). The model can be applied very effectively to benefit businesses, at all TACs and Canadian colleges.

<u>Recommendation:</u>

Providing guidance and support to businesses and organizations is becoming crucial, and the transformation and networking of the economic fabric must be accelerated. CCTTs, TACs and their colleges are best positioned to do so. Recognizing CCTTs and TACs as the gateway to innovation is a premise, a key message the state must convey through immediate concrete actions, including through funding to support the implementation of that new intervention model.

[3] NRC-IRAP: Industrial Research Assistance Program of the National Research Council Canada
CED: Canada Economic Development for Quebec Regions
BDC: Business Development Bank of Canada

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