ITAC 2019 FEDERAL PRE-BUDGET SUBMISSION

Strengthening Canada's Place in a Digital World

As Canada's national Information and Communications Technology (ICT) business association, the Information Technology Association of Canada (ITAC) champions the development of a robust and sustainable digital economy.

More than 37,000 Canadian ICT firms create and supply goods and services that contribute to a more productive, competitive, and innovative society. The ICT sector employs almost 600,000 Canadians and invests $4.6 billion annually in research and development, more than any other private sector segment in Canada.

In this *2019 Pre-Budget Submission*, six industry-based recommendations are provided that will help secure Canada's place as a digital global leader. ITAC would welcome the opportunity to present its recommendations to the Standing Committee on Finance when hearings begin.

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1. Digital Government and Procurement

Digital Government and Modern Procurement

The federal procurement process for IT products and services has long been acknowledged as a barrier that limits small and medium-sized enterprise (SME) participation, slows deployments, dampens innovation and increases costs for government and industry alike. Driving a digital-first agenda, innovating procurement and ensuring a pragmatic approach towards a public-private partnership is mission-critical to building a modern digital government, fueling innovation and improving Canada's competitiveness.

Budget 2019 Recommendations:

1. **Establish a Government Technology Hub, to act a centre of excellence for digital government collaboration with industry and academia.** This will allow the Government to: pilot and experiment with technology prior to purchase; access talent; support and incubate start-ups and micro-firms; and provide a virtual hub for SMEs to develop solutions on a Government infrastructure and platforms.
2. **Expand funding for digital experiments.** Create a government funding portal for digital experimentation under Innovative Solutions Canada, Innovation for Defence and Security (IDEaS) and the Canadian Digital Service.
3. **Invest in Back Office Transformation**. Modernize back office services that support government innovations and digitizes operations.
4. **Innovate contracts, terms and conditions** to align with industry norms focusing on fairness, limiting allocation of risk, and opening the possibility of negotiations with bidders to access confidential inputs.

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5. **Provide a mechanism and requirement for Government to engage with industry at the idea stage** to ensure business cases are developed with a broad understanding of the marketplace, emerging technologies and delivery methods, *before* procurements are constructed.
6. **Collaborate with industry on the design and implementation of a socio-economic development strategy that works for all suppliers.**
7. **Raise the sole sourcing threshold to the NAFTA limits** so SMEs can take full advantage of allowable limits.
8. **Work with industry to develop and implement an annual refresh cycle for the federal procurement process** so that each year government evolves in its engagement with industry on what it buys.

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2. Invest in Data and Tech Renaissance

Invest to Position Canada at the Fore of a Technology Renaissance
Canada can expect business development in technology to soar, if we can make the appropriate investments in a data driven digital economy.

Data and Artificial Intelligence (AI)
AI stands to become one of industry's most disruptive forces, but it's the ability to access this data that will enable Canadian businesses to compete.

Smart Infrastructure
Investments in infrastructure with imbedded sensory technology provides longer-term view of value on taxpayer outlays. The data generated can provide for preventative maintenance and can support a plethora of additional policy or public benefits including human mobility and city planning. It will ultimately provide timely data for AI-based analytics. The government should require funding applicants to consider opportunities to embed "smart technologies" into new infrastructure projects.

Smart Cities
The *Smart City Challenge* is a great initiative, but participation allowance is limited. Canada should create a ***Smart City Superfund*** of at least $100M as a flexible, ongoing resource that municipalities or private developers can leverage.

Technology for Health
Leveraging health and pharma data and combining data sets could lead to AI analytics and precision health care, providing better health outcomes for Canadians and more cost-effective delivery of healthcare. Governments have struggled to use patient data collected over decades to better address health issues facing Canadians. There's a clear need for governments and regional health services to collaborate more across agencies and provincial borders to create better policies for improved health of all residents.

Fifth Generation (5G)

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To leverage the tools to develop the data for AI, modern hyper-connected networks will be required for transmitting 5G networks, which are: predicted to revolutionize the way we use and leverage technology; make possible new classes of advanced applications; foster business innovation; and spur economic growth.

Budget 2019 Recommendations:

1. **Invest in "Data for AI" projects** integrating data from multiple sources.
2. **Allocate increased funding to build test beds for data analytics and innovation corridors** based on 5G.
3. **Establish an engagement plan for roll-out of 5G networks**.
4. **Introduce a "Smart Infrastructure Lens" for all federal infrastructure investments**, including investments made by the Canada Infrastructure Bank.
5. **Mandate patient-first health data sharing across the entire healthcare system** to improve care across multiple channels.
6. **Require health transfer funding supports and sustains digital healthcare innovation**, including funding to organizations (e.g. Canada Health Infoway, Canadian Institute for Health Research), specifically targeted at developing better use of telehealth practices and new technology opportunities.

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3. Tax Competitiveness

Accelerate Capital Cost Allowance (CCA) to expand ICT infrastructure

Canada's poor investment climate is leading to lags in ICT investment and reduced productivity and impacts competitiveness. Accelerating the CCA rate for ICTs will entice businesses to: make investments leading to improvements in businesses processes; maximize the usage of existing assets; integrate more efficiently in global supply-chains; enhance customer experience; and explore new business models and technologies. Increasing CCA rates will also support expedited deployment of 5G networks.

The U.S. moved in December 2017 to lower the corporate tax rates and increase CCA to 100 per cent allowing companies to depreciate or write off 100 per cent of investments annually for the next five years. By contrast, Canadian CCA rates remain unchanged, ranging from 12 to 50 per cent. This slows investments by Canadian firms and multinationals operating in Canada and hinders Canada's competitiveness and ability to attract foreign investments.

Canadian firms are at risk. On a size-adjusted basis, Canadian firms invest half the level ICT that gets invested in the U.S. The result is sizable lag in productivity. The gap between Canada and the U.S. will continue to increase: from five per cent in the 80's; to fifteen per cent in the early 2000's; it's now 27 per cent[i].

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Budget 2019 Recommendation:

- **Encourage greater private sector investments in ICT infrastructure and more accurately reflect real depreciation costs by accelerating CCA to 100 per cent for all ICT class assets.**

International Trade

It is crucial that Canadian technology have access to international markets as well as the ability to attract investment into Canada from abroad. Canada needs to diversify its export markets.

Budget 2019 Recommendation:

- Global Affairs Canada to receive **increased funding to improve their Digital Online Trade Commissioner Service** that would include a better integration of an all of government approaches to avoid duplication of efforts.
- **Expand the CanExport program** that provides direct financial assistance to SMEs seeking to develop new export opportunities and markets.
- **Take advantage of CETA and CPTPP** through funding for the Trade Commissioner Service. Including expansion of the Canadian Technology Accelerator to Europe and Asia.
- **Maintain pressure to conclude a successfully renegotiated NAFTA**, including needed updates to chapters relating to modern technology.

Innovate the SR&ED Program

Since the government announced a holistic review of federal R&D programs in Budget 2017, ITAC has met with several Government officials to encourage innovative companies to scale-up, create market-based mechanisms to guide tax-payer investments in R&D; and increase access to risk capital.

Issues identified by ITAC include:

- **Supporting Scale-up:** Reward successful innovators by reducing the SR&ED Grind Down for growing companies.
- **Encouraging Collaborative Innovation:** Allow large firms to access a portion of unused SR&ED credits to fund collaborative R&D with Canadian SMEs – increasing risk capital and providing access to global supply chains.

  Encouraging SMEs to grow through mergers and acquisitions: Help create larger, competitive businesses by creating 3-5 year "SR&ED holiday," so the merged company can still access credits at rates previously available to smaller entities.

Budget 2019 Recommendation:

- **Finance Canada and ISED work with ICT industry experts to advance recommended adjustments to SR&ED.**

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4. Cyber Security

Cyber threats pose an increasing risk for our economy and society. The new Canadian Cyber Security Strategy announced in Budget 2018 is a good start, but more details are needed.

- Have the new *Canadian Centre for Cyber Security* establish a **Government-Industry Executive Advisory Table,** with senior cyber executives from industry and government advising on increasing cyber preparedness and innovation across the economy.

- Invest in the **development of cyber talent** and encourage students to pursue cyber careers.

- Fund research, development and commercialization of new cyber security technologies, and develop programming to support the growth of Canada's cyber industry to take advantage of a of a $100B global cyber economy.

- Introduce a tax credit for cyber security technologies aimed primarily at SMEs that collect consumer data; conduct R&D – especially funded by taxpayers; and provide goods or services that are important for the physical and economic security of Canadians.

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5. Marketplace Frameworks

Data is the engine of economic growth and prosperity. Countries that promote data's availability and use for societal good and economic development will lead the 4th industrial revolution.

Trust in the digital economy will require sound data governance, cyber security, intellectual property protection, and privacy protection. There need not be a trade-off between privacy and business innovation. New technologies, especially cyber solutions, can better protect Canadians privacy.

Government needs to partner with industry. Adoption of new technologies will fall behind if the regulatory environment limits Canadians' capacity to innovate in practical applications of technologies, reducing competitiveness and diminishing Canada's relevance as a global player.

Budget 2019 Recommendation:

As part of the Data Strategy, the Government should **review the effectiveness of marketplace laws and regulations** to ensure:

- PIPEDA, CASL, IP and Copywrite policies support, not impede innovation.
- Appropriate levels of funding to provide businesses, especially SMEs, with simple compliance guidance and tools.
- Private initiatives, voluntary codes and standards are leveraged, and regulatory tools are only used where needed.

- Privacy and security concerns by federal departments regarding technology adoption need to be honestly stated with facts.
- Government focuses on obvious gaps: the reform of the *Privacy Act,* as well as the inclusion of political parties as entities subject to privacy law.

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6. Talent and Diversity

Talent is the foundation of Canada's ICT sector and of innovations in every sector of our economy. Beyond meeting projected demand for ICT talent, Canada needs to double down on its proven ICT strengths.

People with the right ICT skills – combined with expertise in business, complementary technologies, innovation and leadership – are a magnet for investment. Canada can gainfully employ a high share of its workforce in export-oriented technology-based products and services. This can help offset the disruptive impacts of automation.

Some companies have linked diversity to the labour skills shortage, suggesting increasing participation of under-represented groups—particularly women and immigrants—would help offset the declining enrolments in STE{A}M programs, considered the principal pipeline to the ICT profession.

The Innovation and Skills Plan in Budget 2017 included steps to address Canada's opportunity. More are needed.

Budget 2019 Recommendations:

Double Down on Canada's Diverse Tech Talent Competitive Advantage - 2025 targets

- Increase the number of employed highly-qualified ICT professionals from 550,000 (2018) to 750,000 (2025), by increasing the average compound growth rate from 2.5 per cent to 4.5 per cent per year.
- Increase the proportion of women and Indigenous Canadian employed as highly-qualified ICT professionals by 25 per cent over the same period.

Recommended Budget items:

- Conduct national/regional consultation and strategy development project to identify, prioritize and develop ICT-related post-secondary education program capacity expansion priorities, strategies and plans.
- Work with ITAC to develop and conduct a four-year national/regional ICT career awareness and comprehension program that targets secondary school teachers and students.
- Support the Business/ Higher Education Roundtable (BHER) Work-Integrated Learning recommendations to the federal government.
- Consult with Indigenous organizations to develop a strategy and plan for increasing participation in ICT-related career paths.

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- Expand Student Work Placement Program (SWPP) to include funding of foreign students.
- Review current Canadian and global best practices for the use of educational technologies to support skills upgrading and career transitions from the Future Skills Centre commission. Budget to be drawn from existing Centre funding.

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[i] *BDC Productivity Matters.*