



**Ideas
can...**

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Ideas Can... shape the future

The world of ideas moves quickly. More than ever, Canada needs agile and well-rounded thinkers who can synthesize, analyze and make sense of increasing amounts of information, adapt to change, communicate effectively, and consider the past to better prepare for the future. The Federation for the Humanities and Social Sciences (www.ideas-idees.ca) welcomes the Government's decision to update the 2007 S&T strategy. This short document responds to the three areas highlighted in the consultation: business innovation; developing innovative and entrepreneurial people; and research excellence.



A. Business Innovation

Ideas can... challenge existing approaches

1: Successful business innovation is a people-centred process

Despite increasing investments in S&T, Canada's relative performance in research, innovation and productivity continues to slip (e.g. STIC 2012), endangering our long-term prosperity. To thrive, we need to tackle the highly complex challenges of today and tomorrow differently.

The linear and technology-centric approach to innovation has not always worked as expected. Successful innovation requires a people- and organization-centric process, and this is

becoming even more apparent as we deepen the transition from the industrial era to a knowledge-based digital society. The future belongs to countries that can marry and pay greater attention to the interplay between content, context and technology. To do so, we need insights into human behaviour, including motivation and creativity, as well as a better understanding of organizational dynamics and of factors that promote innovation.

We need to mobilize and better connect all fields of knowledge. It is a combination of the sciences, engineering, the arts, social sciences and the humanities that will develop creativity and new cultures of innovation. In a context where events move so quickly, yet detailed understanding is required, social science and humanities research is more essential than ever. They must be embedded in our response, if we want to dig deep, reflect and weigh options on challenges such as energy security, sustainable development with our First Nations communities, and job creation.

A thorough re-conceptualization of Canada's S&T strategy would provide the opportunity to integrate a people-centred approach at the heart of Canadian innovation, setting Canada on a new path to greater creativity and prosperity. The new path is not the responsibility of governments alone. Canadian businesses, NGOs and academic researchers must break out from old insular behavior and embrace new ways of collaborating and partnering.

Examples such as Communitech in Kitchener-Waterloo and the Digital Media Zone in Toronto show that by creating dynamic and sometimes disruptive ecosystems of talent, knowledge and financial resources, governments at all levels can help bring together a critical mass of people with different skill sets and life experience to spur innovation and creative thinking. Social scientists and humanists are well placed to facilitate and mediate these dynamic dialogues



across sectors and fields of research, and a large and growing number of start-ups emerging from these hubs are driven by graduates from the arts, humanities and social sciences.

Ideas can... connect us

2: Accelerate innovation through digital research and technologies

Canada stands at the forefront of the global digital revolution. Canadian researchers are already using digital technologies to conduct and share their research and teach students within and often far beyond their institutions.

Revisiting the S&T strategy provides the government with an opportunity to put digital research and technologies at the heart of Canadian research and innovation. Including a focus on developing digital architecture to facilitate the research of tomorrow, this digital strategy should lead to better access to data, sharing of information, and long-term management of data and research findings. Digital platforms are also essential for open access, which can allow all Canadians to access the results of publicly-funded research performed in universities and by governments.

Building on existing bottom-up initiatives of entrepreneurial Canadian researchers and institutions, a co-ordinated approach to digital scholarship in Canada would allow investments to have a greater multiplier effect and set Canada on course to lead the research of the future. There is an increasing recognition from industry leaders that digital innovation requires greater attention to the interplay among technology, business, content and the human interface. Researchers in the humanities and social sciences are at the front of this wave of digital entrepreneurship and must be central to a national strategy.



B. Developing innovative and entrepreneurial people

Ideas can... change lives

3. Facilitate experiential learning and collaboration across all sectors of the economy

University graduates are in demand everywhere there is a need for critical thinking, problem solving, and sharp and nimble thought. Yet there is a policy challenge in facilitating a seamless move from university into the workforce. That's why experiential learning is growing rapidly: 50 percent of undergraduates across Canada have now some kind of work-integrated learning as part of their education.

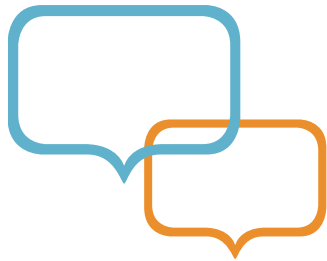
Each year more than 1300 students participate in Mitacs internships, gaining essential work experience during their studies, applying their knowledge and acquiring workplace skills. The Federation recommends supporting knowledge mobilization by expanding the eligibility criteria of the funding agreement for Mitacs internships to include not-for-profit organizations.

Not-for-profit organizations make a significant contribution to Canada's economy each year, generating \$112 billion in revenues and employing more than two million people. Expanding Mitacs' eligibility criteria to include not-for-profit organizations would promote innovation. Just as commercialization takes ideas from lab to market, social innovation links challenges in society in diverse areas such as



immigration, mental health and homecare with research capacity through campus-community collaborations. Organizations benefit from access to research and entrepreneurial insight, and student interns gain experience, setting them on a path to a knowledge-based career.

Also key to the S&T strategy will be mobility. Both international mobility, capitalizing on and expanding existing networks of talent to attract the brightest minds to Canada; and mobility of ideas within Canada through world-class digital infrastructure and support for knowledge exchange throughout the country.



C. Research Excellence

Ideas can... lead the world

4: Recognize that Canadian S&T strength depends on social sciences and humanities

The priority areas outlined in the 2007 S&T strategy largely reflect a view of Canada as a producer of natural resources, which is an undeniable fact and important consideration. However, the widespread interpretation of these priority areas as primarily technology-driven misses the opportunity to go beyond the immediate return on investments and ensure Canada's future prosperity by taking advantage of contextual understanding and creativity.

This is precisely what humanities and social science research does. For example: energy

transportation requires engineering researchers to design and build infrastructure, but social science is required to understand the social, ethical and political implications. Health research can create vaccines or medication but we need to understand human behaviour for them to be effective. Mining ventures are expanding into new sites but require knowledge of aboriginal peoples' culture and languages. Even in Canada's recent economic niche in the gaming industry, success depends on the coupling of computer science research with the ground-breaking creativity of our writers and artists.

Canada would be dramatically economically, intellectually and culturally poorer without world-leading humanities and social science research. And it is world-leading. Historical studies, visual and performing arts, and psychology and cognitive sciences are all recognised as fields where Canada is among the best in the world by the CCA report on the State of S&T in Canada (2012).

It is essential that the new S&T strategy recognise the role that the humanities and social sciences play in achieving success in all priority areas and in all regions of the country. A forward-looking strategy would recognise that Canada's future prosperity is rooted in the humanities and social sciences.



The **Federation for the Humanities and Social Sciences** works to promote the value of research and learning in the humanities and social sciences. Its membership comprises over 80 scholarly associations, 79 post-secondary institutions and six affiliate organizations, representing 85,000 researchers, educators and students across Canada.

In advancing equity, diversity, knowledge, excellence and innovation, the Federation for the Humanities and Social Sciences contributes tangibly to a free and democratic society.

The Federation:

-  Organizes Canada's largest annual gathering of academic researchers, the **Congress of the Humanities and Social Sciences**
-  Brings leading scholars to Parliament Hill to discuss public policy and public relevance in our **Big Thinking** lecture series
-  Supports the publication and sharing of new ideas through our **Awards to Scholarly Publications Program**

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