



# WOMEN ENTREPRENEURS' ADOPTION AND USE OF TECHNOLOGY

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## **Executive Summary**

Cisco requested research to determine the needs of women entrepreneurs respecting the adoption of technology to enhance and to grow their businesses. From a review of published literature, it is clear that Canada's ICT infrastructure is well developed. Studies indicate that 89 to 93% percent of SMEs have an internet connection. SMEs are using Internet, social media and other collaborative solutions for their business operations. However, adoption of ICTs equipment and use of management software packages varies significantly depending on the size of the company and the type of business. Companies with 100 to 499 employees show a greater use of the ICTs and a better web presence than the smaller companies. Women owned enterprises tend to have fewer than 100 employees.

The number of women owned businesses in Canada has been steadily increasing. They tend to be concentrated in the service- orientated sectors such as health care and social assistance, information and cultural industries, arts, entertainment, recreation and retail

Many women founders struggle to access and use the technology, networks, and knowledge they need to start and to grow their business. From interviews with organizations that support women enterprises, this study found that women entrepreneurs adoption of technology is not so much related to the ICTs infrastructure, but rather understanding what type of technology does the business require and integrating social media tools into core business processes that is supported by a clear digital strategy. The findings reveal in order to overcome the challenge with technology adoption, women entrepreneurs need advisers who not only understands technology but the entrepreneurs strategic business goals and how the business functions. An effective advisor should be able conduct an analysis to identify the strengths and weaknesses, of the business, analyze their business needs, and advise them on the most effective technology given their level of business, and their financial and human resources. There is no doubt that women entrepreneurs would benefit from one- to- one assistance provided by an advisor who is knowledgeable about both the needs of the business and the technology. An adviser who understands technology but not business processes will likely not be successful in helping an entrepreneur understand what will be most effective for her business.

## **Introduction**

This research examines the current state of technology adoption by female entrepreneurs and how Cisco can facilitate improved integration of information, communication, and technology (ICT) and social business tools (digital technologies) into women's enterprises. From a review of published literature and subsequent interviews with organizations that support women enterprises, the study concludes that the main problem is not so much related to the ICTs infrastructure, but rather understanding what type of technology does the business require and integrating social media tools into core business processes that is supported by a clear digital strategy. The success of such technology dissemination is determined by the appropriateness such as business needs assessment, the use of appropriate technologies including digital technology, ability to integrate the digital technology to improve organizational capabilities across multiple business processes, and a clear strategy

Both a literature review and interviews with organizations that support women entrepreneurs were conducted. Interviews with organizations helped in identification of the challenges and areas where Cisco can best support and facilitate women entrepreneurs' use of ICTs for business activities. The study begins with an overview on female-owned SMEs followed by the ICT environment for businesses in Canada. The study ends with a roadmap on how Cisco can help women business owners with their technology adoption.

## **Women's Entrepreneurship in Canada**

Evidence shows a substantial increase in the number of women owned businesses<sup>i</sup> in Canada. The number of women self-employed climbed by 23%, while the number of self-employed men grew by 14%<sup>ii</sup> between 2001 and 2011. In 2012, 950,000 women were self-employed, accounting for 35.6% of all self-employed persons<sup>iii</sup>. According to TD Economics, in 2012, 47% of small and medium-sized enterprises (SMEs) were entirely or partially owned by women. Furthermore, RBC Economics Research (2013) reported, in 2011, the aggregate contribution of female majority-owned SMEs was an estimated \$148 billion in economic activity. The report further estimated that a 10% rise in the number of female majority owned firms in next decade would mean an estimated \$198 billion in economic activity. Although, there is a growth in the

number of female owned businesses, the report states, the number is still low and there is room for expansion within this demographic<sup>iv</sup>.

The literature has recently started to use the number of self-employed with an incorporated business as an indicator (or a proxy) to understand female and male entrepreneurial activity<sup>v</sup>. This is primarily because self-employed people with an incorporated business often operate in formal sectors such as professional, technical, health, and social assistance, while unincorporated business owners tend to operate in informal sectors such as running micro-enterprises from home. Although, the majority of women based businesses are in the informal sectors<sup>vi</sup>, the scenario is fast changing. Industry Canada's, Key Small Business Statistics (2012) reports that the number of self-employed women with an incorporated business has increased by 15% since 2007, and has more than doubled since 1996. These businesses are mainly in the formal sector with 17.4% in professional, scientific, and technical services, and 12.7% in health care and social assistance<sup>vii</sup>.

According to the Industry Canada sponsored 2015 study, the majority of female-owned SMEs tend to be smaller than other SMEs (See Table 1) and were mainly concentrated in service-oriented business (Table 2)<sup>viii</sup>. The report states, "majority female-owned SMEs were three to four times less likely to operate in the agriculture, forestry, fishing and hunting sector and the construction sector than majority male-owned SMEs. The manufacturing sector also exhibited a significantly lower concentration of majority female-owned businesses." The report further notes, "Majority female-owned SMEs were concentrated in service-oriented sectors, with health care and social assistance, information and cultural industries, and arts, entertainment and recreation; retail trade; and accommodation and food services accounting for 62.3 percent and 62.5 percent of majority female-owned SMEs in 2007 and 2011 respectively." In terms of growth, the report shows majority female-owned SMEs exhibited lower growth and lower intentions to grow compared to the male-owned SMEs, however, a majority of the female-owned SMEs were more likely to engage in innovation activities and were more engaged in product innovation compared to the male-owned SMEs.

**Table 1: Percentage Distribution of SME Ownership by Firm Size (Number of Employees), 2007-2011**

Number of Employees	Majority Female-Owned		Majority Male-Owned		Equal Ownership	
	2007	2011	2007	2011	2007	2011
1 to 4	58.8	59.2	59.1	51.4	55.4	53.5
5 to 19	37.6	33.5	29.1	35.1	36.7	38.6
20 to 99	3.1	6.8	10.7	12.3	7.3	7.3
100 to 499	0.5	0.5	1.2	1.2	0.6	0.6

Adopted from: Majority Female-Owned Small and Medium-Sized Enterprises Report, May 2015, Table 1, p.7.

**Table 2: Percentage Distribution of SME Ownership by Industry Sector, 2007-2011**

Industry Sector	Majority Female-Owned		Majority Male-Owned		Equal Ownership	
	2007	2011	2007	2011	2007	2011
Agriculture, Forestry, Fishing and Hunting	1.9	2.1	7.7	7.2	9.0	9.8
Construction	4.6	5	17.5	17.9	10.2	14.1
Manufacturing	4.2	2.8	6.8	7.5	7.4	7.5
Wholesale Trade	3.3	2.7	5.3	6.9	4.7	6.4
Retail Trade	19.3	21.4	10	11.7	21.2	14.1
Transportation and Warehousing	3.9	2.9	4.9	5.6	1.6	4.7
Professional, Scientific and Technical Services	10.3	10.7	14.4	12	15.8	11.4
Accommodation and Food Services	9.3	14.4	6	7.7	12.1	7.9
Other Services	9.4	11.4	6	6.6	3.9	7.7
Health Care and Social Assistance, Information and Cultural Industries, and Arts, Entertainment and Recreation	33.7	26.7	21.3	17	14.1	17.5
Knowledge-Based Industries	3.2	3.7	5.7	4.6	5.6	5.2

Adopted from: Majority Female-Owned Small and Medium-Sized Enterprises Report, May 2015, Table 2, p.7.

Women's self-employment particularly entrepreneurship make meaningful contributions both in economic and social spaces<sup>ix</sup>. Examples of some major benefits include, generate increased revenue and contribute positively in the country's GDP<sup>x</sup>; increase national well-being and competitiveness<sup>xi</sup>; improve women's employability, empowerment, and gender equality<sup>xii</sup>; and benefit future generations, as women entrepreneurs' invest more in their children's education and health, which in return increases productivity<sup>xiii</sup>.

Despite the benefits of women's' entrepreneurship, the foreword note on The Gender Global Entrepreneurship and Development Index (GEDI, 2013) notes, "many women founders struggle to access the capital, technology, networks, and knowledge that they need to start and grow their business". In advanced countries like the USA and Canada, well-developed policy and institutional support through government and public/private partnership does facilitate to some extent access to capital and business networks to women entrepreneurs<sup>xiv</sup>. Yet, not much has been done in the area of access to technology except for sporadic initiatives such as the 'Women Entrepreneurship Fund' a joint partnership by Start-up Canada and Dell Canada<sup>xv</sup> or that of the Women's Enterprise Centre in Manitoba<sup>xvi</sup>. Similar sentiment had been echoed in a Booz & Company's report<sup>xvii</sup> where it argues that in order to create a more favorable entrepreneurial environment for women entrepreneurs, advanced countries such as the USA and Canada should invest in and emphasize access to technology and energy.

There is substantial evidence that successful entrepreneurs leverage technology in order to achieve their business objectives. Likewise, literature argues, the use of information, communication, and technologies (ICT) can transform existing gender-based inequalities into opportunities and resources and empower women with new tools and solutions<sup>xviii</sup>. Information and communication technologies (ICTs), especially mobile phones, computers, and the internet have become important tools for business operation and competitiveness. Further, the increased accessibility and affordability of ICT has allowed companies to integrate social media (e.g., Twitter, LinkedIn, and Facebook), social software (e.g., instant messaging and blogs), and technology-based social networks (e.g., employee and community forums) in their business operations. According to MIT Sloan Management Review and Deloitte's<sup>xix</sup> 2014 global survey,

60 percent of the business-to-business and 68 percent of the business-to-consumer companies agree or strongly agree that social media initiatives are positively impacting their business outcomes. ICTs together with the power of social business tools and innovations, present opportunities for all entrepreneurs, regardless of gender, to start and grow businesses.

### **ICT Infrastructure for Businesses in Canada**

The feasibility and effectiveness of using technology and social business tools depends on the ICT infrastructure of a country. According to the World Bank and the International Telecommunication Union’s 2015 ICT infrastructure indicators, Canada’s ICT infrastructure is well developed. Canada’s average in terms of households with internet access and fixed broadband subscription is higher than the high-income countries group’s average as presented in Table 3. This is also consistent with the ranking of the Networked Readiness Index<sup>1</sup> where Canada ranked 11<sup>th</sup> out of the 143 countries. Although Canada’s infrastructure was ranked top-level at 6<sup>th</sup>, overall usage with mobile broadband penetration ranked 45<sup>th</sup>, well below other countries in the high-income group. Overall mobile broadband penetration was found weak but the Canadian Internet Registration Authority’s (CIRA, 2014)<sup>xx</sup> survey found that internet access via mobile is common among the business decision-makers. According to CIRA (2014), Canada's ICT economy accounted for \$49 billion in 2010, roughly 3.0 per cent of Canada's GDP and is expected to grow by 7.4 per cent per year through 2016 to a value of approximately \$75 billion and more Canadian online users (50%) used the internet to order a good or service in 2012 compared to the US (33%).

**Table 3 Selected ICT Infrastructure Indicators**

	<b>Canada</b>	<b>High-income</b>
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<sup>1</sup> The networked readiness framework rests on six principles: (1) a high-quality regulatory and business environment is critical in order to fully leverage ICTs and generate impact; (2) ICT readiness—as measured by ICT affordability, skills, and infrastructure—is a pre-condition to generating impact; (3) fully leveraging ICTs requires a society-wide effort: the government, the business sector, and the population at large each have a critical role to play; (4) ICT use should not be an end in itself. The impact that ICTs actually have on the economy and society is what ultimately matters; (5) the set of drivers—the environment, readiness, and usage—interact, coevolve, and reinforce each other to form a virtuous cycle; and (6) the networked readiness framework should provide clear policy guidance (Source: The Global Information Technology Report 2015: p. xiii).

		<b>group</b>
<b>Access</b>		
Fixed-telephone subscriptions (per 100 people)	46.60	39.90
Mobile-cellular telephone subscriptions (per 100 people)	83.00	123.30
Fixed (wired)-broadband subscriptions (per 100 people)	34.40	28.00
Households with a computer (%)	87.60	80.30
Households with internet access (%)	86.60	81.00
<b>Usage</b>		
International voice traffic, total (minutes/subscription/month)		
Domestic mobile traffic (minutes/subscription/month)	396.60	188.00
Individuals using the internet (%)	87.10	80.60
<b>Quality</b>		
Population covered by a mobile-cellular network (%)	99.00	100.00
International internet bandwidth (bits per internet user)	129,244.00	131,821.00

Source: World Bank and the International Telecommunication Union. 2015. *The Little Data Book on Information and Telecommunication Technology*<sup>xxvi</sup>.

High internet connectivity was also found in the research carried out by Canadian Federation of Independent Business (CFIB, 2011) that reported 89 percent of the SMEs have an internet connection<sup>xxvii</sup>. Similarly, a study sponsored by the Business Development Bank of Canada found that 93% of SMEs have an internet connection<sup>xxviii</sup>.

### **ICT Adoption for Small and Medium-Sized Enterprises**

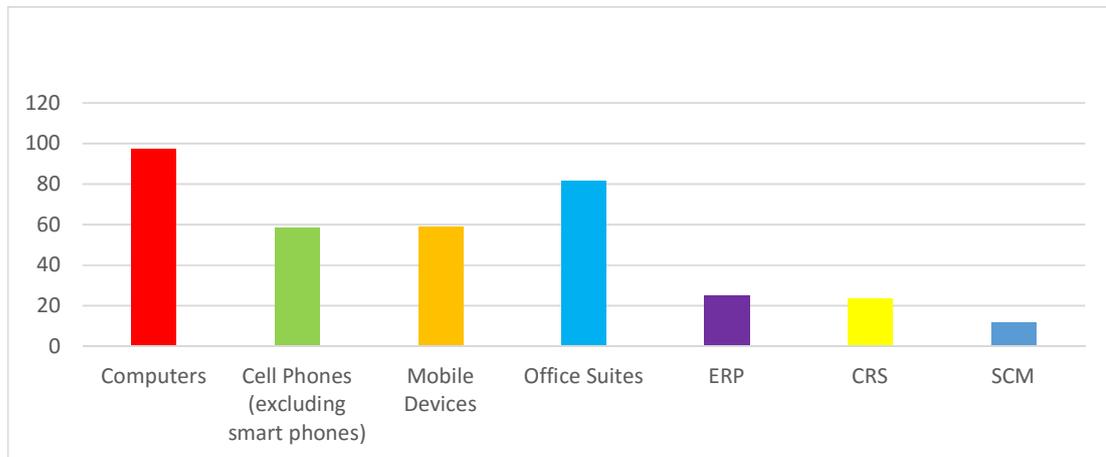
In 2013, small business accounted for 98% of the employer businesses in Canada with medium-sized businesses accounting for an additional 1.6 percent. According to the CIRA's report, 27 percent of the SMEs have an internet presence (website). By industry, 8 percent operate in professional, scientific or technical services, 11 percent in other services, and 13 percent in retail

trade. The SME leaders are likely to connect to the Internet with three or four devices and about 21 percent of SME leaders spend more than 30 hours a month online. CIRA's research does not give a percentage breakdown on technology ownership by SME owners but their report does indicate that most of the SMEs own regular mobile phone, computer, handheld tablets, and have internet connectivity in their computer and mobile phones.

CEFRIIO, NetPME (2011)<sup>xxiv</sup> surveyed more than 2000 SMEs across Canada covering all industry sectors and found 92.8% respondents (Canadian SMEs) are connected to the internet. All companies with 100 to 499 employees have internet connectivity and there is also a high internet connection rate among SMEs in the manufacturing sector. The report further gave the breakdown on the ICT equipment ownership (Figure 1) and reported 97.4% of the Canadian SMEs have at least one computer with 41.2% having between 5 to 19 computers. Interestingly, food and accommodation services were found to be less equipped with 15.2% having no computers. Likewise, 9.4% operating in agriculture, forestry, fishing, and hunting have no computers. Moreover, 58.8% of the SMEs owned cell phones (excluding smart phones) and 59.3% owned mobile devices that included smart phones, digital tablets and PDAs.

Further, the CEFRIIO, NetPME (2011) report found that the majority (82%) of the SMEs are equipped with an office suite (e.g., word, spreadsheet, presentation, and database) but very few companies use management software such as enterprise resource planning (ERP: 24.9%), customer relationship management (CRM: 23.9%), and supply chain management (SCM: 12%) software packages. Table 4 gives a detailed breakdown on the ICT software packages used by Canadian SMEs by number of employees and industry types.

**Figure 1: Canadian SMEs Ownership and Use of ICT Equipment and Software Packages**



Source: This figure was compiled from the data provided in BDC (2011), Use of ICT by Canadian SMEs.

**Table 4: SMEs use of Software Packages by Number of Employees and Industry Type**

		Office Suites	ERP	CRM	SCM
	All SMEs	82.0	24.9	23.9	12.0
Number of Employees	5 to 19	77.5	19.4	18.9	10.1
	20 to 99	90.5	33.3	30.8	14.5
	100 to 499	97.5	51.9	51.6	22.9
Industry Types	Manufacturing	92.3	34.4	29.5	16.2
	Wholesale & Retail Trade	79.9	29.3	29.2	20.4
	Services	81.7	22.6	22.2	8.4
	Other	79.1	19.5	18.0	8.9

Source: This table was compiled from the data provided in CEFRIO, NetPME (2011), Use of ICT by Canadian SMEs.

Generally speaking, the results indicate that Canadian SMEs adoption of ICTs equipment and use of management software packages varies significantly depending on the size of the company and the type of business. Companies with 100 to 499 employees show a greater use of the ICTs and a better web presence than the smaller companies. Smaller companies although they are using the office suites and are connected to internet, they are not heavy users of the management software packages. Also, the majority of the Canadian SMEs that do have a web presence is yet to adapt it for mobile platforms.

### **Adoption of Social Media Strategies by Small and Medium-Sized Enterprises**

In this age of high-speed connectivity, a deliberate and planned approach to social media helps the companies to have collaborative interactions with customers, suppliers, and employees. According to the MIT Sloan Review and Deloitte's 2014 Global executive report<sup>xxv</sup>, social media is not only about marketing (business to customers), and the companies who have taken a strategic approach to social platforms and integrated it in their business activities report:

- 87% use it to spur innovation.
- 83% turn to social media to improve leadership performance and manage talent.
- 60% integrate social business into operations.

Social media or social businesses broadly include activities that use social media (e.g., Facebook, LinkedIn, Twitter), social software (e.g., instant messaging, wikis, blogs, enterprise collaboration platforms), and technology-based social networks (employee and community forums) to enable connections between people, information and assets. These activities could be internally focused within the enterprise or externally focused toward customers, suppliers and partners<sup>xxvi</sup>. Lack of data in this area makes it difficult to draw a detailed picture of Canadian SMEs adoption of social media practices, however, the next section gives some details on how SMEs are using Internet, social media and other collaborative solutions for their business operations.

***E-banking***<sup>xxvii</sup>. One of the most common activities performed by the Canadian SMEs is online banking services. About 76% of the SMEs banked online. The online transactions included

regular banking transactions such as checking account balances and transferring funds (85.7%), payments to suppliers (60.5%), payroll (51.8%), international transactions (24.6%), importing data to accounting systems of SMEs (35.4%) and cash management (32.1%).

***Internet and Social Media Marketing***<sup>xxviii</sup>. The Business Development Bank of Canada's (BDC) identifies marketing as the most common area where SMEs integrate social media tools. Generally, survey findings on the marketing and sales strategy for the SMEs are as follows:

- Overall 83 percent of the SMEs has some form of web presence. Among them, 20 percent SMEs have a website, where online purchases can be made.
- 15.2% of the companies are incorporating social media tools into their marketing strategies.
- More than 50 percent SMEs advertise online and two thirds of the businesses that advertise online (64%) participate in social media.
- The most popular social network with Canadian SMEs is Facebook (60.9%) followed by LinkedIn (32.9%). Facebook is more popular among SMEs in the services and wholesale and retail trade sectors than in the manufacturing sector.
- The majority of the companies (61%) despite using social media, do not monitor online comments or discussions about their company, its products, or services. Even the companies that do make some effort to monitor online comments and discussions do so in an unstructured manner.
- The Canadian companies that have incorporated social media into their communications and marketing strategies are satisfied with the outcomes. Particularly, SMEs in the services sector are more satisfied with the use of social media in their marketing programs than SMEs in other activity sectors.

***Online Collaboration.*** Another area where SMEs integrate online tools, social software, and technology-based social network is in collaboration among the employees of SMEs as well as between SMEs and their partners and suppliers. According to CEFRIO, NetPME (2011) findings:

- 87.9 percent of all Canadian SMEs use email as a collaborative tool.

- About 50 percent of the SMEs use Outlook or Doodle and 30 percent use application sharing or shared editing platforms and video conferencing or conference calls.
- Only 20 percent of Canadian SMEs rely on integrated social media platforms that seamlessly integrate them with their employees, customers, and suppliers.

ICTs together with social media or social business activities offer immense potential for SMEs growth and success, yet, Canadian SMEs particularly the smaller companies are not reaping the advantage that such platforms can offer.

### **Women Entrepreneurs and the ICT adoption**

There are number of studies that focus on ICT adoption by SMEs. Studies are also found that report women entrepreneurs' adoption of technology in developing countries. However, there is a lack of gender-focused technology data because many governments and organizations do not collect data consistently and those that do rarely disaggregate by sex. For example, the study, CEFRIO, NetPME (2011) sponsored by the BDC does not give the breakdown of ICT usage by gender, but it does note that the smaller companies are lagging behind in terms of web presence; in their use of collaborative systems to connect with employees, suppliers, and customers; and in terms of using social networks to their advantage. Likewise, the Industry Canada sponsored study "Female-Owned Small and Medium Sized Enterprises" provided sex disaggregated data on size, industry type, growth, exporting, and innovation, but not on technology adoption.

However, the study does report that the majority of the female-owned SMEs tend to be smaller than other SMEs. The only piece of information found on CIRA's (2014)<sup>xxix</sup> report was 60% of the Canadian SMEs that have internet presence are headed by male entrepreneurs. In sum, from the little available data, it can be inferred that female-owned companies are lagging behind their male colleagues in terms of ICT and social media usage.

Research has found that in Western countries, women use technology more than their male counterparts for personal activities. The Internet usage is 17 percent more for women and they also spend more time talking, sending text messages, and using social networking sites<sup>xxx</sup>. Yet,

when it comes to business activities, women are lagging behind in their access to, and usage and ownership of ICTs which translates into missed opportunities<sup>xxxii</sup>. There is a possibility that women face gender-based barriers in access to information and networks and therefore are unable to integrate ICT and social media tools in their business operations.

In order to tap into the missed opportunities, it is important that resources are channeled to assess and understand women entrepreneurs' adoption and usage of technology. Such assessment will help to develop support mechanisms that can facilitate technology adoption by women entrepreneurs'. The next section of this report highlights the interview findings from organizations that support women entrepreneurs and gives a direction on what could be done to facilitate and increase the adoption of ICTs and social business tools among female-owned Canadian SMEs.

### **Roadmap for Women entrepreneurs' adoption of technology**

Cisco has outlined a program that will provide online materials and one-to one assistance commencing with 10 entrepreneurs. The goal of the one- to one assistance is to match the women with technology experts to help them with technology adoption.

As part of the research to determine need, Discussions were held with women leading enterprise support centres across Canada including Women's Enterprise Centres, Gro Your Biz, Women's Presidents, and Futurepreneurs to seek qualitative input on their assessment of the technology adoption needs of women entrepreneurs. A number of the common themes surfaced through the discussion that are discussed below. There is no doubt that a number of women entrepreneurs would benefit from accessible tools for adoption of technology and one- to- one assistance **providing** the technological advisers are knowledgeable about the needs of business and not simply tech gurus.

## **The Challenge**

As indicated above, the majority of women owned businesses are not in the tech sector or industry but are more likely to be in service-orientated sectors.. Therefore, technology is not the core of their business but rather a tool to make their business more effective. It is time consuming and difficult to assess the kind of technology that will be most effective for their operations.

Many women entrepreneurs have adopted the use of social media platforms with the younger entrepreneurs naturally feeling more comfortable in this space. However, adoption of social media platforms is only one part of the technology needs of entrepreneurs. Even with the adoption of social media, many entrepreneurs are not effectively integrating the information from the platforms nor linking the messages from the various social media platforms. Data from financial management systems is not being applied to improve cash management.

To be effective, technology needs to be linked with the strategic metrics for goals and outcomes for the enterprise. If technology is siloed the entrepreneurs are not obtaining full value or benefit from it. Many small business owners are so busy managing from day- to- day they have not taken the time to outline their strategic goals and desired revenue and other outcomes. In addition there are a multiplicity of technology tools and systems available but entrepreneurs do not have the knowledge of all that is available nor the knowledge to assess which would be best for their organization given the money they have to spend and the requisite HR needs to mine the data from the system.

An additional challenge for the entrepreneurs is that the majority of technology experts do not understand the needs of business. Even if they hire an expert, the advice may not be beneficial in enhancing their understanding of the most effective technology and the output is not being used to make decisions. Technological solutions for entrepreneurs are not cookie-cutter. Each enterprise has specific needs. For example a shoe store owner's needs for inventory control and web marketing will be entirely different than a health care provider's need for a scheduling system. One female enterprise owner had purchased software for her organization but felt they are not using it to its full advantage and it is costing them a lot of money. Without support to

fully utilize the system, they are essentially not obtaining value for money. Since she is a very experienced businesswoman she understand the steps that she needs to take to obtain full usage or change software. Many entrepreneurs do not have this level of experience to know that they need the technology nor whether they are using it most effectively. Women entrepreneurs often avoid debt, therefore may not want to incur debt for technology even though it may enhance their business.

### **What Women Entrepreneurs Need**

Women entrepreneurs benefit from an adviser who can understand their strategic business direction, how their business functions, its strengths and weaknesses , and can analyze their business needs and advise them on the most effective systems given their level of business, money to spend and human resources needed to input in to the system and evaluate the data. The level of technology required is dependent on the individual business needs which will vary with the stage of the business. A startup's needs will differ from a fully engaged business poised for growth. Technology must be integrated with the business processes and desired outcomes. Stated simply technology is a tool to most effectively leverage the desired business outcomes providing good analytics, process efficiency and enabling effective financial management and revenue generation.

For Cisco's program to be successful it is essential that the technology supporters are able to assess the business needs of the entrepreneur, understand their resource capability for full use of the technology and how to implement incrementally to capitalize on available and future resources and future needs. If the advisers simply recommend a form of technology without the full analysis and understanding of business needs, the results could be expense, frustrating and inutile for the entrepreneurs. The Women's Enterprise Centre of Manitoba has developed a check list for use in determining the tech needs of any enterprise and a questionnaire for the entrepreneur which will assist both her and the technology expert to better understand her goals and level of comfort with technology.(attached ) Cisco is welcome to use these questionnaires both online and with the one-to- one relationships provided they are properly attributed to the

Women's Enterprise Centre of Manitoba. We recommend their use as a guide for making the interaction more effective and they can also assist other entrepreneurs if they are integrated into your online material.

Finally online information that offers guidance on how to choose and assess business software would be beneficial if it is readily accessible and not written in technical language nor designed to market one specific product.

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<sup>i</sup> Status of Women Canada. Fact sheet: Economic Security. Available from:

<http://www.swc-cfc.gc.ca/initiatives/wesp-sepf/fs-fi/es-se-eng.html>

<sup>ii</sup> Industry Canada (2012). How many small business entrepreneurs are women? *Key Small Business Statistics*. Available from: <https://www.ic.gc.ca/eic/site/061.nsf/eng/02727.html>

<sup>iii</sup> *ibid.*

<sup>iv</sup> RBC Economics Research (2013). Canadian Women Grabbing the Baton. Available from: <http://www.rbc.com/newsroom/pdf/women-and-sme-10-2013.pdf>

<sup>v</sup> Levine, R., & Rubinstein, Y. (2013). *Does Entrepreneurship Pay? The Michael Bloomborgs, the Hot Dog Vendors, and the Returns to Self-Employment*. Available from: [http://faculty.haas.berkeley.edu/ross\\_levine/papers/2012\\_7sep\\_entrepreneurship.pdf](http://faculty.haas.berkeley.edu/ross_levine/papers/2012_7sep_entrepreneurship.pdf)

<sup>vi</sup> United Nations Conference on Trade and Development (UNCTAD, 2014). *Empowering Women Entrepreneurs through Information and Communications Technologies: A Practical Guide*.

<sup>vii</sup> Industry Canada (2012), *op. cit.*, p. 31.

<sup>viii</sup> Industry Canada (May 2015). *Majority Female-Owned Small and Medium-Sized Enterprises: Key Small Business Statistics*. Available from: [https://www.ic.gc.ca/eic/site/061.nsf/vwapj/MFOSMEs\\_KSBS-PMEDMF\\_PSRPE\\_2015-05\\_eng.pdf/\\$FILE/MFOSMEs\\_KSBS-PMEDMF\\_PSRPE\\_2015-05\\_eng.pdf](https://www.ic.gc.ca/eic/site/061.nsf/vwapj/MFOSMEs_KSBS-PMEDMF_PSRPE_2015-05_eng.pdf/$FILE/MFOSMEs_KSBS-PMEDMF_PSRPE_2015-05_eng.pdf)

<sup>ix</sup> Devex International News (July 17, 2013). Available from: <https://www.devex.com/news/women-entrepreneurs-an-untapped-driver-of-economic-growth-81458>

<sup>x</sup> Greene, P. G., Hart, M. M., Gatewood, E. J., Brush, C. G., & Carter, N. M. (2003). Women entrepreneurs: Moving front and center: An overview of research and theory. *Coleman White Paper Series*, 3, 1-47.

<sup>xi</sup> GEDI (2013). *The Gender Global Entrepreneurship and Development Index*. Global Entrepreneurship and Development Institute.

<sup>xiii</sup> United Nations Economic Commission for Europe (UNECE, 2004). *Access to Financing and ICT for Women Entrepreneurs in the UNECE Region: Challenges and Good Practice*. Geneva and New York: United Nations Publications.

<sup>xiii</sup> Goldman Sachs (2013). Women's work driving the economy. *Equity Research: Fortnightly Thoughts*.

<sup>xiv</sup> UNECE (2004), *op. cit.*, p.1.

<sup>xv</sup> Startup Canada. Women Entrepreneurship Fund. Available from: <http://www.startupcan.ca/women-entrepreneurship-fund/>

<sup>xvi</sup> Women's Enterprise Centre. Available from : <https://www.wecm.ca/about-us/about-us.cfm>

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<sup>xxv</sup> MIT Sloan Management Review and Deloitte (2014), op. cit., p.

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