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The Effects Of Advanced Digital Technologies On Canadian SBOs

startupcan.ca/advanceddigitalsbos
#DigitalSBOs

A study to uncover how advanced technology is affecting Canadian small business owners (SBOs) as they start and scale their businesses. The final report in a four part series, this study outlines the current technological trends in Canadian companies and highlights what advanced technologies SBOs will need to adopt to remain competitive in the global economy.



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EXECUTIVE SUMMARY

In 2017 [Startup Canada](#), the national rallying community and voice for Canada's entrepreneurs, conducted four research surveys that gathered information on the digital adoption rates and consumption habits of Canadian small business owners (SBOs). The first study conducted in February 2017 revealed that while the majority of SBOs in Canada consider themselves to be high adopters of new technologies, many barriers still exist. In the second national report released in May 2017, Startup Canada examined the troubling gender divide that persists amongst women SBOs and outlined recommendations to eliminate this gender gap. In the third report released in October 2017, Startup Canada found a technological skills gap in the Canadian workforce that must be addressed if Canadian companies are to remain competitive in the global digital economy. In this fourth and final report, Startup Canada examines the advanced digital technology consumption habits of SBOs and the importance of adopting advanced technologies, such as artificial intelligence (AI) and the Internet of Things (IoT) in order to remain relevant and competitive.

When it comes to advanced digital technology, Canadian SBOs are slowly beginning to adopt. The most popular advanced technologies include cloud services and data centres, mobility solutions, the Internet of Things, and AI. Eighty-three per cent of SBOs believe that the advancements in digital technologies over the next 10 to 20 years will have a positive impact on the growth of their businesses. Seventy-seven per cent of SBOs said they chose to adopt advanced technologies to better improve their business' productivity and help create a more efficient work environment; 67 per cent are using advanced technologies to improve customer experience; and 61 per cent are using it to reach new customers.

Seventy-nine per cent of SBOs, however, perceive there to be disadvantages in adopting these technologies. According to SBOs, the top three disadvantages include security risks, ongoing maintenance costs and technological failures. SBOs believe that government has a leading role in closing the digital skills gap and can do so by investing in digital literacy training for the mature workforce, support digital skills-building opportunities for young Canadians in elementary and high school, and encouraging students to pursue post secondary studies in Science, Technology, Engineering and Mathematics (STEM) programs. SBOs also indicated that government and industry can play a larger role in supporting SBOs through providing incentives

to invest in digital tools and leading by example by being first adopters of new advanced digital technologies.

INTRODUCTION

Canadian SBOs must keep pace with the rapidly evolving digital ecosystem if Canada is to maintain a competitive edge in the digital global economy. Partnerships between industry, government, and SBOs will determine how to attract and cultivate the talent that will position Canada as a leader during the Fourth Industrial Revolution. The fusion of technology across the physical, biological and digital worlds creates immense opportunities for Canadian SBOs, but only if they have the skills and access to the tools necessary to capitalize on these new possibilities.

The final report in a four-part series, this study explores digital adoption through an innovation lens. This study will build on the previous studies' evaluation of the boldness of Canadian SBOs in adopting new technologies and identify how these attitudes and skillsets are affecting small business innovation and growth. The findings from this research align with the three previous studies conducted by Startup Canada which honed in on what digital skills are required for Canada's SBOs to gain a competitive edge in local markets and beyond.

METHODOLOGY

This study was conducted between June 29, 2017 and July 31, 2017 through a national survey that engaged 428 respondents from across Canada. The confidence level for this sample size is 95 per cent, with a margin of error of 1.96. This report summarizes the results of the research.

RESPONDENT PROFILE

Thirty-five per cent of respondents are 18 to 35 years old; 44 per cent are 36 to 54 years old; 16 per cent are 55 to 64 years old; and, five per cent are over 65 years old. Fifty-five per cent of respondents self identify as women, 44 per cent as men and one percent classify themselves as other. Respondents represent a wide spectrum of industries that range from education, media and entertainment to retail, transportation and telecommunications. Nineteen per cent of

respondents have been in business for less than one year, 38 per cent have been in business for one to three years, 19 per cent for three to six years, nine per cent seven to 10 years and 15 per cent for more than 10 years.

ADVANCED DIGITAL ADOPTION AMONGST SBOS

Digital technology is important to the overall success of any business and with the rapid rate of technological change, it is important that SBOs keep up with the rate of change in order to keep a competitive edge. SBOs are currently exploring the following advanced technologies: cloud services and data centres (65 per cent); mobility solutions (34 per cent); the Internet of Things (28 per cent); and Artificial intelligence (15 per cent). Additionally, 42 per cent of SBOs indicated that they plan to adopt Artificial Intelligence (AI) machines in the future; 40 per cent plan to adopt cloud services and data centres; 33 per cent plan to adopt the Internet of Things (IoT); and 31 per cent plan to adopt mobility solutions.

ADVANTAGES AND DISADVANTAGES OF ADVANCED TECHNOLOGY

Among the respondents who have already adopted advanced technologies, the majority of SBOs (83 per cent) are optimistic about the impact of these technologies on their company's growth over the next 10 to 20 years. Seventy-seven per cent of SBOs said they chose to adopt these technologies to better improve their business' productivity and help create a more efficient work environment; 67 per cent are using advanced technologies to improve customer experience; and 61 per cent are using it to reach new customers.

““The world is changing very fast [and] our team is made up of curious and driven individuals who are committed to contributing to positive social change through our venture,” **said an SBO in the Food Services sector.** “Any way that we can continue to adapt, improve, and expand our horizons will help our business and allow us to do more for the people around us.”

While the majority of SBOs perceive there to be many benefits of advanced technologies, disadvantages also exist. For SBOs, the top three disadvantages of adopting new technologies are the perceived increase of security risks (45 per cent), ongoing maintenance costs (43 per

cent), and the large impact of possible technology failures (30 per cent). Twenty-one per cent of respondents, however, do not perceive any disadvantages to adopting technology.

“We have access to the necessary tools but lack the experience to correctly use them at their full capacity,” **said an SBO in the Engineering and Construction sector.**

CHALLENGES AND BARRIERS

With the digital economy changing at such a rapid pace, SBOs are finding it difficult to locate the resources needed to keep up with evolving technologies. Twenty-seven per cent of respondents indicated not having the necessary tools and training to keep up with new technologies. Further barriers faced by SBOs include access to funds and time for training and recruitment; access to mentorship; knowledge of where to look for training information; and the rural divide.

TIME, COST AND MENTORSHIP

Some of the largest challenges facing SBOs regarding advanced digital adoption is time and cost of maintenance. In the 2017 Startup Canada report, *Advancing Digital Adoption Amongst Small Businesses in Canada*, 44 per cent of SBOs highlighted the high cost and time (38 per cent) associated with updating and maintaining new technology platforms within their companies as a main barrier to general digital adoption. The same barriers were echoed by SBOs looking to adopt advanced digital technologies. Aside from cost and time, other SBOs said that access to mentorship is another major barrier stopping them from adopting advanced technologies.

“Although [I am] a coding bootcamp graduate, I don’t think there are enough mentors and support for developers and entrepreneurs in Canada,” **said an SBO in the High-Tech sector.**

“Advanced digital technologies are still quite costly, and have a longer rate of integration than my company can currently afford,” **said an SBO in the Consulting and Professional Services sector.**

ACCESS TO TALENT AND TRAINING

Another major barrier Canadian SBOs face when adopting advanced digital technologies is the lack of access to talent and training information. SBOs indicated finding it difficult to find reliable sources that offer the proper training on new advanced technologies. In addition, because of the digital skills gap, SBOs are struggling to find and hire employees who have knowledge and experience in this area.

THE RURAL DIVIDE

SBOs working in rural parts of Canada are finding it especially difficult to get access to the necessary tools and training needed to implement advanced digital technologies into their businesses. One SBO from the retail sector said that she lives in a rural community that has no access to a digital or technical school training, making it difficult to find employees who possess the skillsets needed to use and operate advanced technologies. Additionally, one SBO in the Consulting and Professional Services sector said that since her business was located in a remote rural community, it was too expensive and too far to travel to a city that provided training on advanced technologies.

“Our area and budget is very small, and the training required [for advanced digital technologies] is too expensive and too far,” **said an SBO in the Consulting and Professional Services sector.**

RECOMMENDATIONS TO INCREASE DIGITAL ADOPTION RATES

With the various challenges and barriers SBOs are currently facing in today’s digital landscape, it is essential to forge and leverage partnerships between industry, government, and SBOs to attract and cultivate the talent needed to set Canada’s SBOs up for success.

GOVERNMENT AND INDUSTRY INVESTMENT SUPPORT

When it comes to implementing advanced technologies, SBOs believe that government can help harness the opportunities that digital technologies provide SBOs in the future, and help close the digital skills gap in various ways. Seventy-six per cent of SBOs believe that government can help by investing in digital literacy training for the mature workforce; support

digital skills building opportunities for young Canadians in elementary and high school (71 per cent); and, encourage students to pursue post secondary studies in Science, Technology, Engineering and Mathematics (STEM) programs (61 per cent). According to a 2015 report released by the Council of Canadian Academies, “STEM graduates generally fare better in the labour market than their non-STEM counterparts, with lower unemployment, higher employment rates, and higher wages” ([Council of Canadian Academies](#)).

SBOs also believe that government and industry can play a larger role in supporting small business owners as they adopt digital tools and skills through providing incentives for SBOs to invest in digital tools (38 per cent) and digital skills building (35 per cent), and believe that they can lead by example by being first adopters of new digital technologies (18 per cent).

FINAL REFLECTIONS

As technology advances SBOs need to ensure that they are able to keep up with the rapid rate of change. Falling behind on these critical skills can be detrimental to the success of Canadian businesses and since small businesses are responsible for employing more than 90 per cent of the Canadian private sector workforce ([The Government of Canada](#)), it is important that government and industry partners invest in and incentivize advanced technology use amongst SBOs.

Although advanced technology is the way of the future, each report in this four-part series demonstrates that SBOs are running into roadblocks - especially regarding the time and cost of adopting new technologies. With the collaboration and support of industry and government, SBOs will be empowered to keep up with advanced technologies, reap their benefits to grow their companies, and be competitive in the global economy.

Lindsay Bright, Startup Canada