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INFORMATION TECHNOLOGY ASSOCIATION OF CANADA

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ASSOCIATION CANADIENNE DE LA TECHNOLOGIE DE L'INFORMATION

INFORMATION TECHNOLOGY ASSOCIATION OF CANADA SUBMISSION: ONTARIO BUDGET 2019

*Information Technology: A Key to High Quality Jobs and
Government Cost Savings*

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Executive Summary

As the Government of Ontario undertakes planning for the 2019 Budget, the Information Technology Association of Canada (ITAC) – on behalf of its membership – wishes to stress the importance and ability of technology to help the government improve the way that its programs are delivered to its citizens and businesses, improving service delivery and saving money as a result.

This Submission will align to themes outlined by the Government of Ontario, which shape **ITAC's four recommendations for change**. These four recommendations are to:

- Modernize digital government operations that will improve taxpayer services by incorporating technology to drive government efficiencies and better services.
- Ensure the Ontario Government makes Cyber Security a priority (and as part of a new digital government, cyber security should be included by design for all new programs).
- Ontario should increase the number of students in science, technology, engineering and mathematics (STEM) programs.
- The Ontario public sector must accelerate a leadership position in the Ontario economy to capture and provide further opportunities to maximize the impact of Ontario innovation in artificial intelligence (AI), blockchain, machine learning, and other associated technologies.

About the Information Technology Association of Canada (ITAC)

For more than 60 years, ITAC has served as the leading voice for Canada's information, communications and technology (ICT) industry, championing the development of a robust, competitive and sustainable digital economy in Canada.

As a prominent advocate for the expansion of Canada's innovation capacity, ITAC provides a vital connection between business, academia and government. ITAC also offers its members advocacy, networking and professional development services that help them to thrive nationally and compete globally.

Our role as a trusted and authoritative voice has expanded significantly over the years, as technology plays a more significant and important role in all sectors of our economy. That's why ITAC prides itself on its efforts around shaping public policy that supports the growth of talent and access to ICT professionals with diverse experience and backgrounds, better reflecting Canada's population.

This Ontario Budget Submission is being prepared on behalf of ITAC's membership.

Introduction

More than 32,000 Ontario ICT firms create and supply goods and services that contribute to a more productive, competitive, and innovative society. The ICT sector employs over 350,000 Ontarians, generates over 700,000 net jobs, with a growth of over 32,000, and an average wage of \$79,000. ICT is central to productivity and growth in all sectors of Ontario's economy.¹

Over the past few years, Ontario has seen an acceleration of new investments from domestic and global players, and seven of the 10 largest tech companies in the world conduct research and development (R&D) in Ontario. Hundreds of small and medium-sized Ontario-based technology companies are creating jobs and bringing international investment and revenue into the province.

Ontario is now viewed as a global leader in emerging areas such as AI, cyber security and robotics – all of which have, and will have, tremendous impact on individuals and organizations alike.

Ontario's future success is increasingly dependent on technology-fueled innovation. With this focus in mind, we strongly encourage you to consider ITAC's recommendations on the ways the Ontario Government can improve service delivery for its citizens and businesses while maintaining a strong climate for Ontario technology firms to succeed and grow.

We also want to reiterate the ICT industry's ability to help the government meet its stated objectives. ITAC's Submission responds to the Government of Ontario's five priorities – in particular: putting more money in the pockets of Ontarians; creating good jobs; and restoring accountability and trust.

Citizens have a growing expectation that their government is as efficient and effective and easy to engage with as the private sector. Service industries, for the most part, have moved to technology modernization, and every Ministry should undertake a digital modernization plan; technology should be at its core.

We recommend the following recommendations be considered to ensure that Ontario, and the Ontario government, remains a leader and driver of Canada's digital economy. ITAC would welcome the opportunity to meet with Ontario officials to discuss this submission in more detail.

¹ CompTIA *Cyberprovinces 2018* June 2018

Four Recommendations for Change

1. Technology is the Key to Driving Government Efficiencies and Better Services

For decades, private industry in every sector of Ontario has realized exponential improvements in productivity and operational efficiency by embracing digital technology. For private business, digital transformation is a matter of survival. While the Government of Ontario has made strides in recent years, most public sectors are slow to leverage technology to transform how it works and delivers services to its residents.

ITAC strongly supports much of the *September 2018 Ernst and Young Line-By-Line Audit*, especially the significant opportunities to find savings in efficiencies in how government operates and delivers services to our citizens. The review recommends many large-scale opportunities to make government spending more productive and targeted:

- Modernizing services through better use of digital and shared service models.
- Finding more cost-efficient ways of administering government.
- Ensuring government funding is directed to those that require it the most.
- Maximizing the value of government assets and putting them to their most productive use.

While the line-by-line audit will no doubt identify individual programs that could be tweaked or cut to improve efficiency, it also calls for a digital transformation of how the government works, interacts with, and serves Ontarians, and is the only long-term solution that will reduce costs and the size of the government, while delivering more effective and convenient solutions for its citizens.

This is especially the case in Ontario's two largest expenditure areas – healthcare and education.

In healthcare, digital health technologies support the increased use of Virtual Health for Ontario. Telehealth and the use of digital health technologies in homecare settings, for example, have proven to decrease wait times, allowed for more efficient access to specialists and improved preventative medical practices – all of which reduce healthcare costs while improving the health outcomes for patients. For example, patients with chronic health conditions account for a highly disproportionate amount of healthcare spending, from regular appointments and treatments to increased secondary visits, which is also taxing on the patients. Increasing the use of Virtual Health applications will continue to increase the ability for clinicians, doctors and nurses to more efficiently treat patients, reduce wait times by eliminating repeat visits, and leverage larger data sets to deliver more effective care. Benefits of the use of Virtual Health applications are not only realized in our rural and remote communities in Ontario, but also with our aging population, whose mobility is highly restrictive, for all regions of our province. The health ICT sector welcomes an increase in spend on Digital Health technologies to see a further increase in costs savings for Ontarians.

In the education space, digital technologies can connect teachers and students – from primary to post-secondary – in ways that are convenient and impactful. As new technologies disrupt and displace industries in the next few decades (e.g. driverless cars/trucks), worker re-training will need to become a serious focus of Ontario’s education approach and digital learning could help this become more efficient and targeted. ITAC recommends that the province increase ways to encourage more students to enter STEM programs and provide additional co-op and work integrated learning opportunities.

The following recommendations address ways technology can put more money into the pockets of Ontarians (e.g. reduce the cost of government) and restore accountability/ trust (i.e. cut waste and red tape).

Recommendations:

The Government of Ontario has an opportunity to continuously evolve into a digital government. ITAC and its members believe that Ontario should commit to:

1. **Adopting digital-first policies for all new programs.** The private sector is constantly finding digital solutions (e.g. cloud technology) and it is time for the public sector to catch-up, while still considering the need to ensure security and privacy of citizens.
2. **Build on the creation of “modernization plans” for every Ontario Ministry** – as announced in the Fall Economic Statement. This is an excellent opportunity for these to examine all sectors of how government operates as this is the time for ministries to introduce new technologies that will save money in the long and short-term. Ontario should also introduce a digital government lens for all Treasury Board Submissions, so new expenditures are evaluated on their ability to leverage technology to deliver services in the most efficient manner possible.
3. **Review existing procurement practices.** Working with Ontario’s ICT industry, identify new purchasing models (e.g. service subscriptions vs. capital expenditures) to ensure Ministries can get quick access to technology, and make a more agile and flexible Government. The goal should be to acquire the best technologies available at the best rate for its citizens. Neither industry nor tax-payers benefit from a lengthy and obstructive procurement processes.
4. **Leverage Digital to Reduce Travel:** Leverage technology, like modern video conferencing, to reduce the need to public service travel. For example, the British Columbia Government, has reduced travel by installing video conferencing equipment into its facilities. If the Government of Ontario were to upgrade its technology capabilities, it could better connect officials and save on travel costs.
5. **Launch a Mobile Workforce Strategy:** This strategy would make it easier for OPS employees to work from home or OPS “hotel” spaces closer to where they live. This initiative would increase employee flexibility and morale, reduce congestion and

commute times, and potentially allow the government to reduce its office footprint in downtown Toronto for less expensive locations. Technology investments in areas like the cloud would be required to enable remote work and collaboration, as recommended in the *September 2018 Ernst and Young Line-By-Line Audit*.

6. **Establishing an Ontario Efficient Digital Government Office** with a mandate to work closely with Ontario's technology industry to learn about how governments in other jurisdictions are leveraging leading-edge technology to drive efficiencies – and how Ontario's existing procurement processes can be shifted to deliver lower-cost solutions and better services more quickly.
7. **Introduce Commercial First Legislation** that would state that the government should procure from the private sector technology products, goods, services and solutions necessary for the operations and management of certain government agencies, departments, and for other purposes, unless such goods or services are required by law to be produced or performed by such agency or need for security reasons.

It's important to remember that it's not just about the need for digital training of people who lose jobs; we also need to foster more STEM grads. In terms of tech job loss and worker retraining, we recommend:

- That the system of support is updated to help each individual displaced worker to assess their skills and identify where they can lead; and
- That the Government of Ontario, through key partnerships, provide the necessary additional training to help get them there. This entails a combination of digital and in-person supports.

The tech sector is willing to help address these challenges, including in-kind contributions in partnership with government programs.

2. Efficiency Must Not Compromise Security

Ontario faces unprecedented, escalated cyber and information security threats. These threats come from organized crime, cyber activists and, increasingly, state-sponsored hackers. Cyber-attacks have the potential to compromise the physical and economic security of Ontarians, the safety of critical infrastructure and power grids, and even the legitimacy of democratic institutions.

In Budget 2018, the previous government dedicated \$64 million over three years to increasing Ontario's cyber resiliency. This funding should be maintained. The risks and ultimate social and economic costs of a large-scale security breach will damage accountability and trust in the government by citizens and will vastly outweigh any short-term efficiencies gained by reducing Ontario's cyber protections.

Recommendation:

- Cyber Security should remain a priority for the Government of Ontario and should be included in all new digital programs.

3. Maintain Investment Attraction and Expansion Tools

Ontario operates in a global economy. This is especially the case in the ICT industry which is the most globalized industry in the world.

Ontarians have proven that we have among the best technology workers in the world, and a business climate is highly attractive to the largest global tech firms— many of which have established major operations and R&D centres in the province and are engaging in leading innovation hubs. A favourable tax regime is vital for attracting investment, however, the province of Ontario also needs programs to attract international investment from global technology industries. This will result in additional high-paying tech jobs, helping to drive the Ontario economy forward. The average tech industry wage is 55 per cent higher than the average provincial wage.

As stated in the Ernst and Young audit, it is a necessity for the Ontario public sector to accelerate in a leadership position in the Ontario economy to capture and provide further opportunities to maximize the impact of Ontario innovation in AI, blockchain, machine learning, and other associated technologies. For this, Ontario must work pro-actively to support SMEs and scale-up companies with initiatives such as the Ontario Scale-Up Vouchers Program.

Many other jurisdictions – especially competing jurisdictions in the U.S., have various programs, and if Ontario has no incentive option we may lose both jobs and investments. ITAC supports the review of all business support programs as announced in the Fall Economic Statement to ensure they are aligned with the needs of the private sector and value for money.

The Government must also ensure that industry is not faced with unnecessary administrative burdens compared to other similar jurisdictions in areas such as stewardship of electronics products.

Recommendation:

- The Government of Ontario should maintain support for programs such as the Scale-Up Vouchers Program and Regional Innovation Centres.
- Endeavour to minimize the administrative burden and agency resource requirements to manage producer paid stewardship programs.

4. Maintain Investments in Ontario’s Skilled Technology Workforce That will lead to Well Paying Jobs.

Talent is the foundation of Canada’s ICT sector and of innovations in every sector of our economy. Ontario has created a world-leading system for training ICT workers from cutting-edge programs that produces graduates experienced in AI and quantum computers, to underrated technical programs at our colleges. Ontario graduates are some of the best of the world and a driver of the Ontario tech boom.

While there are certainly opportunities to identify efficiencies in Ontario’s education sector, the government should be careful not to undercut the quality and growth of Ontario’s ICT workforce. Rather, investments in ICT skills should be viewed as a particularly efficient use of tax dollars. This could include modern vocational training, such as competency-based programs, and include innovative curriculums in K-12 grades that would feature such as, 21st-century apprenticeships and professional certification programs, such as accelerated digital skills through Pathways in Technology Early College High Schools (P-TECH) at the secondary level. P-TECHs are high school programs that bring together specific elements of science, engineering and computers with in-demand skills and knowledge that students will need for post-secondary studies and high-growth jobs being prepared for a rapidly changing job market.

For years, access to talent has driven the growth of Ontario-based technology firms with ICT skills that range from fiber optic installers to PhDs in AI. Increasingly, combining technology skills with expertise in business, complementary technologies, innovation and leadership, tech professionals – drive entrepreneurship, investment and economic growth.

Recommendations:

- Find ways to increase the number of students in Ontario training in technology fields – including women and other underrepresented groups.
- Encourage the introduction of programs such as P-TECH
- Ontario is well positioned to double down on its global ICT leadership. ITAC believes that the province should launch a high-profile program to accelerate its growth of “high skill” ICT professionals, with a target of 375,000 by 2025. The components of this program should include the following:
 - Strengthen and make widely accessible, post-secondary and career learning in fast growing fields like AI, cybersecurity, robotics, and mobility.
 - Increase the number of co-op and integrated learning opportunities to help bridge students into the workforce.
 - Identify, support and distribute high quality alternative learning pathways such as online, self-directed, on-the-job, private sector, and the like.
 - Get behind Ontario and national efforts such as the Business Higher Education Roundtable to ensure that every post-secondary graduate has relevant work-integrated learning experiences.
 - Educate K-12 students, teachers and parents about the changing nature of ICT and STEM-related careers and career pathways.

Conclusion

Our role as an association is to work with your government to help improve the competitiveness of Ontario firms on a global stage. ICT is at the forefront of an Ontario that is open for business as these are the jobs of both today's and tomorrow's economy.

Ultimately, technology is the key to improved service delivery for the government and the increased growth of our sector is crucial to maintain Ontario's leadership position in the Canadian economy.

Sound government policy and wise investments are needed to help the government modernize, and for Ontario technology industries to compete on a global scale in a global marketplace. Failure to provide this investment will result in hindered economic performance for businesses and the government and Ontario runs the risk of missing game-changing investment opportunities for the future of the province's economy.

ITAC looks forward to working with the Government of Ontario to advance these five recommendations. We would be happy to meet to discuss and provide further clarification at your nearest convenience.

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