

# NetPME 2011



## Use of ICT by Canadian SMEs

A SURVEY OF OVER 2,000 COMPANIES





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Chaire de recherche du Canada sur la performance des entreprises  
and Institut de recherche sur les PME  
Université du Québec à Trois-Rivières  
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## CEFRIO

CEFRIO is the centre dedicated to supporting research and innovation in organizations through the use of information and communications technologies (ICT). Grouping together over 150 members from government, industry and the academic sector, as well as 60 guest and associate researchers, CEFRIO's mission revolves around using technology as an engine of social and organizational innovation to transform Quebec into a digital society. CEFRIO, acting as a liaison and transfer centre, enters into partnerships for research and experimental, investigative and business intelligence projects on the acquisition and use of ICT in Quebec and Canada. These projects cover all economic sectors, both public and private. CEFRIO's own activities generate 64% of the organization's funding, with the remaining 36% provided by its primary financial partner, the Ministère du Développement économique, de l'Innovation et de l'Exportation.

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économique, Innovation  
et Exportation



CEFRIO's primary financial partner

## NetPME 2011 – Use of ICT by Canadian SMEs

### Project team:

#### CEFRIO team:

Josée Beaudoin,  
Vice President, Innovation and Transfer  
Claire Bourget,  
Director of Marketing Research  
Sahbi Guedda,  
Project leader  
Raphaël Danjou,  
BI Officer  
Annie Lavoie  
Coordination

#### Financial partners:

Business Development Bank of Canada  
Ministère du Développement économique,  
de l'Innovation et de l'Exportation  
Secrétariat du Conseil du trésor du Québec  
Desjardins Card Services  
Services Québec  
TELUS

#### Contributors:

Louis Raymond and his team,  
Chaire de recherche du Canada sur la performance  
des entreprises and Institut de recherche sur les PME  
Université du Québec à Trois-Rivières

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#### Quebec City office

888 Saint-Jean # 575  
Quebec City QC G1R 5H6  
Telephone: 418 523-3746  
Fax: 418 523-2329

#### Montreal office

550 Sherbrooke west  
West Tower, # 471  
Montreal QC H3A 1B9  
Telephone: 514 840-1245  
Fax: 514 840-1275

Email: [info@cefrio.qc.ca](mailto:info@cefrio.qc.ca)

Website: [www.cefrio.qc.ca](http://www.cefrio.qc.ca)

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## Foreword



The impact of information and communications technologies (ICT) on the ability of small and medium-sized enterprises (SMEs) to be productive, innovative and competitive is not only widely acknowledged, but has even been written up by various authors and addressed in several published documents. Given the high degree of globalization and competition in most economic sectors, it is more germane than ever to examine the extent to which ICT can enable SMEs to distinguish themselves on the world stage.

It is with these factors in mind that CEFRIO once again conducted its annual *NetPME* survey to measure the extent to which the business practices of SMEs include the use of ICT. This year, generous support from the Business Development Bank of Canada made it possible for the *NetPME 2011* survey to be held from coast to coast—canvassing a total of around 2,000 SMEs—for the very first time.

This fourth edition of *NetPME* was also made possible by the financial support of the Ministère du Développement économique, de l'Innovation et de l'Exportation, the Secrétariat du Conseil du trésor du Québec, Desjardins Card Services, Services Québec and TELUS. To all of these partners, thank you.

We are also pleased to acknowledge the contribution of the Chaire de recherche du Canada sur la performance des entreprises and the Institut de recherche sur les PME from Université du Québec à Trois-Rivières. These organizations made it possible to read the results of the *NetPME 2011* survey in greater depth by considering them alongside the major challenges currently faced by SMEs. For this, we sincerely thank them. We would also like to thank SOM Research and Surveys for helping to collect cross-country data.

I urge you to consult the *NetPME 2011* report, which provides the most recent data on ICT use by Canada's SMEs. We hope that these results will allow both companies and governments to find better ways to go forward and position themselves more strategically in the global marketplace.

A handwritten signature in black ink, reading 'Jacqueline Dubé'. The signature is fluid and cursive.

**Jacqueline Dubé**  
President & Chief Executive Officer, CEFRIO



## Introduction

*NetPME 2011* takes a close look at Canadian SMEs' acquisition and use of information and communications technologies (ICT). This fourth edition of the *NetPME* survey explores various topics, among them Internet connection, computer and communications equipment, office suites, enterprise resource planning (ERP) software packages and Internet tools. It also considers to what extent Canadian SMEs use the Internet, the role of Web 2.0 in their exchanges with government, and the use by Quebec SMEs of the government of Quebec's services portal and the transactional services it offers. Since we had historical data for 2006, 2007 and 2009, results obtained for Quebec in 2011 were compared with those of previous years.

There are six chapters in the *NetPME* report. The first chapter looks at Canadian SMEs' current situation with regard to Internet connection and the various types of connections used such as high speed, very high speed and extreme high speed. The second chapter addresses the computer and communications equipment of Canadian SMEs, which includes computers, cell phones and mobile Internet keys. The third chapter examines whether or not Canadian SMEs make use of management software packages, customer relationship management (CRM) software packages, supply chain management (SCM) software packages and office suites such as Microsoft Office, Apple iWork or OpenOffice for Linux. The fourth chapter reflects on SMEs' use of Internet tools, including websites, intranets and extranets, as well as the extent to which SMEs use collaborative Internet tools such as email, web meetings, videoconferencing and conference calling. The fifth chapter considers e-commerce, online banking services (also called e-banking), online government services, Web 2.0 and SMEs' perceptions of the security of online transactions. The sixth and final chapter studies the investments made by SMEs in ICT over the past 12 months, as well as obstacles to the adoption of ICT and the alternative solutions considered.

*NetPME 2011* results clearly indicate that high speed connections are no longer an issue for SMEs, a majority of which currently use this type of service. New challenges have emerged however, including the incorporation of Internet tools (particularly Web 2.0) into business activities. In the current economic context, where many economic forecasts anticipate an imminent labour shortage, it has become critical to give careful thought to the use of such tools.



## Methodology

During the course of the *NetPME 2011* survey, slightly more than 2,000 leaders of Canadian and Quebec SMEs were questioned (company owners or managers, or the people in charge of ICT, communications or marketing, as applicable). SOM research and survey company conducted telephone interviews from April 11 to May 24 2011. The SMEs surveyed had between 5 and 499 employees and were randomly selected from the Dun & Bradstreet database.<sup>1</sup> The survey response rate was around 27.7% for all of Canada. It was 42.8% for Quebec, 19.6% for Ontario, 19.2% for Manitoba and Saskatchewan, 24.4% for Alberta and 19.5% for British Columbia. The margin of error for the overall sample was  $\pm 3.4\%$ .

### SAMPLING AND WEIGHTING

We set quotas for two specific variables-activity sector and company size-in order to ensure that the results were representative. The sampling plan was to conduct 1,000 surveys in Quebec and 1,000 elsewhere in Canada. The sampling plan selected is illustrated in the table below.

Table 1  
Quotas by company size and activity sector (Quebec)

QUEBEC		Number of employees					
		5 to 9	10 to 19	20 to 49	50 to 99	100 to 499	Total
Activity sectors	Manufacturing	75	75	60	50	40	300
	Wholesale and retail trade	100	100	40	30	30	300
	Services	125	75	40	30	30	300
	Others	50	25	15	5	5	100
	Total	350	275	155	115	105	1,000

1. The Dun & Bradstreet list is created on the basis of information provided by the establishments themselves and provides the name of the company, its telephone number, number of employees and name of a contact person. For this specific survey, only companies established in or having their head office in Quebec were selected.

Table 2

**Quotas by company size and region (elsewhere in Canada)**

ELSEWHERE IN CANADA		Number of employees				Total
		5 to 19	20 to 49	50 to 199	200 to 499	
Regions	Atlantic	35	30	20	15	100
	Ontario	150	100	90	60	400
	Manitoba / Saskatchewan	35	30	20	15	100
	Alberta	90	50	30	30	200
	British Columbia	90	50	30	30	200
	Total	400	260	190	150	1,000

The sampling plan only provided for one type of weighting: stratification (by province, sector activities, region and number of employees). The weighting was done by extrapolating from the number of respondents to the number of companies per stratum.

### MAKEUP OF CANADIAN CENSUS AREAS

As part of the survey and for the purposes of the analysis, the provinces where the companies surveyed were established were grouped into 5 major regions:

- Quebec
- Prairies (Alberta, Saskatchewan and Manitoba)
- British Columbia
- Ontario
- Atlantic (New Brunswick, Nova Scotia, Newfoundland and Prince Edward Island)

### MAKEUP OF QUEBEC CENSUS METROPOLITAN AREAS (CMAS)

For the purposes of the survey, Quebec’s census metropolitan areas were grouped into the following regions:

- **Montreal CMA** (Montreal, Laval, Lanaudière [CMA], Laurentians [CMA] and Montérégie [CMA]);
- **Quebec City CMA** (Quebec City [CMA] and Chaudière-Appalaches [CMA]).

The “Elsewhere in Quebec” category covered the following regions:

- **Est-du-Québec** (Lower Saint-Lawrence, Saguenay–Lac-Saint-Jean, North Shore and Gaspé–Magdalen Islands);
- **Centre-du-Québec** (Mauricie, Eastern Townships, Centre-du-Québec, Quebec City [other than the CMA] and Chaudière-Appalaches [other than the CMA]);
- **Ouest-du-Québec** (Outaouais, Abitibi-Témiscamingue, Lanaudière [other than the CMA], Laurentians [other than the CMA] and Montérégie [other than the CMA]).

### MARGINS OF ERROR ACCORDING TO ESTIMATED PERCENTAGES

Overall, results have a margin of error of  $\pm 3.4\%$ , 19 times out of 20, with a confidence interval in excess of 95%. For the activity sectors, however, margins of error range from 4.7% to 8.9%.

Table 3  
Margins of error by sector

Activity sectors	Number of respondents	Margins of error (95% confidence interval)
<b>Total SMEs surveyed</b>	2,013	<b><math>\pm 3.4\%</math></b>
<b>Manufacturing</b>	404	$\pm 8.9\%$
<b>Wholesale and retail trade</b>	448	$\pm 7.1\%$
<b>Services</b>	899	$\pm 4.7\%$
<b>Others</b>	257	$\pm 9.2\%$

For the 5 major regions in Canada, margins of error range from 3.7% to 13.4%.

Table 4  
Margins of error by region

Regions	Number of respondents	Margins of error (95% confidence interval)
<b>Total SMEs surveyed</b>	2,013	<b><math>\pm 3.4\%</math></b>
<b>Quebec</b>	1,001	$\pm 3.7\%$
<b>British Columbia</b>	203	$\pm 8.8\%$
<b>Prairies</b>	303	$\pm 7.3\%$
<b>Ontario</b>	401	$\pm 6.6\%$
<b>Atlantic</b>	105	$\pm 13.4\%$

## MAKEUP OF ACTIVITY SECTORS

Table 5  
Makeup of activity sectors

Activity sectors	Types of companies
<b>Manufacturing</b>	<ul style="list-style-type: none"> <li>• Manufacturing (manufacturers, processing companies)</li> </ul>
<b>Wholesale and retail trade</b>	<ul style="list-style-type: none"> <li>• Wholesale trade (wholesalers, distributors)</li> <li>• Retail trade (supermarkets, car dealerships, etc.)</li> </ul>
<b>Services</b>	<ul style="list-style-type: none"> <li>• Transportation, communications, warehousing and courier services</li> <li>• Finance and insurance (financial institutions, insurance companies)</li> <li>• Information and cultural industries (newspaper editors, broadcasters and television broadcasters)</li> <li>• Real estate and rental services (real estate agents, rentals of buildings, tools, cars)</li> <li>• Professional, scientific and technical services (notaries, lawyers, accountants, engineers)</li> <li>• Management of companies and enterprises</li> <li>• Waste management and sanitation (collection, treatment and recycling)</li> <li>• Educational services</li> <li>• Administrative and business support services (maintenance, travel agencies, collection agencies, security agencies)</li> <li>• Health care and social assistance (care centres, daycare centres, clinics, dentists)</li> <li>• Accommodation and food services (bars, caterers, camping sites, inns)</li> <li>• Arts, entertainment and recreation (sports centres, theatres and concert halls, artists, museums, theatre troupes)</li> <li>• Other services (car repair shops, hairdressing salons, dry cleaners, non-profit organizations, other organizations)</li> </ul>
<b>Other activity sectors</b>	<ul style="list-style-type: none"> <li>• Primary sector: agriculture, forestry, fishing and hunting</li> <li>• Natural resources sector: mining and oil and gas extraction</li> <li>• Construction (plumbing, electricity, carpentry)</li> </ul>

# Highlights

**Table 6**  
**Survey highlights**

Internet connection	
The majority of Canadian SMEs have Internet access.	92.8% of Canadian SMEs are connected to the Internet. All of the companies with 100 to 499 employees are connected. There is also a high Internet connection rate among SMEs in the manufacturing sector (97.6%).
The Internet connection rate has grown by 8.1% in Quebec.	In 2011, 94.6% of Quebec SMEs are connected to the Internet, compared to 86.5% in 2009. The highest growth was observed among SMEs in the wholesale and retail trade sector (21.3%).
Extreme high speed and very high speed connections are more prevalent in Quebec.	A greater number of Quebec SMEs use very high speed or extreme high speed connection. They represent 24.7% of SMEs (15.5% for very high speed and 9.2% for extreme high speed), compared to 21.1% in Ontario (14.5% in the case of very high speed and 6.6% in the case of extreme high speed).
Computer equipment and management software packages	
Computers are essential tools for Canadian SMEs.	97.4% of Canadian SMEs have at least one computer, and 41.2% of them have between 5 and 19 computers. SMEs in the accommodation and food services sector are the least well equipped, with 15.2% of them having no computers.
SMEs have various mobile devices.	59.3% of Canadian SMEs have mobile devices, among them smart phones, PDAs and digital tablets; 40.1% of them have no mobile devices.
SMEs make regular use of office suites.	The majority of Canadian SMEs are equipped with an office suite. Such products are most prevalent among the larger SMEs, namely those with 100-499 employees (97.5%), and companies in the manufacturing sector (92.3%).
One out of every four SMEs relies on management software packages.	<p>Generally speaking, Canadian SMEs are not heavy users of management software packages. One out of every four companies makes use of either an enterprise resource planning (ERP) software package (24.9%) or a customer relationship management (CRM) software package (23.9%). A minority of companies (12.0%) have a supply chain management (SCM) software package.</p> <p>Quebec SMEs lead the pack in terms of ERP use (32.2%, which represents an increase of 15.1% over 2009). On the other hand, they are outstripped by Ontario SMEs as regards the use of CRM software (27.3% in Ontario compared to 22.2% in Quebec) and SCM software (15.9% in Ontario compared to 8.0% in Quebec).</p>

Use of Internet tools by Canadian SMEs	
The mobile Internet is not very popular among SMEs.	Although two thirds of Canadian SMEs (69.8%) have a website, only a small minority (8.2%) have adapted it for use on mobile platforms.
The intranet is used much more than the extranet.	Canadian SMEs tend to prefer the intranet (43.8%) to the extranet (17.7%).  In Quebec, despite a 9.4% rise in the percentage of SMEs with an intranet (34.2% in 2011, compared to 24.8% in 2009), there are fewer SMEs intranets than there are elsewhere in Canada. Conversely, there are more Quebec SMEs using the extranet (19.8% in Quebec, 18.1% in Ontario and 13.6% in the Atlantic).
Email is the preferred collaborative tool of SMEs.	In terms of collaborative and communications tools, 87.9% of SMEs use email and 48.9% of them use task management applications such as Outlook.  Application sharing (30.2%), videoconferencing or conference calling (21.4%), web meetings (24.7%) and project management (21.4%) are some of the collaborative tools used. Only one out of every five SMEs (19.8%) relies on an integrated collaborative solution.
Internet use by Canadian and Quebec SMEs	
Three quarters of Canadian SMEs use the Internet for some of their banking transactions.	In 2011, 75.9% of Canadian SMEs used the Internet for banking transactions. Online purchases, also frequent, are made by 70.9% of companies. The same can be said about transactions with the government (61.8%). Selling online, however, is much less popular, with a mere 17.9% of Canadian SMEs doing so.
Regular banking transactions: an online banking service frequently used by SMEs.	Most (85.7%) of the companies that use online banking services carry out their regular banking transactions online, including transfers of funds and checking of account balances. Payments to suppliers and payroll transactions are two other online services used by a large number of SMEs (60.5% and 51.8% respectively).
Web 2.0 is still not widespread among Canadian companies.	In spite of significant development as regards Web 2.0, Canadian SMEs are not yet enamoured of social network applications, with only 15.2% of companies incorporating these into their marketing strategies, 14.3% using them with employees internally, and 17.5% using them in partner and supplier relationships. The SMEs that do resort to these activities most often use Facebook (60.9%) and the LinkedIn network (32.9%).
Searching for information is the main reason why SMEs visited the “Businesses” section of the Quebec government services portal.	There were fewer visits to the “Businesses” section of the Quebec government services portal in 2011 than there were in 2009 (30.0% compared to 44.5%). Most of the SMEs that did visit the site were searching for information (60.7%). Searching for forms was the second reason given by SMEs (14.7%) for their visits to the services portal.

<p>A steadily increasing number of Quebec SMEs pay their taxes online.</p>	<p>In 2011, 60.2% of Quebec SMEs did online transactions with a government of Quebec department or agency, which represents an increase of 16.8% over 2009 (43.4%).</p> <p>Paying taxes (63.5% in 2011 compared to 28.2% in 2009) and submitting contributions (63.8% in 2011 compared to 29.8% in 2009) are the two primary types of transactions carried out with the government of Quebec.</p>
<p>Quebec SMEs still prefer to carry out their online transactions via the website of a financial institution, in spite of a drop in this option's popularity.</p>	<p>To carry out online transactions with the government of Quebec, 48.8% of Quebec SMEs (compared to 70.0% in 2009) prefer to use the website of a financial institution, while 17.6% opt to rely on the site of the department in question. 12.7% of SMEs prefer a one-stop government site.</p>
<p><b>Investments in ICT</b></p>	
<p>Most Canadian SMEs have invested in ICT.</p>	<p>88.3% of SMEs invested in ICT over the past 12 months. Purchases of computer equipment and licenses are the most frequent investments among companies, accounting for 77.8% and 40.5% respectively.</p>
<p>SMEs regularly rely on outside consultants to manage their technological resources.</p>	<p>Over half of SMEs (58.1%) bring in independent consultants or professionals to oversee the development of their technological resources.</p>





## CHAPTER 1

# INTERNET CONNECTION OF CANADIAN SMEs

The popularity and use of Internet applications is growing at an ever-increasing pace, which requires increasingly faster data transmission rates. This first chapter considers the current situation with regard to the Internet connection of Canadian SMEs.

The first section begins by illustrating the connection rate of Canadian SMEs and comparing it to the connection rate of SMEs based on number of employees, activity sector and region. For the purposes of our comparative analysis, we have divided Canada into 5 major regions: Quebec, Ontario, the Prairies (Manitoba, Saskatchewan and Alberta), British Columbia and the Atlantic (Newfoundland, Prince Edward Island, New Brunswick and Nova Scotia). We then discuss the various types of connection: high speed, very high speed and extreme high speed. The second section of the chapter looks at the reasons why some SMEs do not use the Internet or a high speed connection.

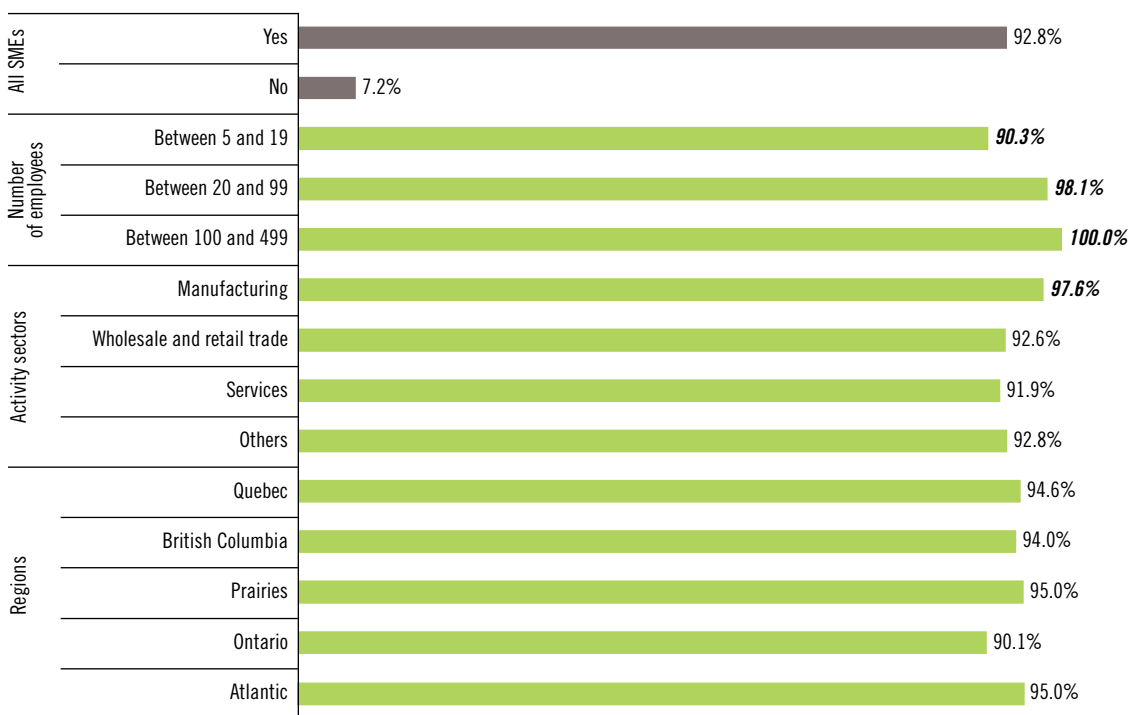
Since the *NetPME* survey has been carried out in Quebec since 2006 we have longitudinal data since that time, so we can study the progress of Internet use in Quebec.

## 1.1 INTERNET CONNECTION OF CANADIAN SMEs

Today's companies evolve in an environment characterized by rapid changes, particularly in the field of ICT. As has often been said, companies have no choice but to jump onto the Internet bandwagon if they wish to remain both productive and competitive.

The results of this survey indicate that most SMEs have grasped this reality, since 92.8% of them are now connected to the Internet.

Figure 1  
Internet connection rate of Canadian SMEs



Base: Canadian SMEs (n: 2,013)

Question: Is your company connected to the Internet?

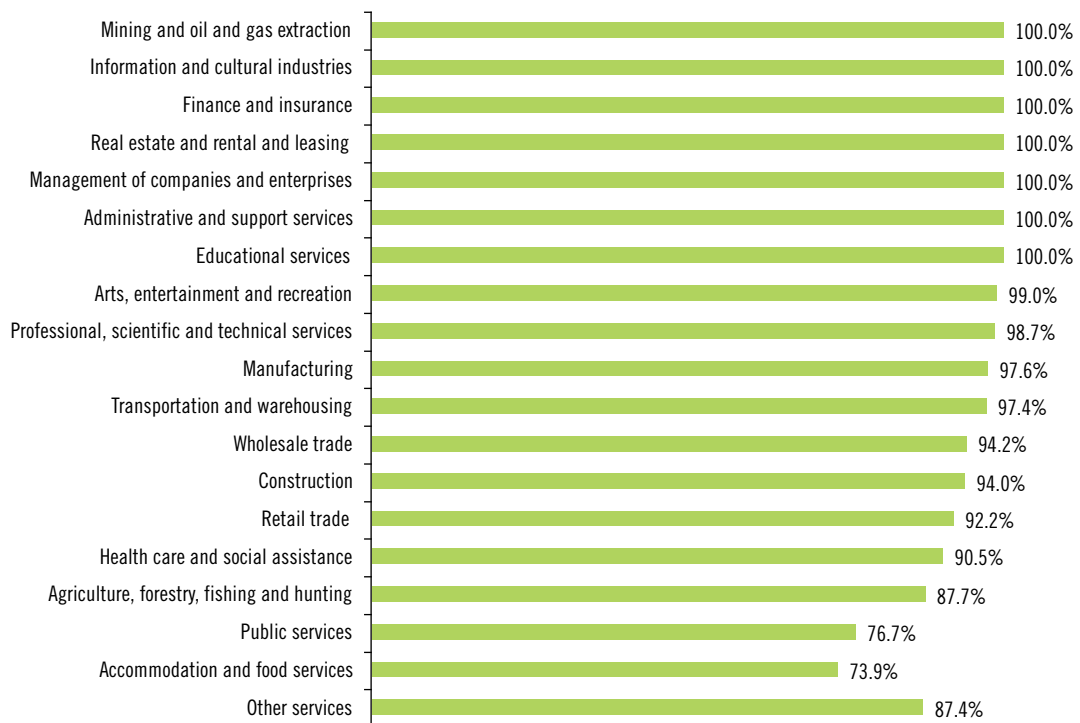
Note: In this chart, percentages that are significantly higher than the others are in bold and italics.



## 1.2 CONNECTION RATE ACCORDING TO ACTIVITY SECTOR

An analysis of the 4 major activity sectors shows that Internet connection is most prevalent among SMEs in the manufacturing sector, where the connection rate is 97.6%. A detailed analysis of the 19 activity sectors, however, reveals that SMEs in the information and cultural industries, finance and insurance, administrative and business support services, and educational services are all connected to the Internet, with a connection rate of 100%. The sector with the lowest connection rate among SMEs is accommodation and food services, where 26.1% of companies are still not connected to the Internet.

Figure 2  
Internet connection rate by activity sector



Base: Canadian SMEs (n: 2,013)

Question: Is your company connected to the Internet?

Note: In this chart percentages that are significantly higher than the others are in bold and italics.

### **1.3 CONNECTION RATE ACCORDING TO COMPANY SIZE AND REGION**

The figures lead to the conclusion that the Internet connection rate also progresses on the basis of company size. 90.3% of companies with fewer than 20 employees are connected to the Internet. For companies with 20 to 99 employees the connection rate is 98.1%, and it is 100% for SMEs with 100 to 499 employees.

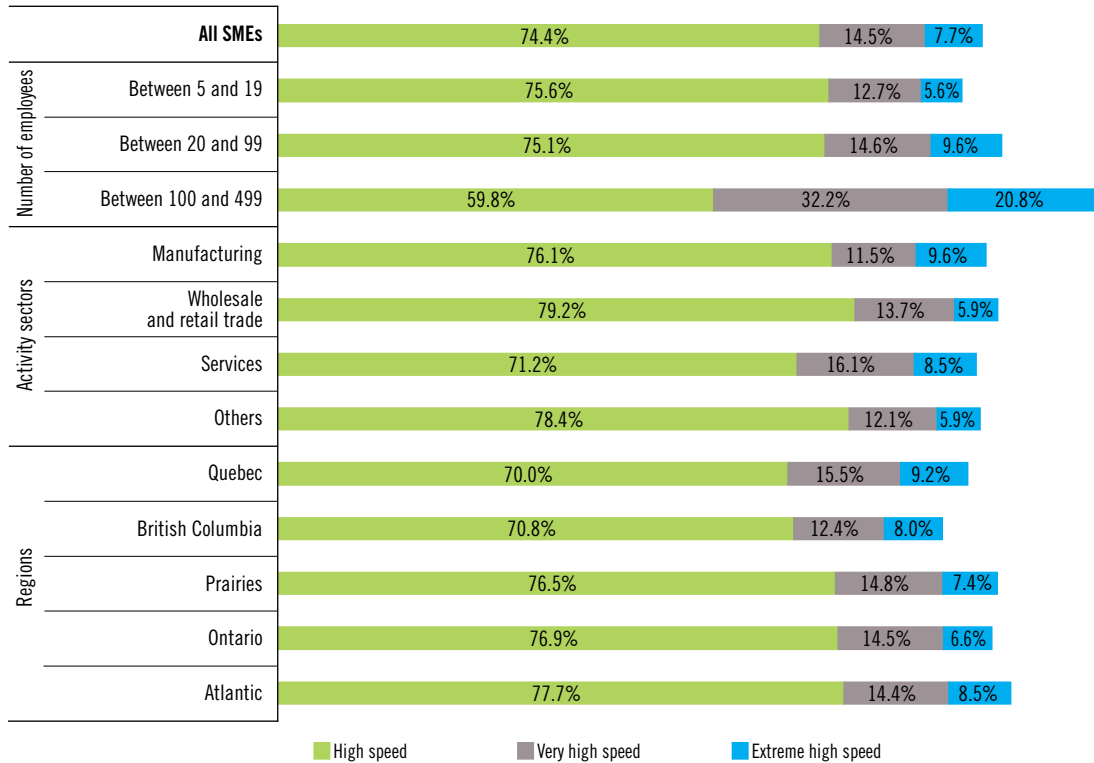
As regards geographic distribution, we did not note any differences between the 5 major regions in Canada (Quebec, Ontario, the Prairies, British Columbia and the Atlantic). The Internet connection rate of SMEs for each of the major regions is between 94% and 95%, with the exception of Ontario, where 90.1% of SMEs are connected to the Internet (this is slightly below the national average).

### **1.4 TYPE OF INTERNET CONNECTION**

Over time, technological progress has made it possible to significantly increase Internet connection speeds and thereby enable SMEs to enjoy the benefits of higher-speed connections. This is obvious from our survey results, which indicate that 22.2% of Canadian SMEs used very high speed (14.5%) or extreme high speed connection (7.7%) in 2011. In Quebec, this combined rate is 24.7%, up 11.2% from 2009 when it was 13.5%.



**Figure 3**  
**Type of Internet connection among Canadian SMEs**



Base: Connected Canadian SMEs (n: 1,930)

Question: What type of Internet connection does your company use?

Note: High speed refers to a connection with a speed of between 4 and 9 Mbps, while very high speed is between 10 and 19 Mbps and extreme high speed is over 20 Mbps.

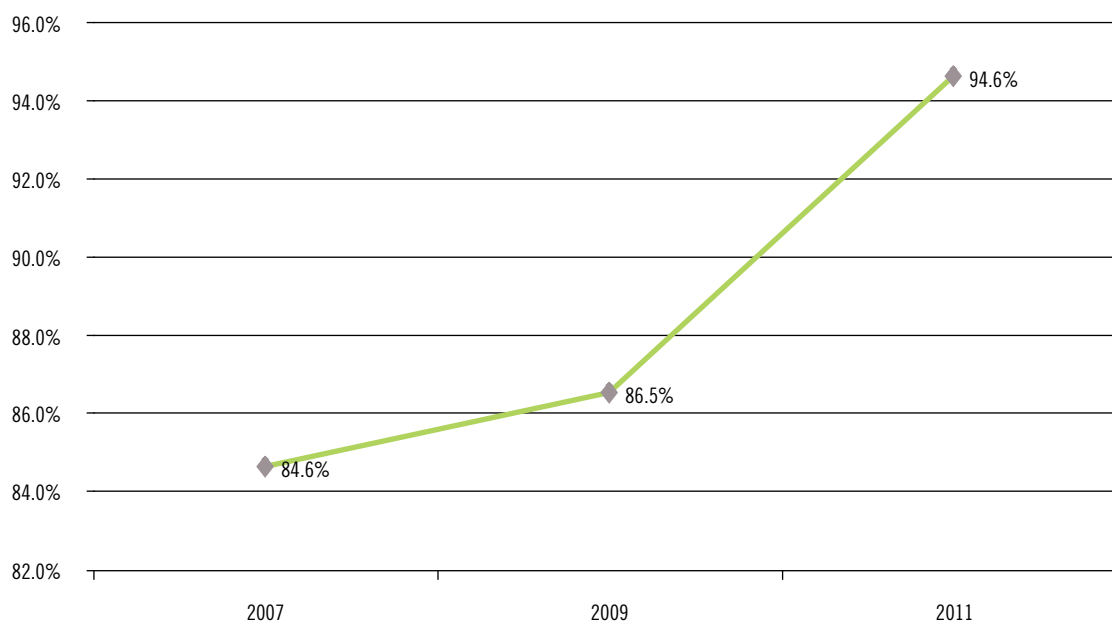
As we saw for the Internet connection rate, a greater percentage of large SMEs (with 100 to 499 employees) rely on very high speed or extreme high speed connections. 32.2% of these SMEs use very high speed and 20.8% extreme high speed. Together they account for 53.0% of the SMEs in this segment. The percentage (for the total of very high speed and extreme high speed) becomes 24.2% for SMEs with 20-99 employees, and a mere 18.3% for SMEs with fewer than 20 employees.

An analysis of connection type by region indicates that Quebec has, by a small margin, the highest connection rates for very high speed and extreme high speed: 15.5% and 9.2% of SMEs respectively (for a total of 24.7%). These rates are 14.5% and 6.6% respectively (total of 21.1%) for Ontario, and between 20.4% and 24.7% for all of Canada, depending on the region.

## 1.5 CHANGES IN THE OVERALL SITUATION IN QUEBEC

There has been constant growth in the Internet connection rate for SMEs across Quebec. In 2011, 94.6% of Quebec SMEs had Internet connection, compared to 86.5% in 2009 and 84.6% in 2007.

Figure 4  
Changes in the Internet connection rate in Quebec



Base: Quebec SMEs (n: 1,001)  
Question: Is your company connected to the Internet?

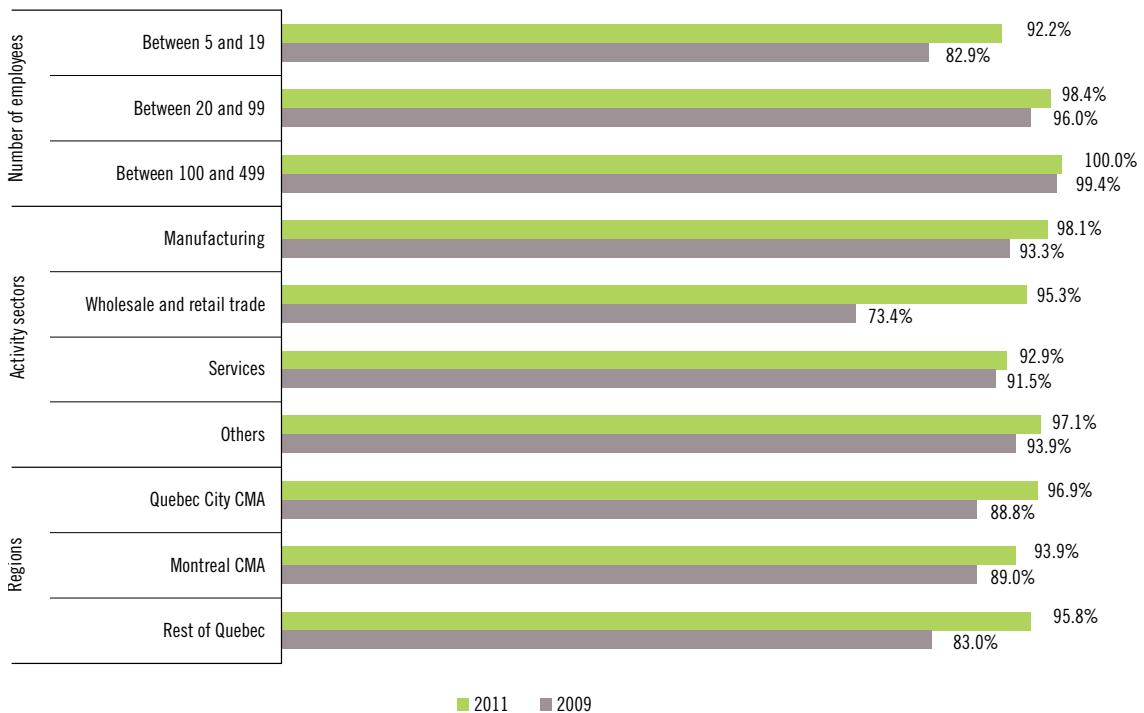
Quebec SMEs exhibit a similar trend to that observed across Canada: the Internet connection rate increases with company size. All Quebec SMEs (100%) with 100-499 employees are connected. There is, however, a definite growth among smaller SMEs (fewer than 20 employees) compared to 2009 figures. Most of them (92.2%) had Internet access in 2011, compared to 82.9% in 2009. This represents an increase of around 9.3%.



If we consider activity sector, SMEs in the manufacturing sector continue to have the highest connection rate (98.1%). It bears noting that Quebec companies in the wholesale and retail trade sector, which were lagging with regard to Internet connection, have caught up since 2009. While the Internet connection rate for these SMEs was 73.4% in 2009, it had risen to 95.3% by 2011. This 21.9% increase is significant.

A comparison between the various regions in Quebec shows that companies in the Montreal CMA are relatively more connected (rate of 96.9%).

**Figure 5**  
**Comparison of SME connection rates in Quebec in 2009 and 2011**

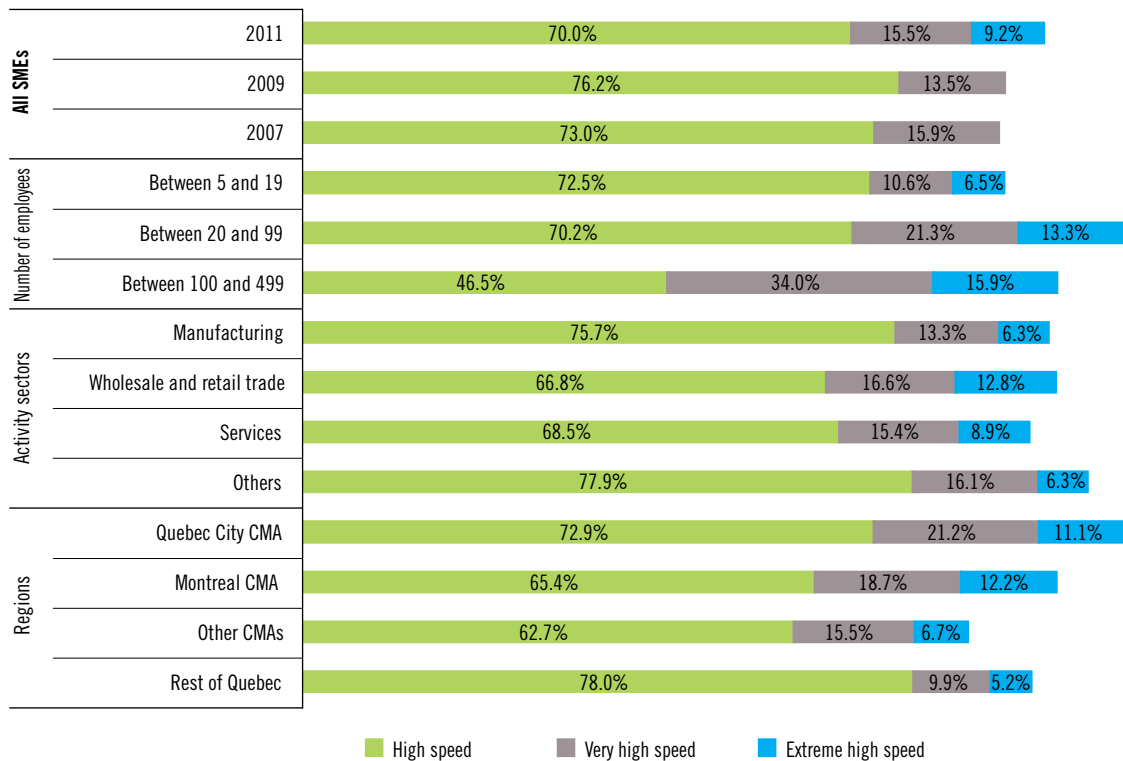


*Base: Quebec SMEs (n: 1,001)*  
*Question: Is your company connected to the Internet?*

### Changes in the type of connection in Quebec

The companies using the most high speed connections are located in the Quebec City CMA and the Montreal CMA. The cumulative connection rate to very high speed and extreme high speed is 32.3% for the Quebec City CMA and 30.9% for the Montreal CMA.

Figure 6  
Types of Internet connections among Quebec SMEs



Base: Connected Quebec SMEs (n: 960)  
Question: What type of Internet connection does your company have?

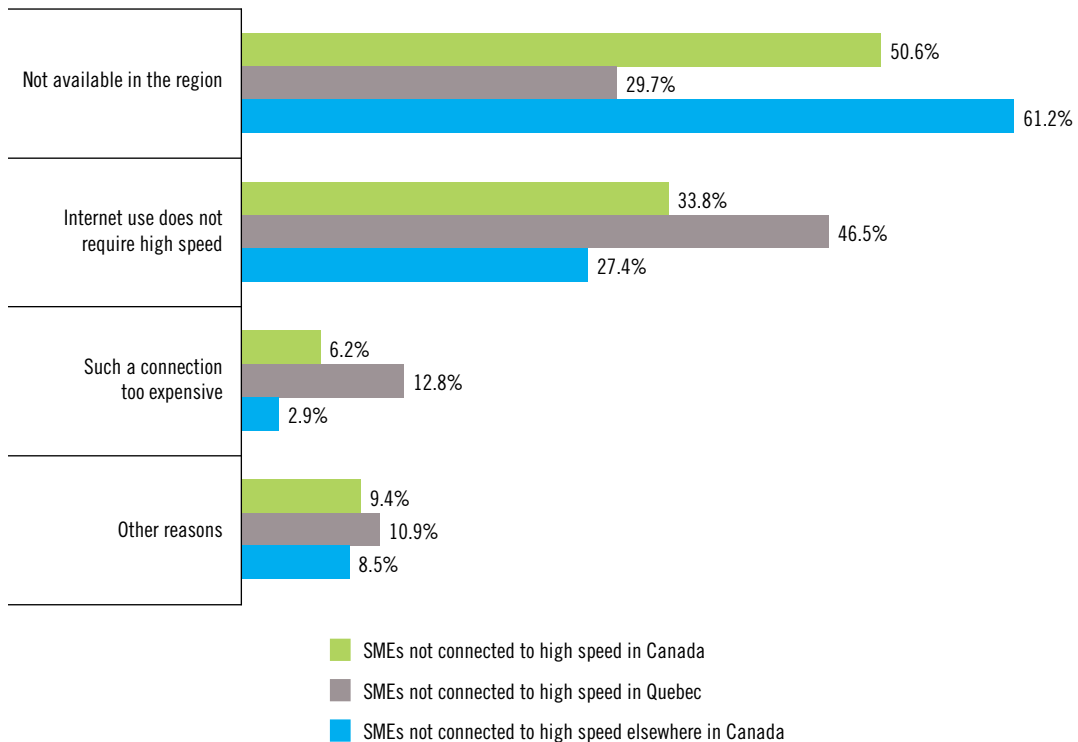


## 1.6 REASONS FOR NOT HAVING A HIGH SPEED CONNECTION

By 2011 only 9.9% of companies in Canada did not use at least a high speed connection. The first reason for not relying on a high speed connection is the unavailability of such a connection in the region in question. This was the reason given by 50.6% of all non-users of a high speed connection in Canada. The second reason is that the company's Internet use does not require a high speed connection (cited by 33.8% of non-users).

Figure 7

### Reasons for lack of connection to high speed or very high speed in Canada



Base: Canadian SMEs not connected to high speed (n: 115)

Question: What is the primary reason for your company's lack of a high speed or very high speed connection?

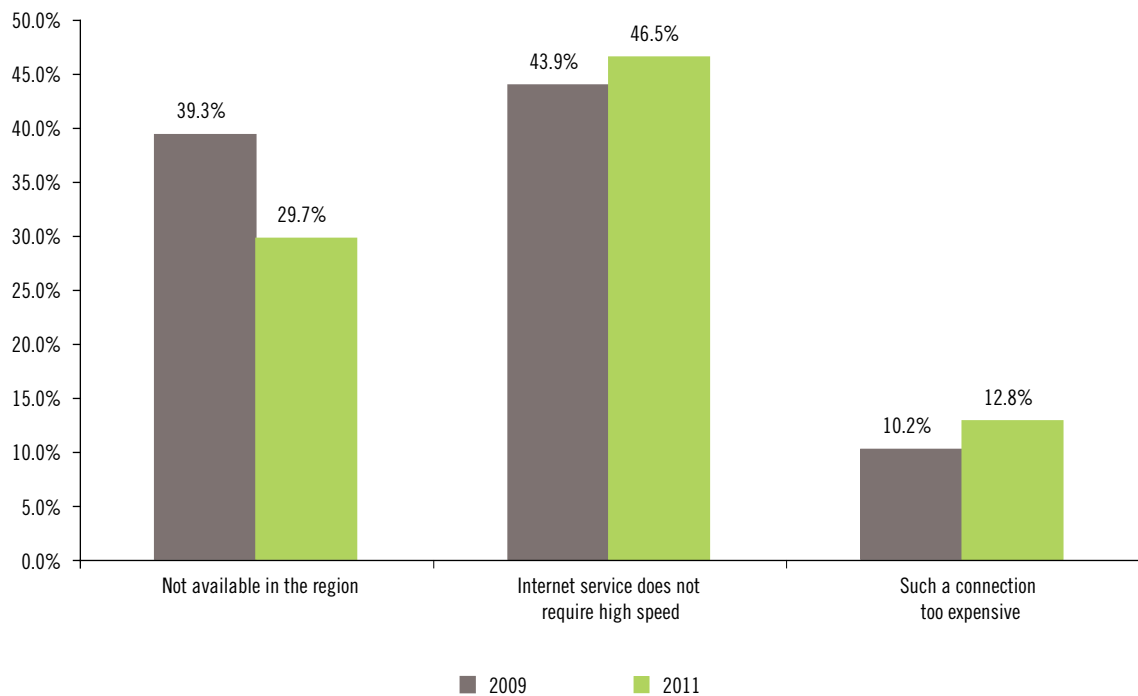
The reasons given by the companies in question vary from one region to another. 29.7% of Quebec SMEs without a high speed or very high speed connection explained that high speed was not available in their region, and another 46.5% felt that their Internet use did not require high speed. These two reasons are inverted elsewhere in Canada, with respective rates of 61.2% and 27.4%.

### Changes in the reasons for lack of connection to high speed or very high speed in Quebec

A look at how the reasons given by Quebec SMEs for not having a high speed connection changed between 2009 and 2011 indicates that high speed connections became increasingly available as of 2009 (39.3% of Quebec SMEs did not have access to high speed in 2009, compared to 29.7% in 2011).

Figure 8

#### Reasons for lack of connection to high speed or very high speed in Quebec



Base: Total number of Quebec SMEs not connected to high speed (n: 76)

Question: What is the primary reason for your company's lack of a high speed or very high speed connection?



## CHAPTER 2

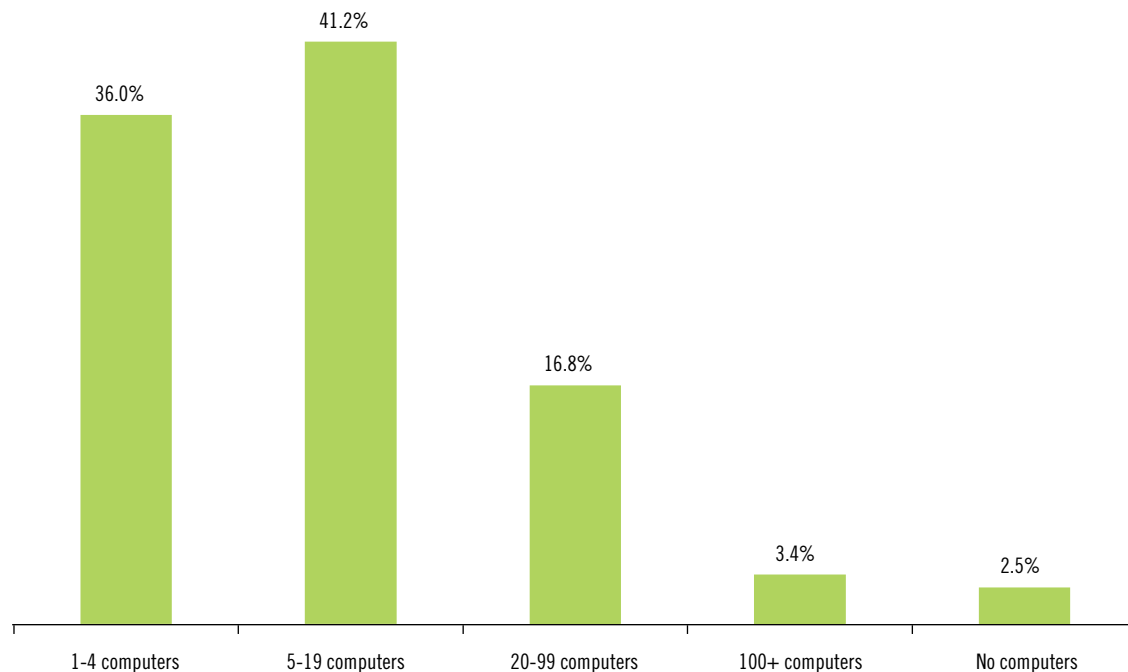
# COMPUTER AND COMMUNICATIONS EQUIPMENT

This chapter describes the computer and communications equipment used by Canadian SMEs, including computers, cell phones and mobile Internet keys.

### 2.1 COMPUTERS

Throughout Canada, the majority of Canadian SMEs (77.2%) have fewer than 20 computers in their company.

**Figure 9**  
**Number of computers in Canadian SMEs**



*Base: Canadian SMEs (n: 2,013)*

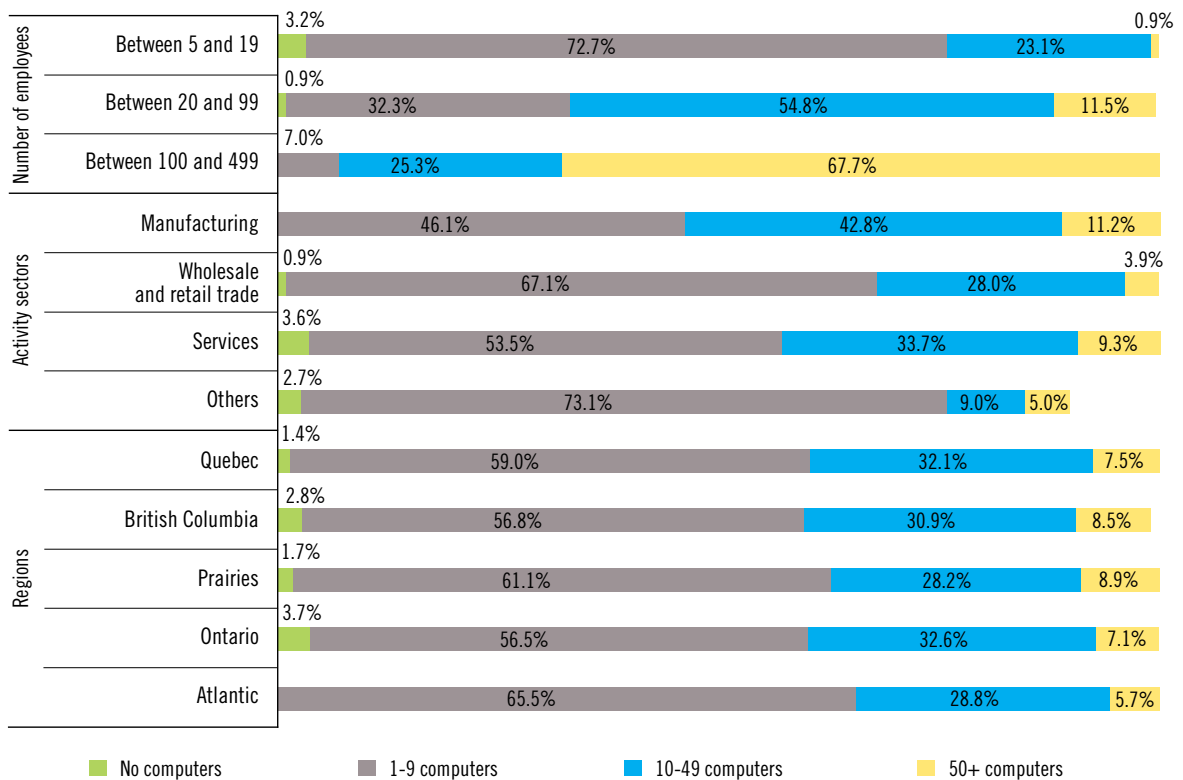
*Question: Approximately how many computers does your company have?*

The ownership of computers by Canadian SMEs varies significantly, depending on the size of the company. SMEs with fewer than 20 employees have an average of 7 computers, whereas SMEs with 20-99 employees have an average of 23; SMEs with 100-499 employees have an average of 132.

We note that 15.2% of SMEs in the accommodation and food services sector have no computer equipment whatsoever. The same goes for SMEs in the agriculture, forestry, fishing and hunting sector-9.4% of them have no computers.

The survey does not reveal any significant differences between Quebec and the other major regions of Canada in this regard. We note, however, that the largest percentage of SMEs with more than 10 computers is in the manufacturing sector (54.0%).

**Figure 10**  
**Number of computers based on company size, activity sector and region**



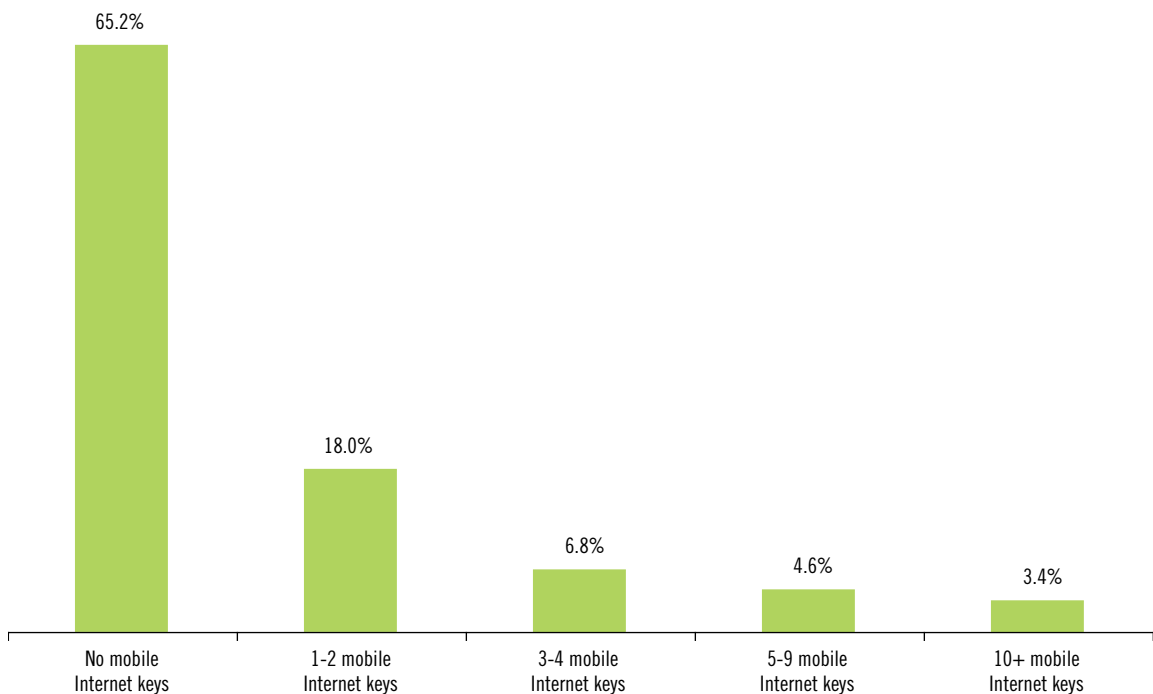
Base: Canadian SMEs (n: 2,013)  
 Question: Approximately how many computers does your company have?



## 2.2 MOBILE INTERNET KEYS

Internet keys allow access to the Internet from locations where no wired or wireless Internet connection is available. The use of such keys among Canadian SMEs does not appear widespread. Only 34.8% of companies have such keys and, on average, they only make 5 of them available to employees.

Figure 11  
Number of mobile Internet keys in Canadian SMEs



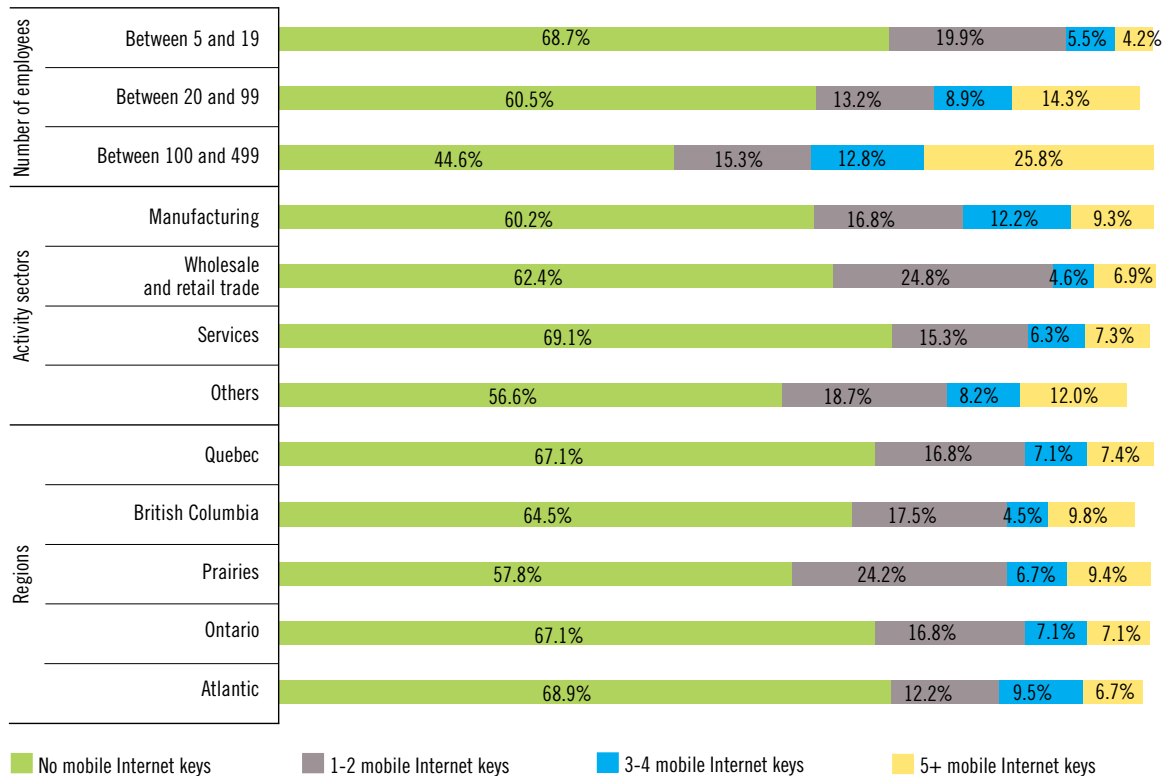
Base: Canadian SMEs (n: 2,013)  
Question: Approximately how many mobile Internet keys does your company have?

Company size is definitely the distinguishing factor among Canadian SMEs for this type of equipment. 68.7% of SMEs with fewer than 20 employees have no mobile Internet keys. On the other hand, 53.9% of companies with 100-499 employees supply such keys to their employees.

SMEs in the Prairies make somewhat greater use of mobile Internet keys than do SMEs in other regions of Canada. 40.4% of SMEs in the Prairies rely on such keys, compared to 31.8% in British Columbia, 31.4% in Quebec, 31.0% in Ontario and 28.3% in the Atlantic.

Figure 12

Number of mobile Internet keys based on SME size, activity sector and region



Base: Canadian SMEs (n: 2,013)

Question: Approximately how many mobile Internet keys does your company have?

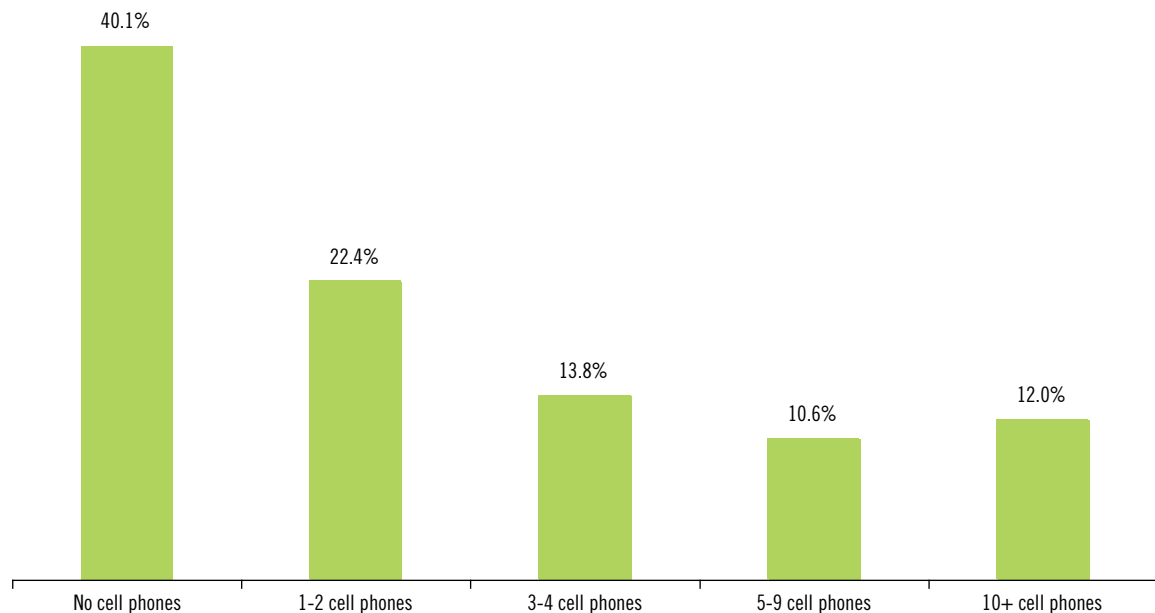
### 2.3 CELL PHONES (NOT INCLUDING SMART PHONES)

While the use of cell phones is fairly widespread among Canadians (in 2008, 74.3% of households in Canada had at least one),<sup>2</sup> the percentage of Canadian SMEs that admit to having cell phones (not including smart phones) is 58.8%.

2. <http://www.statcan.gc.ca/daily-quotidien/090615/dq090615c-eng.htm>



Figure 13  
Number of cell phones (excluding smart phones) in Canadian SMEs



Base: Canadian SMEs (n: 2,013)

Question: Approximately how many cell phones, not including smart phones, does your company have?

SMEs with 100-499 employees account for the greatest percentage of SMEs (75.7%) with cell phones (not including smart phones). This percentage is 63.6% for SMEs with 20-99 employees and 57.2% for SMEs with fewer than 20 employees.

We also observe that Canadian SMEs in certain sectors have a greater number of cell phones (not including smart phones). These are:

- SMEs in the construction sector (82.3%)
- SMEs in the wholesale trade sector (77.6%)

Conversely, these figures are lower for companies in certain others sectors:

- SMEs in the health care and social assistance sector (61.5%)
- SMEs in the accommodation and food services sector (57.7%)

For SMEs with cell phones, the average number of cell phones (not including smart phones) is 6.99 per company. This figure obviously varies according to company size (3.96 units for SMEs with fewer than 20 employees, 8.27 units for SMEs with 20-99 employees, and 29.64 units for SMEs with 100-499 employees). The numbers also vary depending on the region (5.46 units for Quebec SMEs compared to 7.03 in British Columbia, 7.88 in the Prairies, 8.06 in Ontario and 4.58 in the Atlantic).

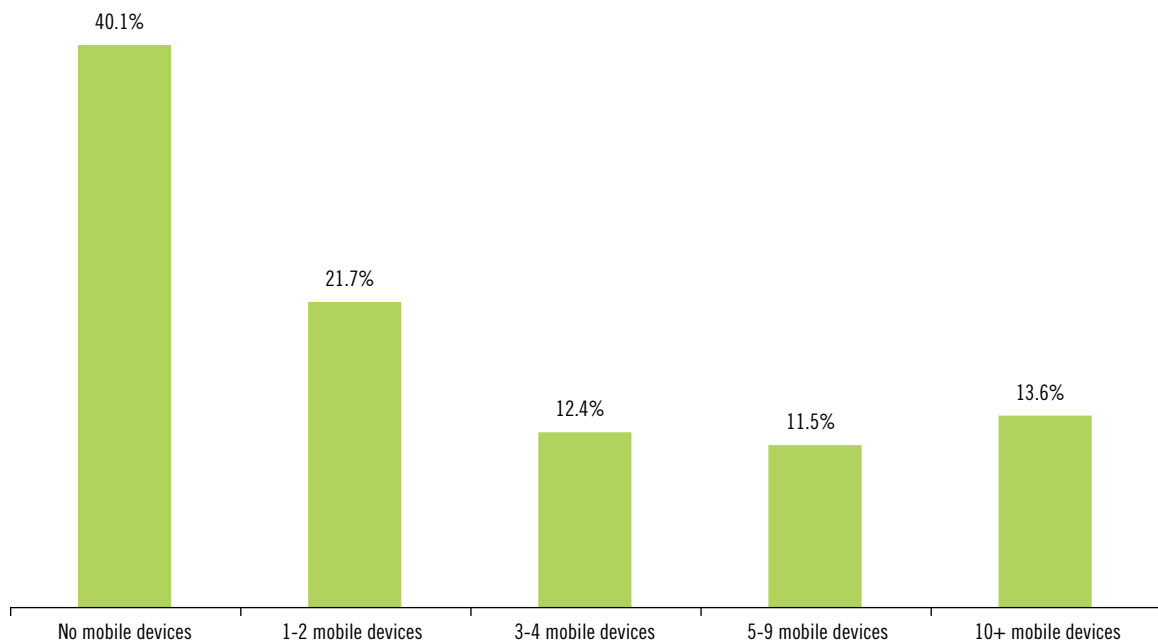
## 2.4 MOBILE DEVICES (INCLUDING SMART PHONES, PDAS AND DIGITAL TABLETS)

Mobile devices include all mobile phones or personal digital assistants (PDAs) which can serve as personal computers. They do not include cell phones that cannot serve in the capacity of personal computers.

Generally speaking, 59.3% of Canadian SMEs have mobile devices (including smart phones, PDAs and digital tablets).

Figure 14

### Number of mobile devices (including smart phones, PDAs and digital tablets) in Canadian SMEs



Base: Canadian SMEs (n: 2,013)

Question: Approximately how many mobile devices, including smart phones, PDAs and digital tablets, does your company have?



SMEs with 100-499 employees account for the greatest percentage of SMEs (88.9%) having mobile devices. This percentage is 68.3% for SMEs with 20-99 employees and 53.4% for SMEs with fewer than 20 employees.

We also note that Canadian SMEs in certain sectors have a greater number of mobile devices (including smart phones, PDAs and digital tablets). These are:

- SMEs in the mining and oil and gas extraction sector (98.6%)
- SMEs in the information and cultural industries (88.0%)
- SMEs in the utilities sector (73.5%)
- SMEs in the transportation and warehousing sector (73.3%)
- SMEs in the manufacturing sector (70.1%)

Conversely, these numbers are lower for companies in certain sectors:

- SMEs in the health care and social assistance sector (37.4%)
- SMEs in the accommodation and food services sector (49.9%)

For SMEs with mobile devices, the average number of such devices is 8.28 per company. This figure obviously varies according to company size (4.12 units for SMEs with fewer than 20 employees, 9.32 units for SMEs with 20-99 employees and 33.06 units for SMEs with 100-499 employees). The numbers also vary depending on the region (7.01 units for Quebec SMEs versus 7.56 in British Columbia, 9.32 in the Prairies, 9.02 in Ontario and 6.89 in the Atlantic).





## CHAPTER 3

# OFFICE SUITES AND MANAGEMENT SOFTWARE PACKAGES

Companies that wish to maximize the returns on their ICT investments while remaining competitive in their respective markets would do well to make judicious use of computer systems and tools designed to support their management activities. Are Canadian companies making adequate use of management software packages? In this chapter we will first assess the use of office suites such as Microsoft Office, Apple iWork and OpenOffice for Linux by SMEs across Canada. We will also look at SMEs' use of enterprise resource planning (ERP), customer relationship management (CRM) and supply chain management (SCM) software packages.

We also asked what prompted SMEs to computerize their processes by using such systems.

Using our historical data for Quebec, we traced the progress made by Quebec companies in this area.

### 3.1 OFFICE SUITES

The *NetPME 2011* survey reveals that most Canadian SMEs (82.0%) are equipped with an office suite such as Microsoft Office, Apple iWork or OpenOffice for Linux.

Figure 15  
Office suites used by Canadian SMEs



Base: Canadian SMEs (n: 2,013)

Question: Is your company equipped with an office suite (Microsoft Office, Apple iWork, OpenOffice for Linux)?

Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.

More specifically, our analysis of results indicates that the percentage of SMEs equipped with an office suite varies according to company size and activity sector:

- 77.5% of SMEs with fewer than 20 employees have an office suite. This percentage rises to 90.5% among SMEs with 20-99 employees, and to 97.5% for larger Canadian SMEs, i.e. those with 100-499 employees
- As regards activity sector, 92.3% of SMEs in the manufacturing sector are equipped with an office suite, compared to 81.7% of SMEs in the services sector, 79.9% of SMEs in the wholesale and retail trade sector and 79.1% of SMEs in the other sectors

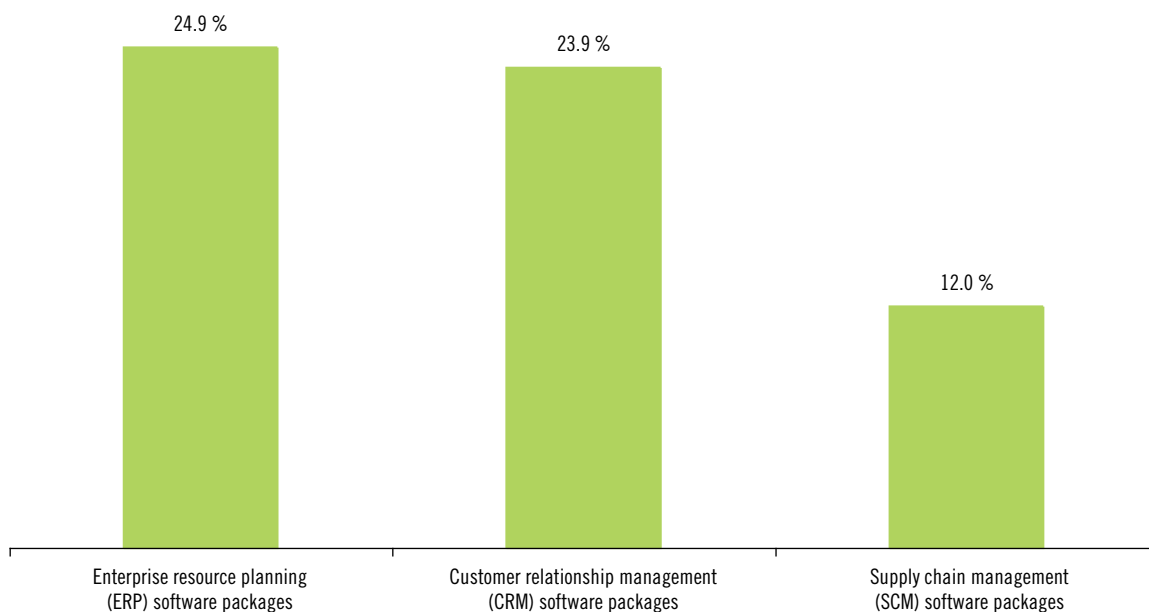


It should be noted that 100% of SMEs in the finance and insurance sector make use of office suites. Relatively more SMEs in the manufacturing sector (92.3%) use these tools. SMEs are lagging behind in the accommodation and food services sector (63.8%), and the agriculture, forestry, fishing and hunting sector (68.4%).

### 3.2 MANAGEMENT SOFTWARE PACKAGES

The *NetPME 2011* survey reveals that only one out of every four Canadian SMEs is equipped with enterprise resource planning (ERP) software; the same statistic applies to customer relationship management (CRM) software. Only 12.0% of Canadian SMEs are equipped with a supply chain management (SCM) software package.

Figure 16  
Management software packages in Canadian SMEs



Base: Canadian SMEs (n: 2,013)

Question: Does your company have a management software package?

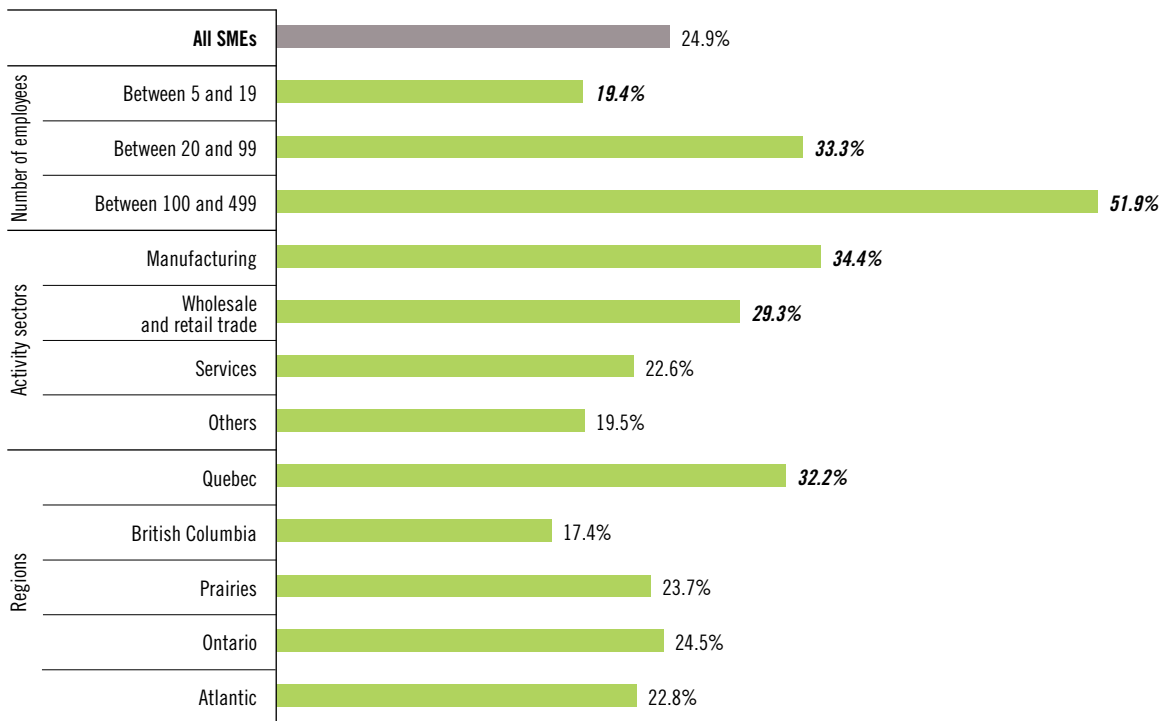
### 3.2.1 Enterprise resource planning (ERP) software packages

With enterprise resource planning (ERP) software packages companies can make their various operating processes dovetail by integrating all of their functions (human resources, accounting management, financial management, sales, distribution, procurement and e-commerce).

51.9% of Canadian SMEs with 100-499 employees are equipped with enterprise resource planning (ERP) software packages, compared to 33.3% of SMEs with 20-99 employees and 19.4% of companies with fewer than 20 employees.

Figure 17

#### Enterprise resource planning (ERP) software packages in Canadian SMEs



Base: Canadian SMEs (n: 2,013)

Question: Does your company have an enterprise resource planning (ERP) software package?

Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.



An analysis by activity sector reveals that enterprise resource planning (ERP) software packages are most prevalent among SMEs in the manufacturing sector (34.4%), compared to those in the wholesale and retail trade (29.3%), services (22.6%) or other sectors (19.5%).

Within the wholesale and retail trade sector there is an important distinction between SMEs in the wholesale trade (39.6%) and those in the retail trade (27.0%) as regards enterprise resource planning (ERP) software packages.

Comparing the 5 major regions in Canada also shows that a greater percentage of Quebec SMEs are equipped with enterprise resource planning (ERP) software packages (32.2%). Numbers for the other regions are: 24.5% for Ontario, 23.7% for the Prairies, 22.8% for the Atlantic and 17.4% for British Columbia.

### Challenges associated with enterprise resource planning (ERP) software packages\*

To be able to enjoy improved performance from the use of enterprise resource planning (ERP) software packages, SMEs must first manage the risks associated with the introduction of such IT by following *strategic alignment* principles (software packages must be tailored to the companies' requirements, strategic orientations and business processes). They must then manage the advantages such IT brings, assessing its impact on operating results and overall business management.

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\* For more information:

Poba-Nzaou, P. and Raymond, L. (2011), Managing ERP system risk in SMEs: a multiple case study, *Journal of Information Technology*, 26 (3), 172-190.

Uwizeyemungu, S. and Raymond, L. (2010), Linking the effects of ERP to organizational performance: Development and initial validation of an evaluation method, *Information Systems Management*, 27 (1), 25-41.

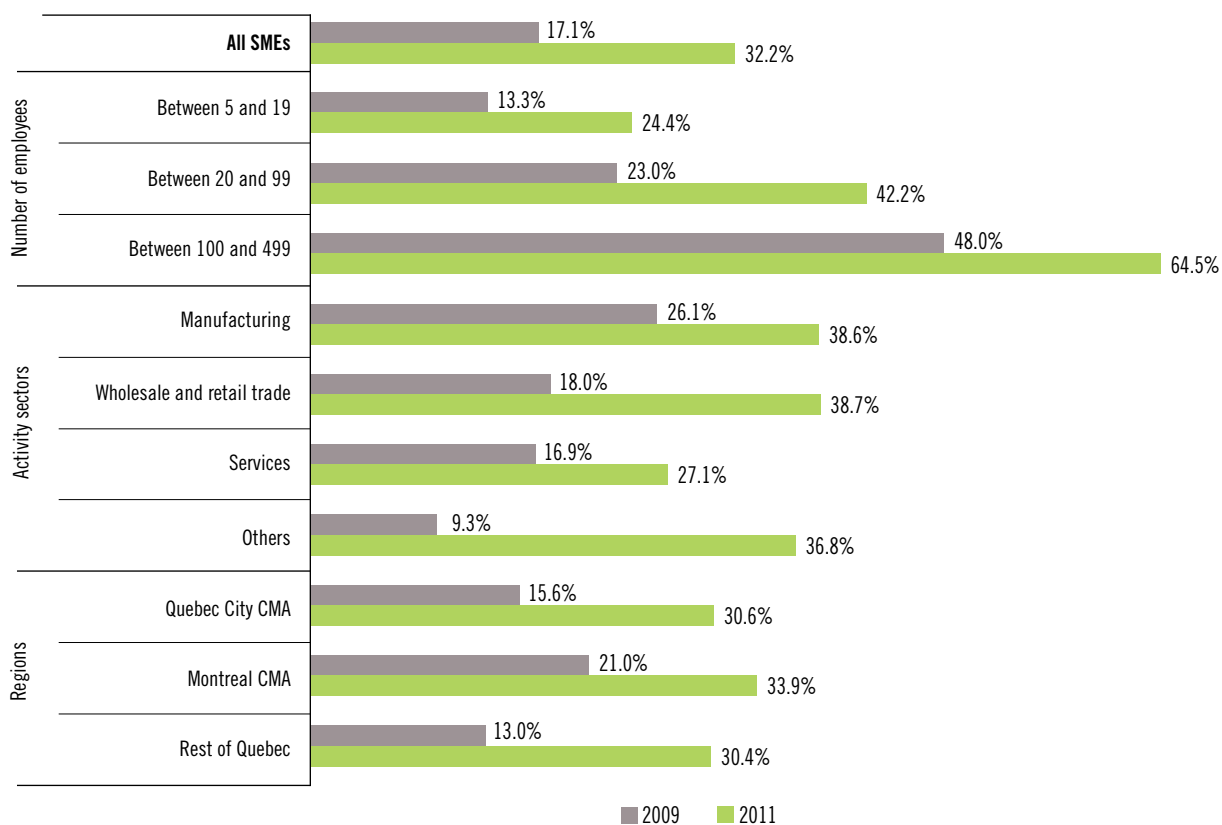
### Progress of enterprise resource planning (ERP) software packages in Quebec SMEs

Since 2009 the percentage of Quebec SMEs using enterprise resource planning (ERP) software packages has risen by 15.1%, namely from 17.1% to 32.2% in 2011.

Comparing the results of this survey with those of the *NetPME 2009* survey reveals that in Quebec the increase in enterprise resource planning (ERP) software packages is most prevalent among SMEs with 20-99 employees (an increase of 19.2% over 2009) and among wholesalers and retailers (an increase of 20.7% over 2009).

Figure 18

### Comparison of Quebec SMEs equipped with an enterprise resource planning (ERP) software package in 2009 and 2011



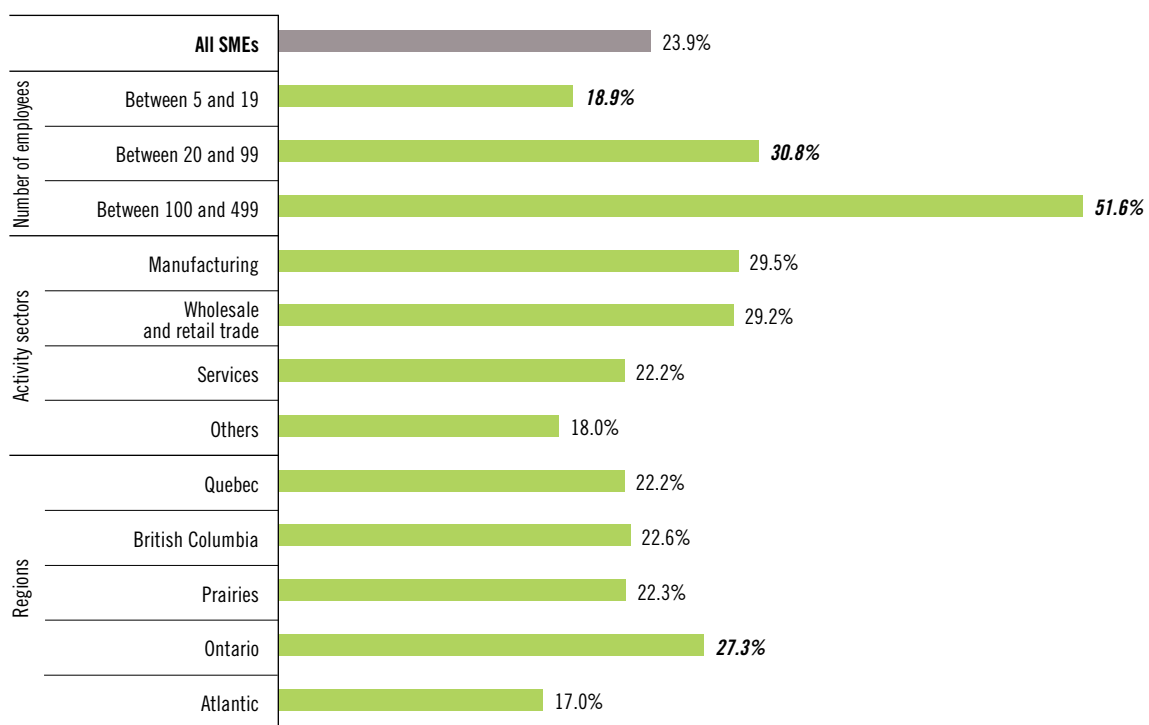
Base: Quebec SMEs (n: 1,001 in 2011 and 1,801 in 2009)  
 Question: Does your company have enterprise resource planning (ERP) software?



### 3.2.2 Customer relationship management (CRM) software packages

One out of every four Canadian SMEs (23.9%) makes use of a customer relationship management (CRM) software package. These are systems that allow companies to manage interactions with clients at various junctures (e.g. sales, after-sales, technical support) by using multiple and interconnected communications channels.

**Figure 19**  
**Customer relationship management (CRM) software packages in Canadian SMEs**



*Base: Canadian SMEs (n: 2,013)*

*Question: Does your company have a customer relationship management (CRM) system?*

*Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.*

As we saw for enterprise resource planning (ERP) software packages, customer relationship management (CRM) systems are more prevalent among Canadian SMEs with 100-499 employees (51.6%). The equivalent figure is 30.8% for SMEs with 20-99 employees and 18.9% for companies with 5-19 employees.

49.9% of Canadian SMEs in the finance and insurance sector are equipped with customer relationship management (CRM) software packages.

Although Quebec SMEs are increasingly making use of enterprise resource planning (ERP) software packages, the same cannot be said for customer relationship management (CRM) software packages. Our survey indicates that 27.3% of Ontario companies have a customer relationship management (CRM) system, compared to 22.6% in British Columbia, 22.3% in the Prairies, 22.2% in Quebec and 17.0% in the Atlantic.

### Challenges associated with customer relationship management (CRM) software packages\*

To be able to enjoy improved performance from the use of customer relationship management (CRM) software packages, SMEs must first develop their IT capabilities as *customer- and service-focused organizations* (rather than production-focused). They must also develop their *knowledge management capabilities* and ensure that the software packages are aligned with their marketing strategies (including Internet-based marketing strategies).

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\* For more information:

Croteau, A.-M. and Li, P. (2003), Critical success factors of CRM technological initiatives, *Canadian Journal of Administrative Sciences*, 20 (1), 21-34.

Uwizeyemungu, S. and Raymond, L. (2011), Information technology adoption and assimilation: Towards a research framework for service sector SMEs, *Journal of Service Science and Management*, 4 (2), 141-157.

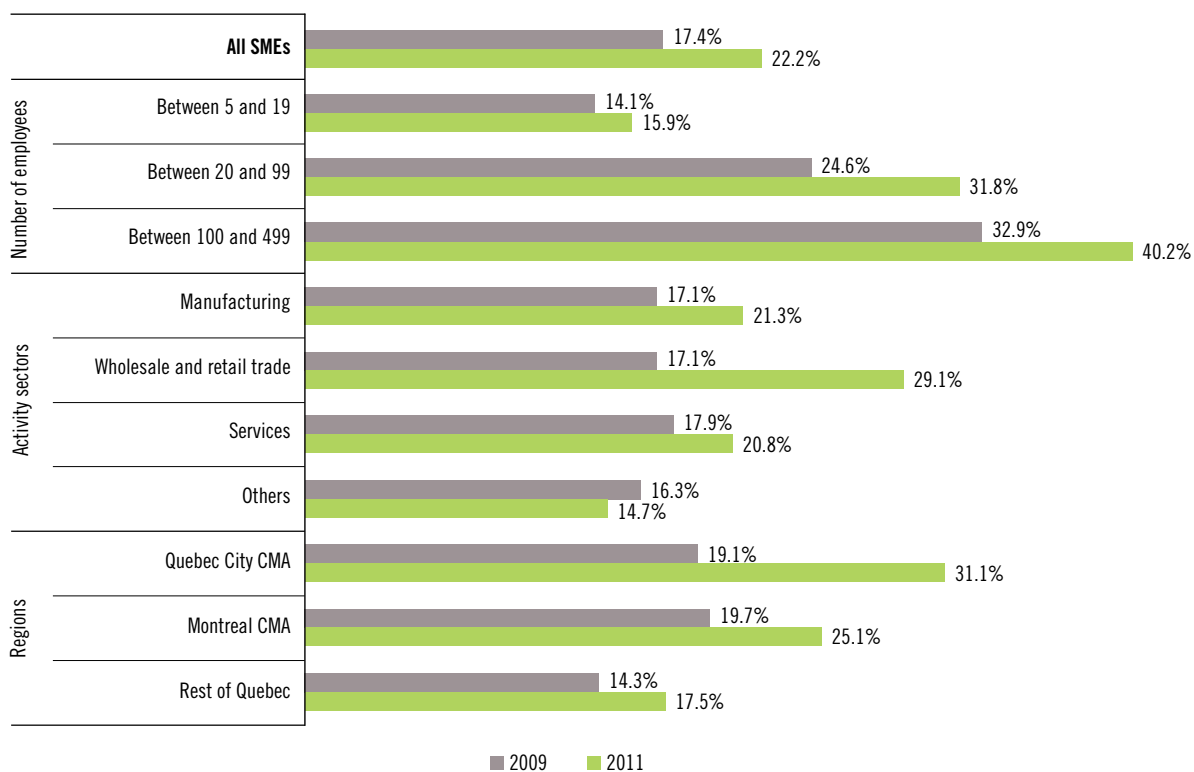


### Progress of customer relationship management (CRM) software packages among Quebec SMEs

A comparison of the results of this survey with those of *NetPME 2009* shows a slight increase (4.8%) in the number of Quebec SMEs with customer relationship management (CRM) software packages (22.2% in 2011 versus 17.4% in 2009). This comparison also reveals that in Quebec such packages are more prevalent among SMEs in the wholesale and retail trade sector (an increase of 12.0% over 2009).

Figure 20

### Comparison of Quebec SMEs equipped with customer relationship management (CRM) software in 2009 and 2011



Base: Quebec SMEs (n: 1,001 in 2011 and 1,801 in 2009)

Question: Does your company have a customer relationship management (CRM) system?

### 3.2.3 Supply chain management (SCM) software packages

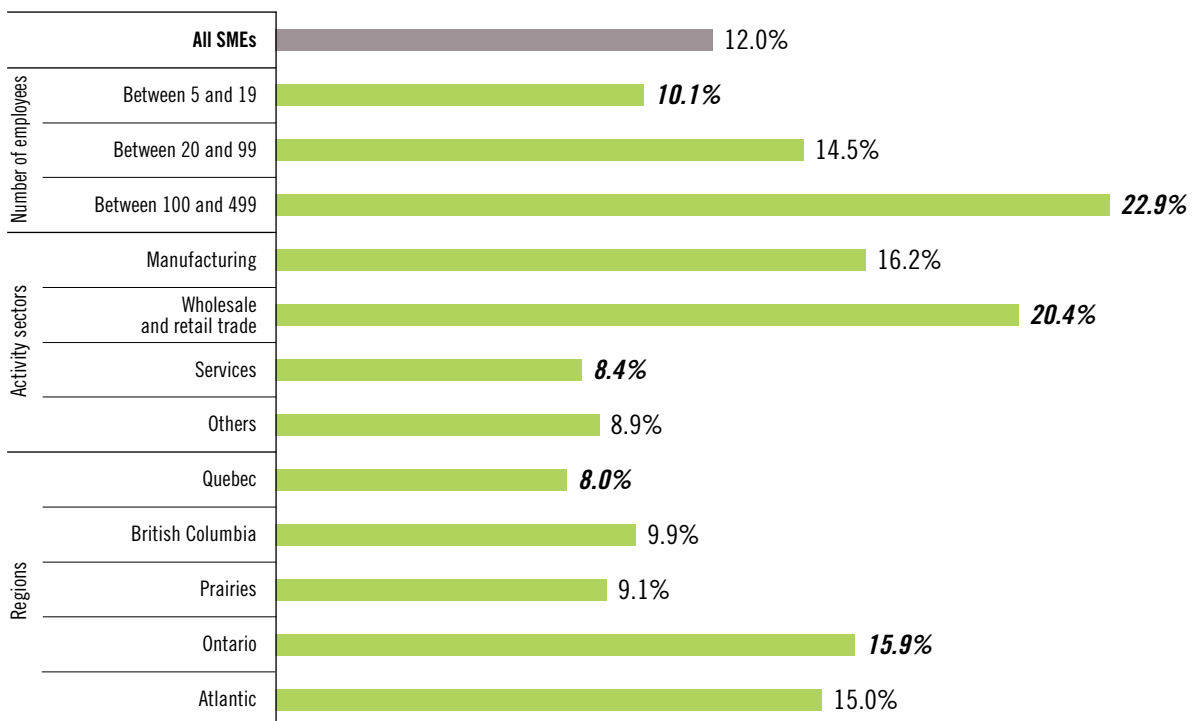
According to our figures, only 12.0% of Canadian SMEs use supply chain management (SCM) software packages. Such systems make it possible to manage a whole network of companies involved in manufacturing a product or delivering a service required by the end client. They cover the flow of materials and information from their point of origin to the point of consumption.

As was the case for ERP and CRM packages, supply chain management (SCM) software packages are more prevalent among Canadian SMEs with 100-499 employees (22.9%). The equivalent statistic is 14.5% for SMEs with 20-99 employees and 10.1% for companies with 5-19 employees.

An analysis by activity sector reveals that supply chain management (SCM) software packages are also more prevalent among SMEs in the wholesale and retail trade sector (20.4%) and least prevalent among SMEs in the services sector (8.4%). 16.2% of manufacturing companies are equipped with a supply chain management (SCM) system.

Our survey also shows that 15.9% of SMEs in Ontario, 15.0% in the Atlantic, 9.9% in British Columbia, 9.1% in the Prairies and only 8.0% of Quebec SMEs are equipped with supply chain management (SCM) software packages.

**Figure 21**  
Supply chain management (SCM) software packages in Canadian SMEs



Base: Canadian SMEs (n: 2,013)

Question: Does your company have a supply chain management (SCM) system?

Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.



### Challenges associated with supply chain management (SCM) software packages\*

To be able to enjoy improved performance from the use of supply chain management (SCM) software packages, SMEs must ensure that such IT enables them to operate as *extended organizations*, i.e. networked with their business partners for the best possible management of operations (value-added production or lean manufacturing, JIT manufacturing, technical sector subcontracting or offshoring, and outsourcing of business and other services).

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\* For more information:

Raymond, L. et Croteau, A.-M. (2009), Manufacturing strategy and business strategy in medium-sized enterprises: Performance effects of strategic alignment, *IEEE Transactions on Engineering Management*, 56 (2), 192-202.

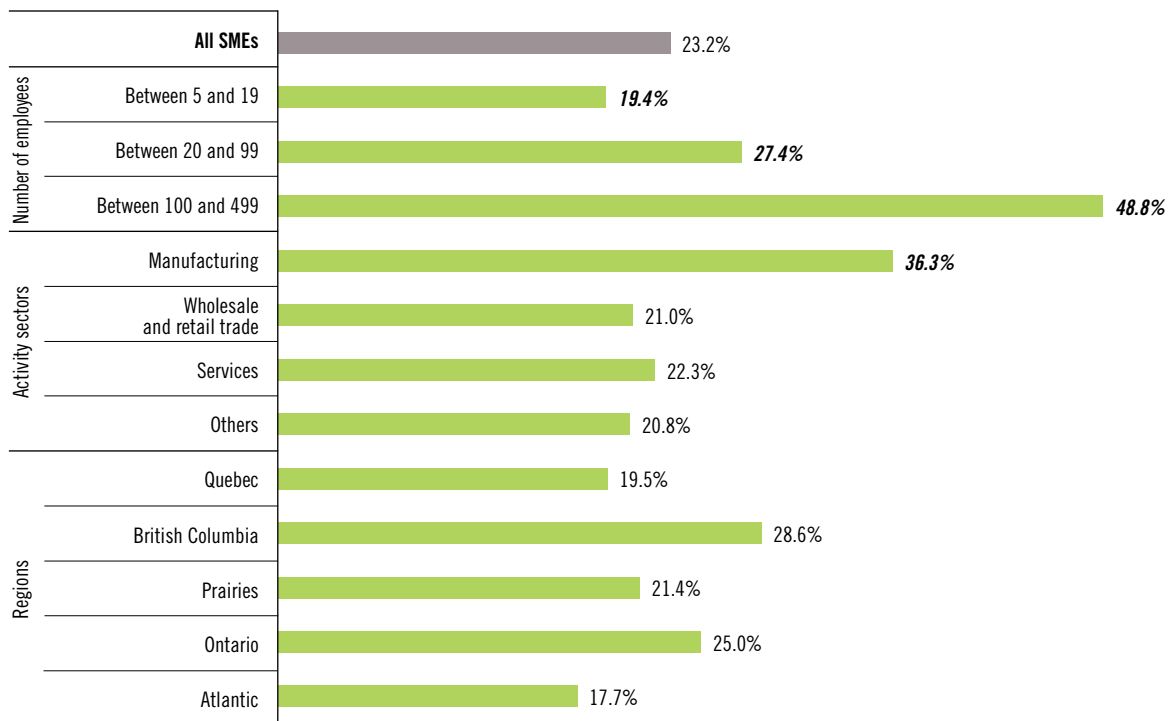
Raymond, L. et Croteau, A.-M. (2006), Enabling the strategic development of SMEs through advanced manufacturing systems: A configurational perspective, *Industrial Management & Data Systems*, 106 (7), 1012-1032.

### 3.3 OPEN SOURCE SYSTEMS OR SOFTWARE APPLICATIONS

23.2% of Canadian SMEs use what are called «open source» or free systems or software applications.

Figure 22

#### Open source systems or software applications in Canadian SMEs



Base: Canadian SMEs (n: 2,013)

Question: Does your company make use of "open source" (also called free) systems or software applications?

Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.

As was the case for ERP, CRM and SCM, open source systems or software applications are more prevalent among Canadian SMEs with 100-499 employees (48.8%). The equivalent figure is 27.4% for SMEs with 20-99 employees and 19.4% for those with 5-19 employees.

An analysis by activity sector reveals that the use of open source systems or software applications is more prevalent among SMEs in the manufacturing sector (36.3%). The equivalent figure is 22.3% for the services sector, 21.0% for the wholesale and retail trade sector, and 20.8% for the other sectors.

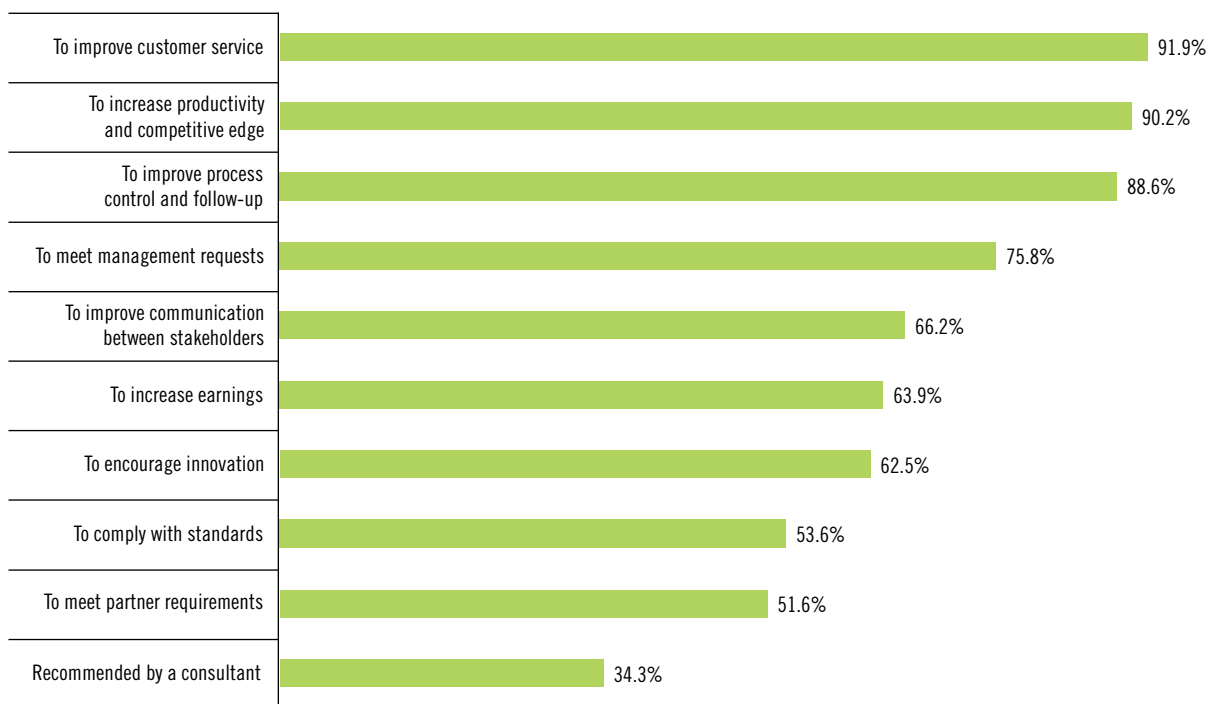


### 3.4 REASONS GIVEN TO JUSTIFY THE COMPUTERIZATION OF MANAGEMENT PROCESSES

We asked the Canadian SMEs that did make use of ERP, CRM or SCM to tell us why they had opted to computerize the processes in question. The reasons they gave were quite varied.

Figure 23

#### Reasons for computerizing processes in Canadian SMEs



Base: Canadian SMEs that make use of ERP, CRM or SCM (n: 981)

Question: Which of the following reasons prompted your company to computerize its processes?

The reasons most often cited by executives include, beginning with the most important: to improve customer service (91.9%), increase productivity and competitiveness (90.2%), improve process control and follow-up (88.6%). 63.9% of companies also look to computerization in order to increase earnings. And lastly, they use it to comply with standards (53.6%) and meet partner requirements (51.6%).





## CHAPTER 4

# USE OF INTERNET TOOLS BY CANADIAN SMEs

This chapter bears on the use of Internet tools-websites, intranets and extranets-by Canadian SMEs. We also assessed the extent to which SMEs use collaborative Internet tools such as email, web meetings, videoconferencing and conference calling.

The evolution among Quebec companies is also discussed.

### 4.1 WEBSITES

A company's website, in addition to solidifying its presence on the Internet and providing it with greater exposure, allows it to carry out transactions and sell online. A website can also serve as a strategic communications and marketing tool. 69.8% of Canadian companies have their own websites.

#### Challenges associated with the use of websites\*

To be able to enjoy improved performance from the use of websites, SMEs must first be able to define the informational, transactional and relational objectives and functionalities of such tools, based on their strategic capabilities and choices, and more specifically their marketing strategies (price, product/service, distribution, communications, customer relationships).

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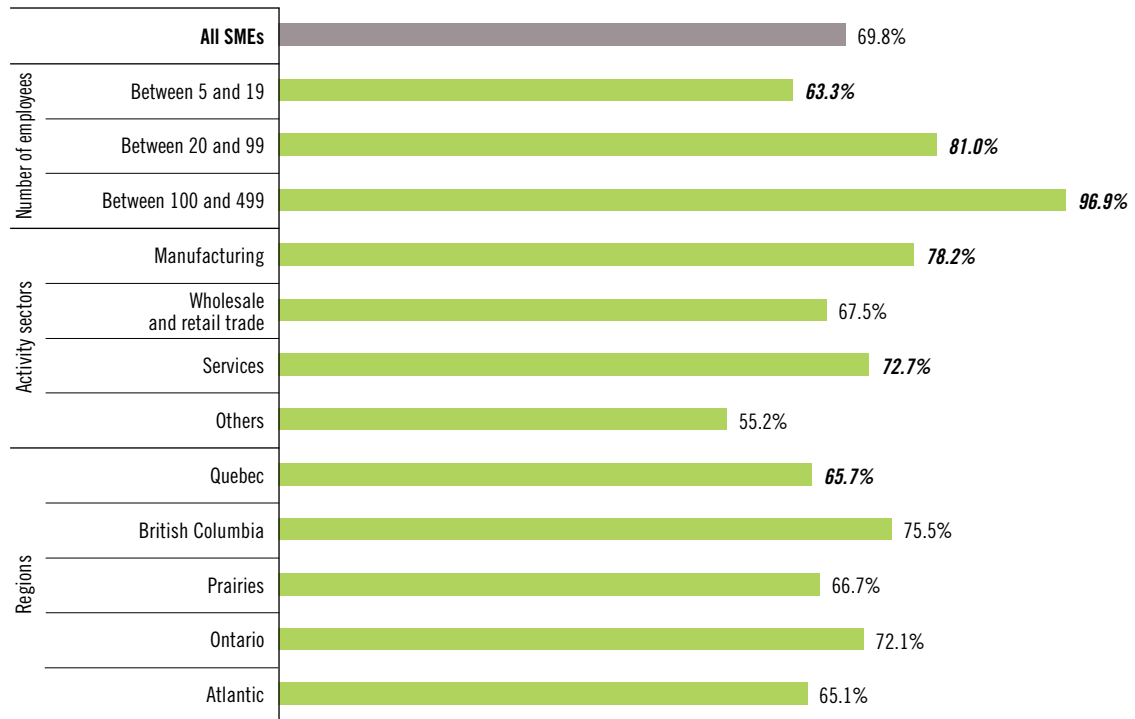
\* For more information:

Raymond, L., Bergeron, F. and Blili, S. (2005), Assimilation of e-business in manufacturing SMEs: Determinants and effects on growth and internationalization, *Electronic Markets*, 15 (2), 32-44.

Raymond, L. (2001), Determinants of Web site implementation in small businesses, *Internet Research*, 11 (5), 411-422.

Figure 24

Use of the website as an Internet tool among Canadian SMEs



Base: Canadian SMEs (n: 2,013)

Question: Does your company have a website?

Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.

A company's Internet presence will vary greatly depending on its size. Most Canadian SMEs with 100-499 employees (96.9%) have a website, compared to 81.0% of companies with 20-99 employees and 63.3% of SMEs with 5-19 employees.

SMEs in the manufacturing sector tend to have greater presence on the Internet (78.2%) than SMEs in the services sector (72.2%), the wholesale and retail trade sector (67.5%) and other sectors (55.2%). Also, certain specific sectors, among them information and cultural industries (99.0%), finance and insurance (91.4%), and educational services (89.7%), have a greater presence on the Internet. The opposite, however, is true for the agriculture, forestry, fishing and hunting sector (31.4%) and the utilities sector (43.6%).

Quebec SMEs are somewhat less present on the Internet (65.7%) than are SMEs elsewhere in Canada (70.9%).



### *Mobile websites*

The proliferation of mobile devices such as the iPhone or BlackBerry undeniably prompts companies to develop mobile websites and applications that run on these new platforms. How are Canadian SMEs faring in this regard?

The *NetPME 2011* survey reveals that only a very small percentage of Canadian SMEs (8.2%) have made the leap toward mobile Internet services. This percentage varies depending on company size and geographic location.

13.6% of SMEs with 100-499 employees have a mobile website, compared to 13.8% of SMEs with 20-99 employees and 5.6% of SMEs with 5-19 employees. The Quebec region has the highest percentage of SMEs with mobile websites, at 11.4%. The equivalent figure is 10.4% for the Prairies, 9.0% for British Columbia, 5.5% for Ontario and 5.2% for the Atlantic.

#### **Challenges associated with the use of mobile websites\***

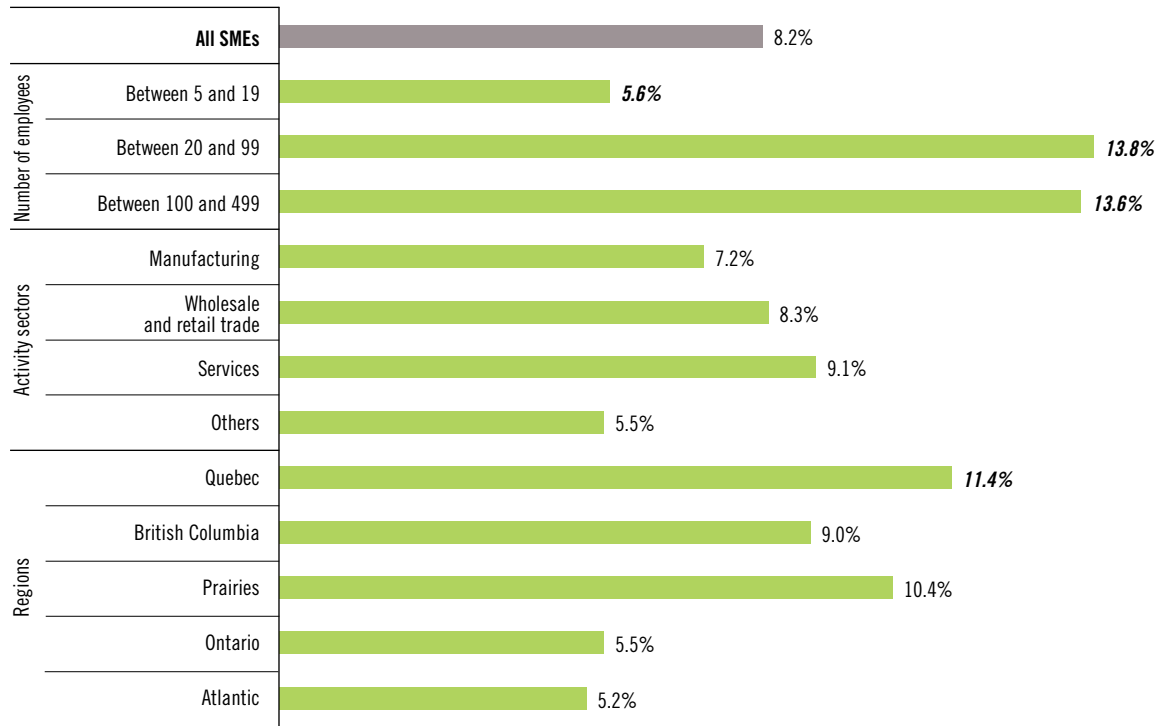
To be able to enjoy improved performance from the use of mobile websites, SMEs must use such technology to extend the scope of their Internet-based marketing strategies, and more specifically, their business management (including remote management of their sales forces), linking up to company intranets (and, eventually, ERP, CRM or SCM systems).

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\* For more information:

Balocco, R., Mogre, R. et Toletti, G. (2009), Mobile internet and SMEs: a focus on the adoption, *Industrial Management & Data Systems*, 109 (2), 245-261.

Figure 25  
**Mobile websites among Canadian SMEs**



Base: Canadian SMEs (n: 2,013)

Question: Does your company have a mobile website adapted for viewing from a mobile device?

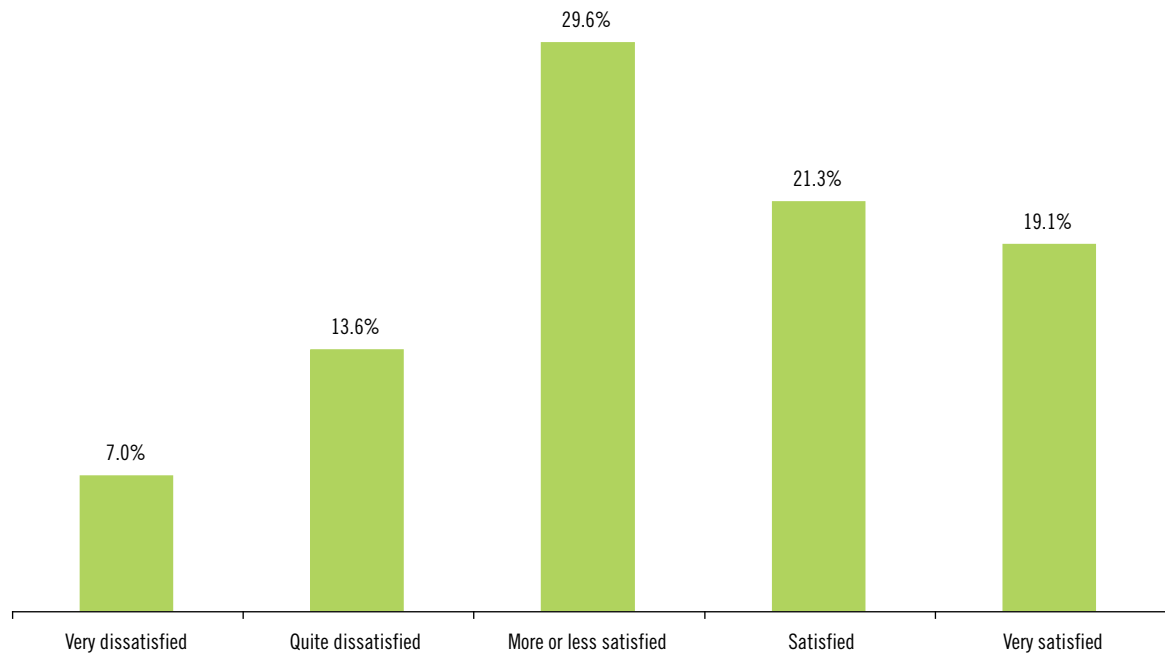
Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.

Generally speaking, 70.0% of SMEs with mobile websites incorporated into their communications and marketing strategies are satisfied with them.



Figure 26

Level of satisfaction among Canadian SMEs with regard to the use of mobile marketing



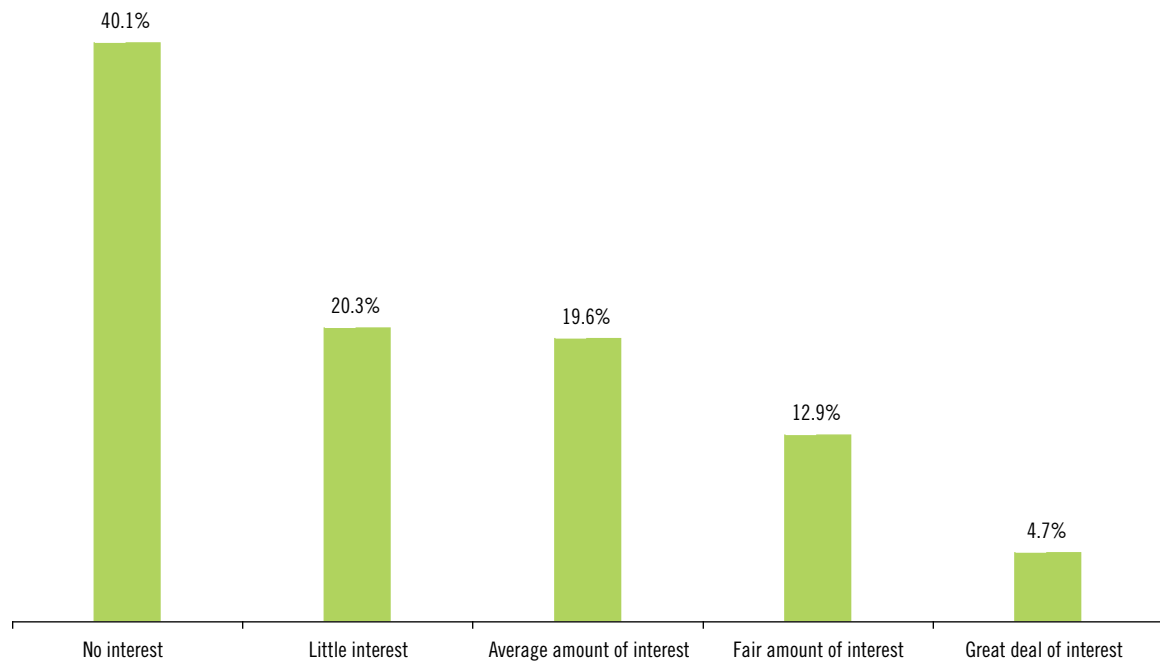
Base: Canadian SMEs incorporating mobile marketing into their communications and marketing strategies (n: 246)

Question: On a scale of 1 to 5, how satisfied are you with the mobile marketing component of your communications and marketing strategies?

Current interest for eventually adapting their websites for mobile devices is not very widespread among Canadian SMEs, with only 37.2% of those surveyed expressing an interest.

Figure 27

**Connected Canadian SMEs' interest in adapting their websites for mobile devices**



*Base: Connected Canadian SMEs with no mobile site (n: 1,289)*

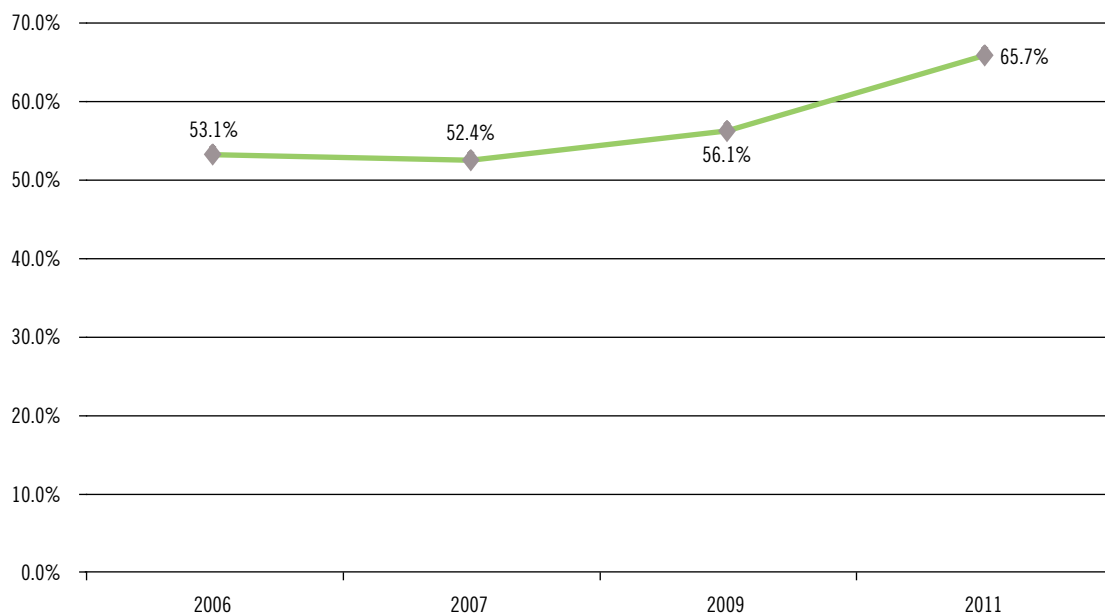
*Question: What is the extent of your company's interest in adapting its website for mobile devices?*

***Progress in the Internet presence of Quebec SMEs***

Data from prior *NetPME* surveys show that the Internet presence of Quebec SMEs is continually growing; the percentage of SMEs with websites grew from 53.1% in 2006 to 65.7% in 2011.



Figure 28  
Evolution of Quebec companies with a website

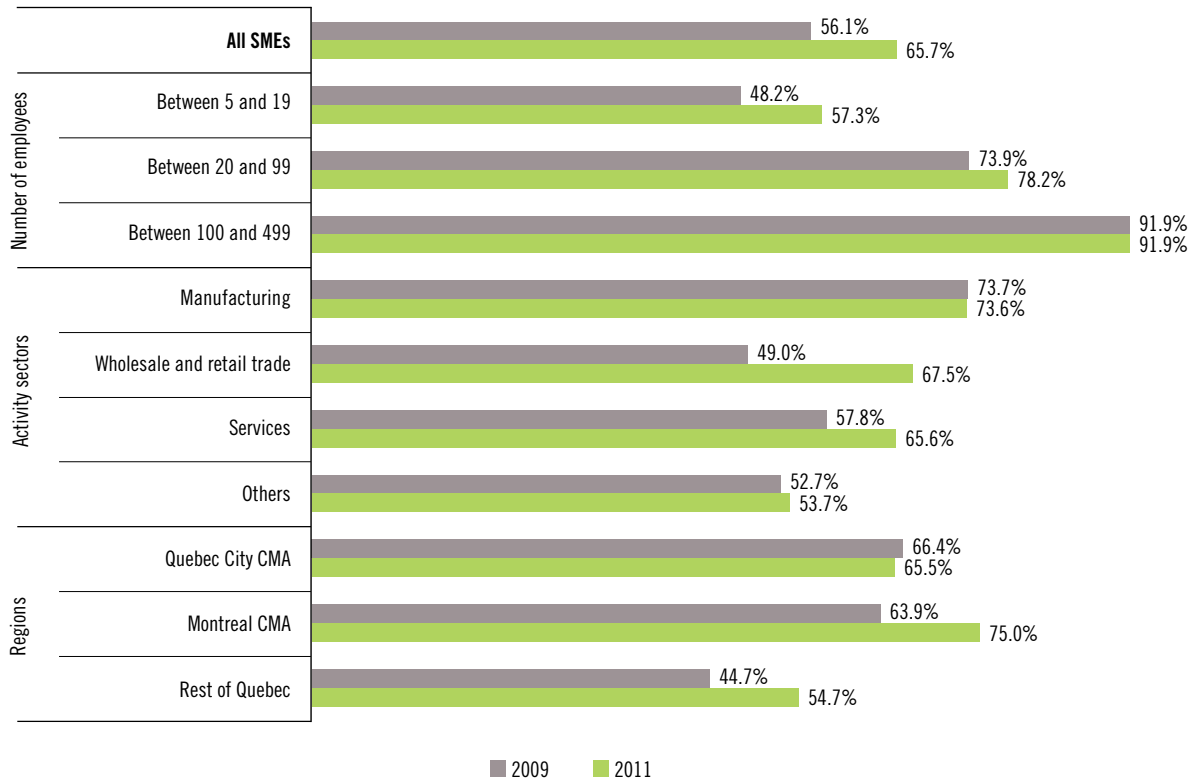


Base: Quebec SMEs (n: 1,001)  
Question: Does your company have a website?

Quebec companies are increasingly likely to have their own websites. The general trend shows sustained growth with regard to Internet presence. This growth has intensified over the past 2 years, with the percentage of Quebec SMEs with websites increasing from 56.1% in 2009 to 65.7% in 2011.

Figure 29

Comparison of Quebec SMEs with websites in 2009 and 2011



Base: Quebec SMEs (n: 1,001 in 2011 and 1,801 in 2009)  
 Question: Does your company have a website?

Generally speaking, the percentage of Quebec SMEs with websites has risen from 56.1% in 2009 to 65.7% in 2011, which represents an increase of 9.6%.

While larger SMEs (with 100-499 employees) still lead the pack in terms of company websites (91.9%), SMEs with 5-19 employees exhibited the greatest growth (9.1%) between 2009 and 2011 in terms of having their own. The percentage of such companies with websites rose from 48.2% to 57.3%.

Between 2009 and 2011 companies in the wholesale and retail trade sector experienced the greatest growth (18.5%) in terms of the development of websites, with the number of SMEs with websites going from 49.0% to 67.5%.

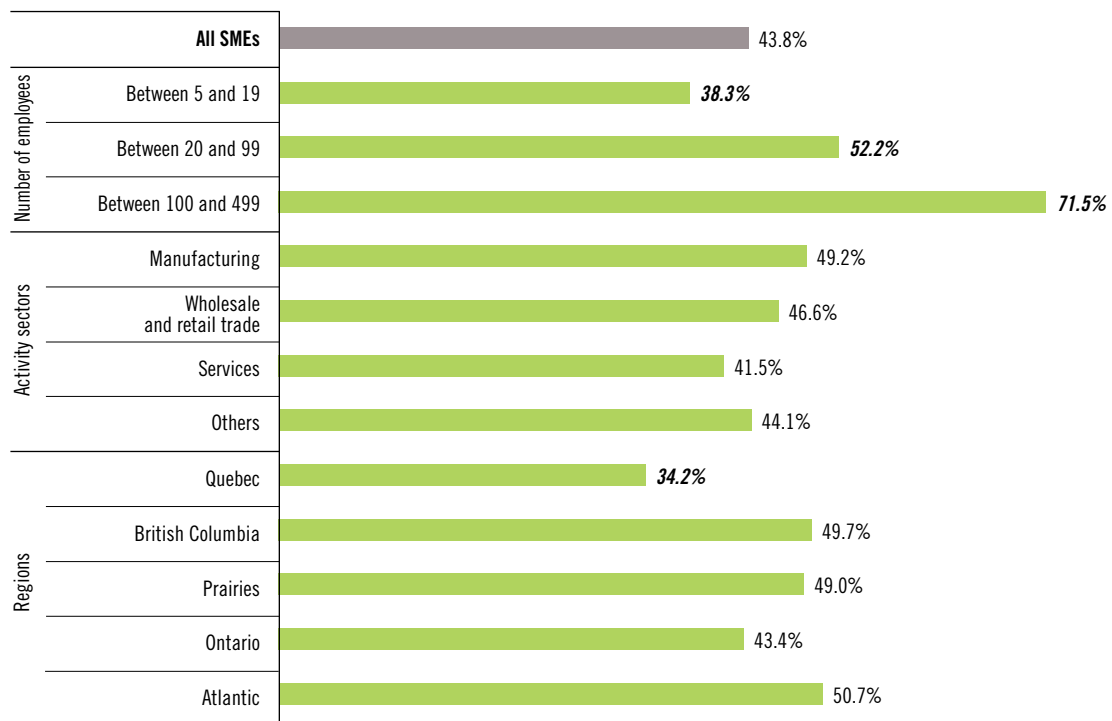
As regards regions, there was a reversal in the trend in 2011. Three quarters of the companies in the Montreal CMA have websites in 2011, pulling ahead of companies located in the Quebec City CMA (65.5%), whose position has not changed since 2009.



## 4.2 INTRANET SITES

The intranet is a computer network deployed inside a company but using Internet communications techniques. It is a local network, designed for a company's exclusive use, and may or may not be connected to the Internet. In 2011, 43.8% of Canadian SMEs had intranets.

Figure 30  
Use of intranets in Canadian SMEs



Base: Canadian SMEs (n: 2,013)

Question: Does your company have an intranet?

Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.

71.5% of Canadian SMEs with 100-499 employees have intranets, compared to 52.2% of SMEs with 20-99 employees and 38.3% of companies with 5-19 employees.

Use of the intranet varies from one region to another, with a major difference between Quebec (34.2%) and elsewhere in Canada (46.5%). More specifically, 50.7% of SMEs in the Atlantic, 49.7% of SMEs in British Columbia, 49.0% of SMEs in the Prairies and 43.4% of SMEs in Ontario have intranets.

### Challenges associated with the use of intranets\*

To be able to enjoy improved performance from the use of intranets, SMEs must ensure that such technology supports their *knowledge management* practices (such as the memorization of tacit knowledge) which preserve and increase the business' intellectual capital and *strategic human resources management* practices (including training), which result in greater employee skills and motivation.

### *Progress of intranet use among Quebec SMEs*

Between 2009 and 2011 the number of Quebec SMEs with intranets grew by 9.4%, and now represents 34.2% of Quebec SMEs, compared to 24.8% in 2009. Growth was most prominent among SMEs in the wholesale and retail trade sector (15.0%), going from 23.4% in 2009 to 38.4% in 2011.

Companies with 20-99 employees also experienced significant growth of 10.2%, going from 34.3% in 2009 to 44.5% in 2011. The same can be said for SMEs in the Quebec City CMA, which experienced growth of 11.3% – from 27.0% in 2009 to 38.3% in 2011.

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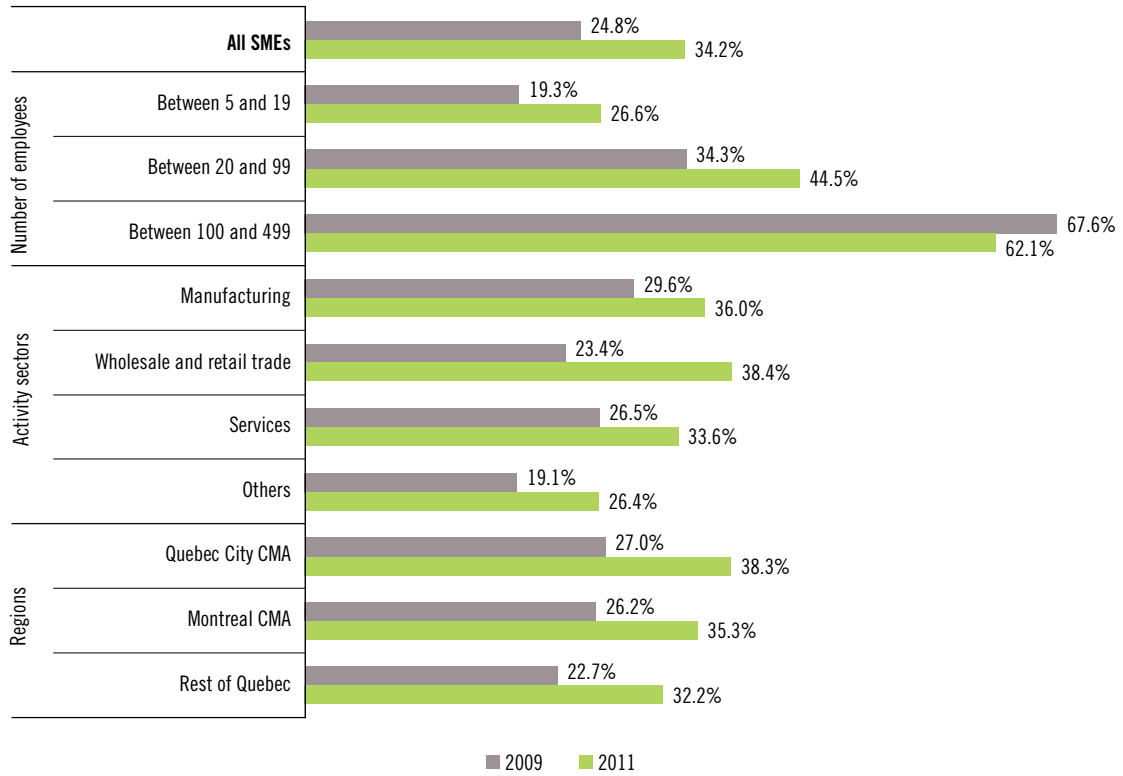
\* For more information:

Evangelista, P., Esposito, E., Lauro, V. and Raffa, M. (2010), The adoption of knowledge management systems in small firms, *Electronic Journal of Knowledge Management*, 8 (1), 33-42.

Roy, A. and Raymond, L. (2008), Meeting the Training Needs of SMEs: Is e-Learning a Solution?, *Electronic Journal of e-Learning*, 6 (2), 2008, 89-98.



**Figure 31**  
**Comparison of Quebec SMEs with intranets in 2009 and 2011**

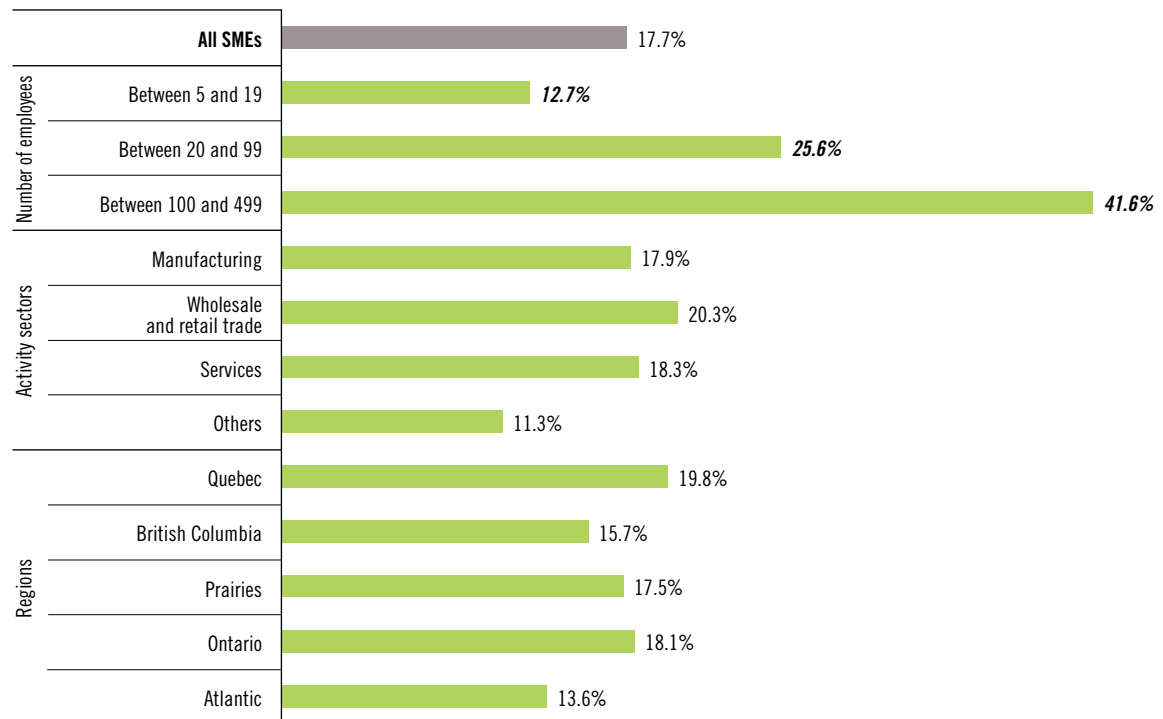


*Base: Quebec SMEs (n: 1,001 in 2011 and 1,801 in 2009)*  
*Question: Does your company have an intranet site?*

### 4.3 EXTRANET SITES

An extranet is essentially a network comprised of an expanded intranet allowing a company to securely share resources with certain outside organizations. 17.7% of Canadian SMEs make use of extranets.

Figure 32  
Use of extranets in Canadian SMEs



Base: Canadian SMEs (n: 2,013)

Question: Does your company have an extranet?

Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.

41.6% of Canadian SMEs with 100-499 employees have extranets, compared to 25.6% of SMEs with 20-99 employees and 12.7% of companies with 5-19 employees.



### Challenges associated with the use of extranets\*

To be able to enjoy improved performance from the use of extranets, SMEs in the manufacturing or industrial services sectors must develop their IT capabilities in order to become members of cooperative and subcontracting networks using this technology (portals, electronic marketplaces, platforms developed by major contract givers in sectors such as the automotive or aeronautics industries).

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\* For more information:

Jacob, R., Julien, P.-A. and Raymond, L. (2009), Compétitivité, savoirs stratégiques et innovation: les leviers de l'apprentissage collectif en contexte de réseau, in *Développer les compétences au travail*, D. Bouteiller and L. Morin (dir.), Montréal: Gestion – Revue internationale de gestion, 630-646.

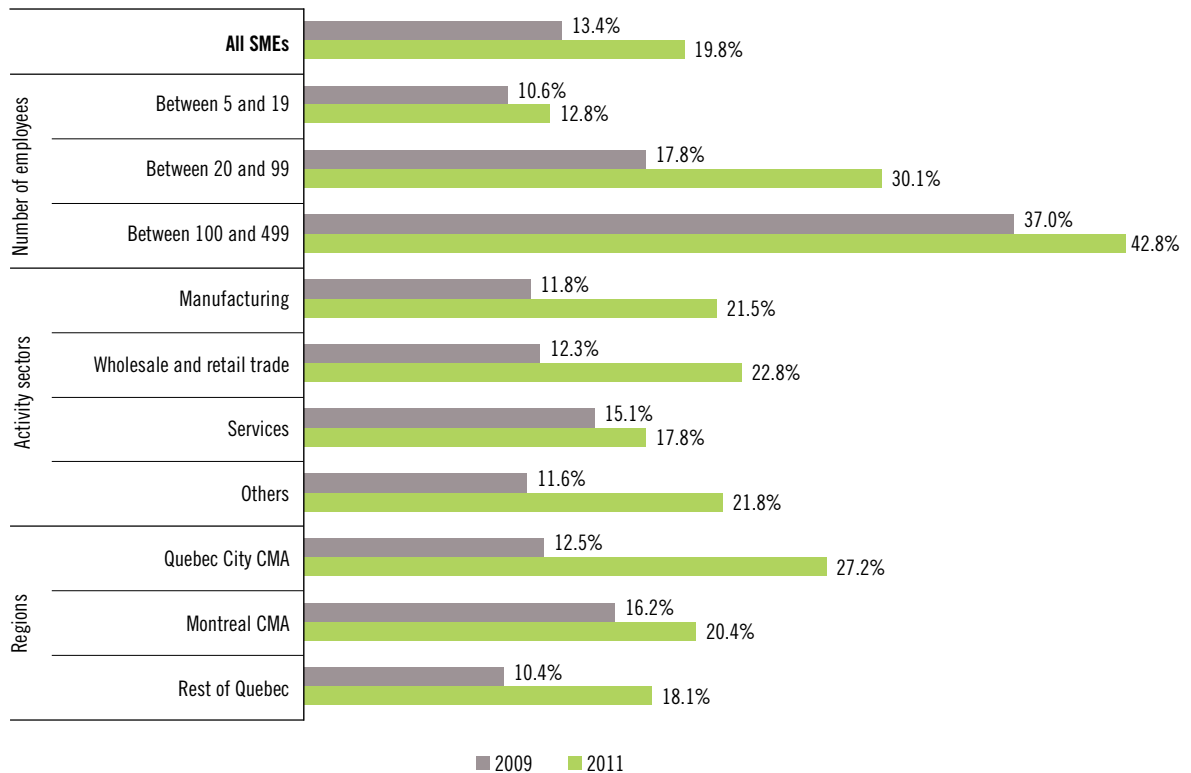
Raymond, L. (2008), Les places de marché électronique : Émergence et enjeux pour l'entrepreneuriat, in *Regards prospectifs sur les pratiques entrepreneuriales*, C. Schmitt (dir.), Québec: Presses de l'Université du Québec, 85-102.

### Progress of extranet use among Quebec SMEs

The number of Quebec SMEs with extranets grew by 6.4% from 2009 to 2011 and now accounts for 19.8% of Quebec SMEs, compared to 13.4% in 2009. Growth was most prominent among SMEs with 20-99 employees (12.3%), going from 17.8% in 2009 to 30.1% in 2011.

Lastly, a strong 14.7% growth (from 12.5% in 2009 to 27.2% in 2011) was observed among SMEs in the Quebec City CMA, which overtook SMEs in the Montreal CMA (20.4%) in extranet use.

**Figure 33**  
**Comparison of Quebec SMEs with extranet sites in 2009 and 2011**



Base: Quebec SMEs (n: 1,001 in 2011 and 1,801 in 2009)  
 Question: Does your company have an extranet site?



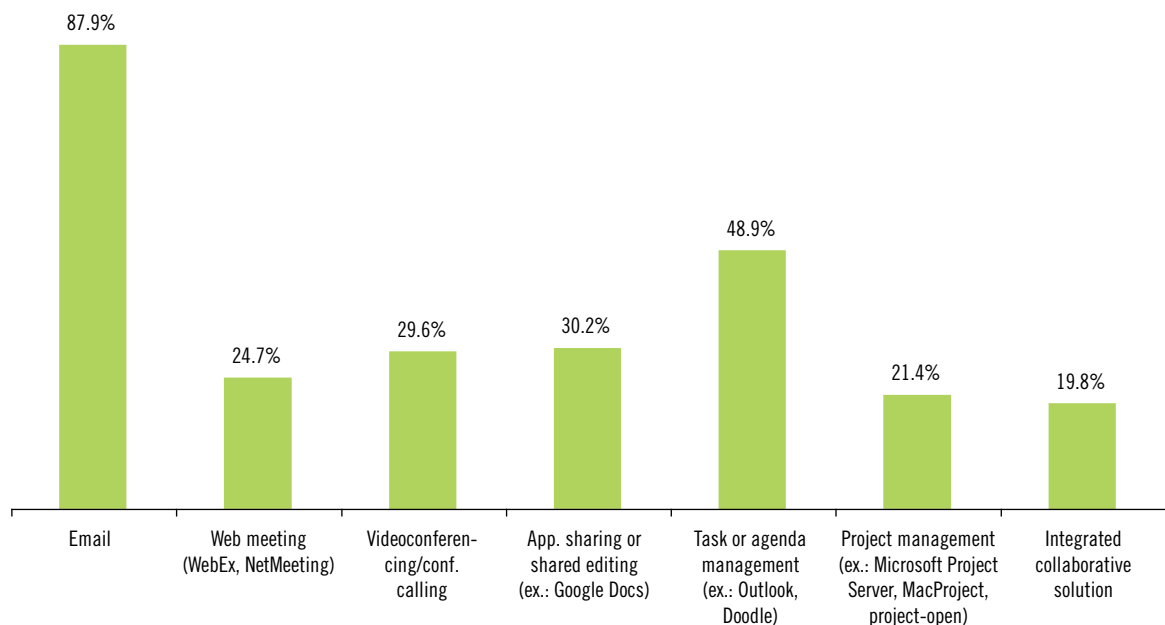
## 4.4 COLLABORATIVE TOOLS

Use of ICT greatly facilitates exchanges among the employees of SMEs as well as between SMEs and their partners. We wanted to find out which collaborative solutions are used, among them email, web meetings such as WebEx, GoToMeeting or NetMeeting, videoconferencing or conference calling, application sharing or shared editing (example: Google Docs), as well as task or agenda management tools (example: Outlook, Doodle).

### Challenges associated with e-collaboration\*

To be able to enjoy improved performance from e-collaboration, SMEs must opt for relational rather than transactional technologies. These include videoconferencing and discussion forums, which support interorganizational *open innovation* processes (joint business intelligence, joint R&D, co-design of products and services, shared practices) and lead to growth of the companies' *social capital*.

Figure 34  
Use of collaborative tools by Canadian SMEs



Base: Canadian SMEs (n: 2,013)  
Question: Do your employees use the following collaborative tools?

\* For more information:

Lindermann, N., Valcárcel, S., Schaarschmidt, M. and von Kortzfleisch, H. (2009), SME 2.0: Roadmap towards Web 2.0-based Open Innovation in SME networks: A Case Study Based Research Framework, in *Information Systems: Creativity and Innovation in Small and Medium-sized Enterprises*, IFIP Advances in Information and Communication Technology, 301, 28-41.

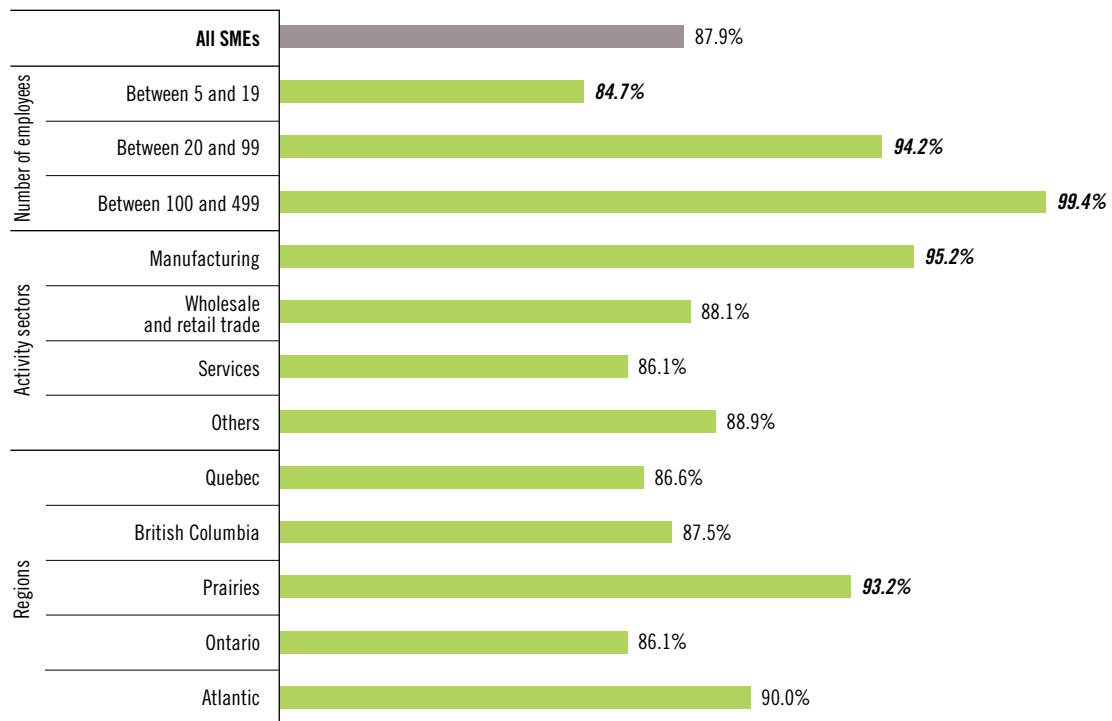
Raymond, L. and Bergeron, F. (2008), Enabling the business strategy of SMEs through e-business capabilities: A strategic alignment perspective, *Industrial Management & Data Systems*, 108 (5), 577-595.

Electronic mail, most commonly referred to as email, is without a doubt the collaborative tool most used by all Canadian SMEs (87.9%). Some task management tools such as Outlook or Doodle, are used by one out of every two SMEs (48.9%), and one out of every three SMEs makes use of application sharing or shared editing (30.2%) as well videoconferencing or conference calling (29.6%). Lastly, 19.8% of Canadian SMEs rely on integrated collaborative solutions.

### Email

The email use rate among SMEs with 5-19 employees is 84.7%, and it is 94.2% among SMEs with 20-99 employees. The rate is 99.4% for SMEs with 100-499 employees.

**Figure 35**  
Use of email by Canadian SMEs



*Base: Canadian SMEs (n: 2,013)*  
*Question: Do your employees use email?*

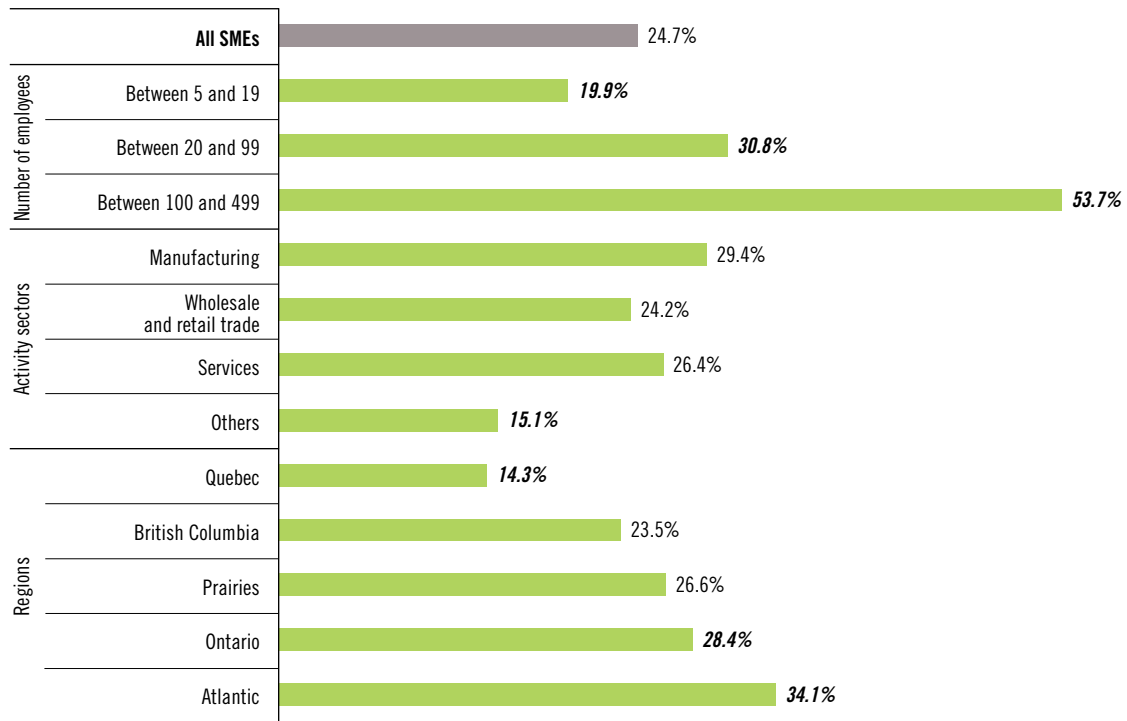


### Web meetings

A web meeting (examples: WebEx, GoToMeeting, NetMeeting) is a conference held by means of an electronic network, usually the Internet. It combines a conference call with the presentation of documents.

Generally speaking, around a quarter (24.7%) of Canadian SMEs make use of web meetings. However, this type of collaborative tool is significantly more popular among SMEs with 100-499 employees (53.7%), compared to SMEs with 5-19 employees (19.9%) or SMEs with 20-99 employees (30.8%). It is also popular among SMEs in Ontario (28.4%) and the Atlantic (34.1%).

**Figure 36**  
Use of web meetings by Canadian SMEs



Base: Canadian SMEs (n: 2,013)

Question: Do your employees use web meetings such as WebEx, GoToMeeting, NetMeeting?

Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.

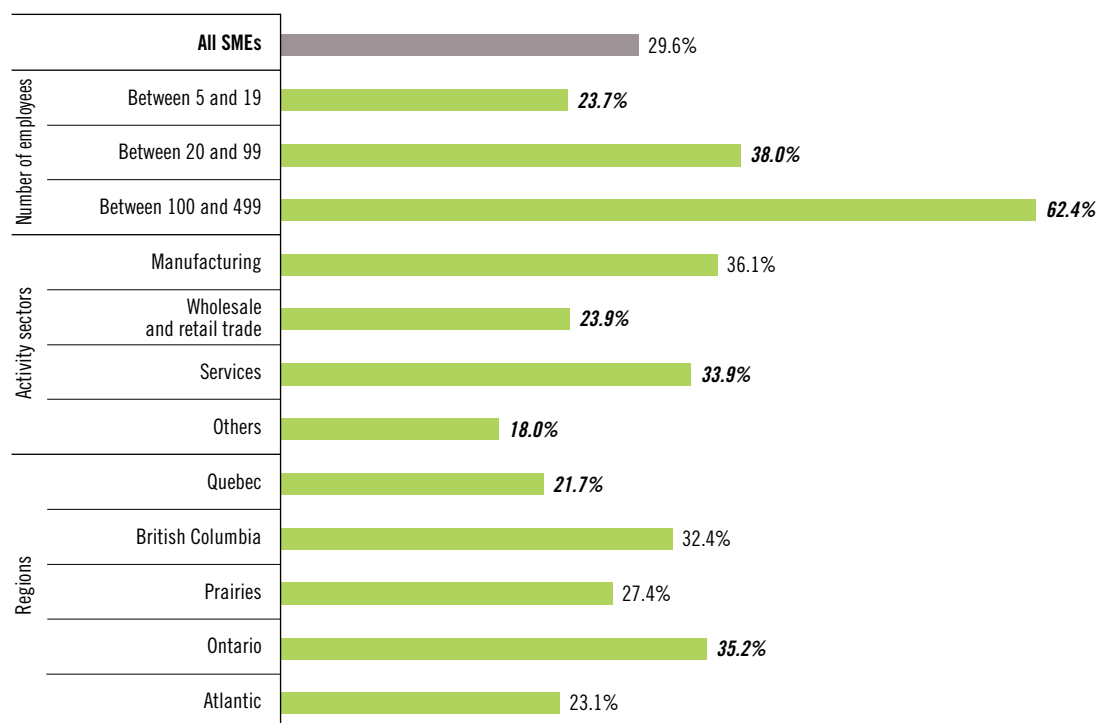
### *Videoconferencing or conference calling*

Videoconferencing or conference calling consists of an exchange between two or more people by means of audiovisual terminals or telephones. Use of videoconferencing or conference calling as a collaborative tool is more prevalent among SMEs with 100-499 employees (62.4%) than in smaller SMEs (38.0% for those with 20-99 employees and 23.7% for SMEs with 5-19 employees).

SMEs in Ontario (35.2%), along with SMEs in the services (33.9%) make greater use of videoconferencing and conference calling than other SMEs.

Figure 37

### Use of videoconferencing or conference calling by Canadian SMEs



Base: Canadian SMEs (n: 2,013)

Question: Do your employees use videoconferencing or conference calling?

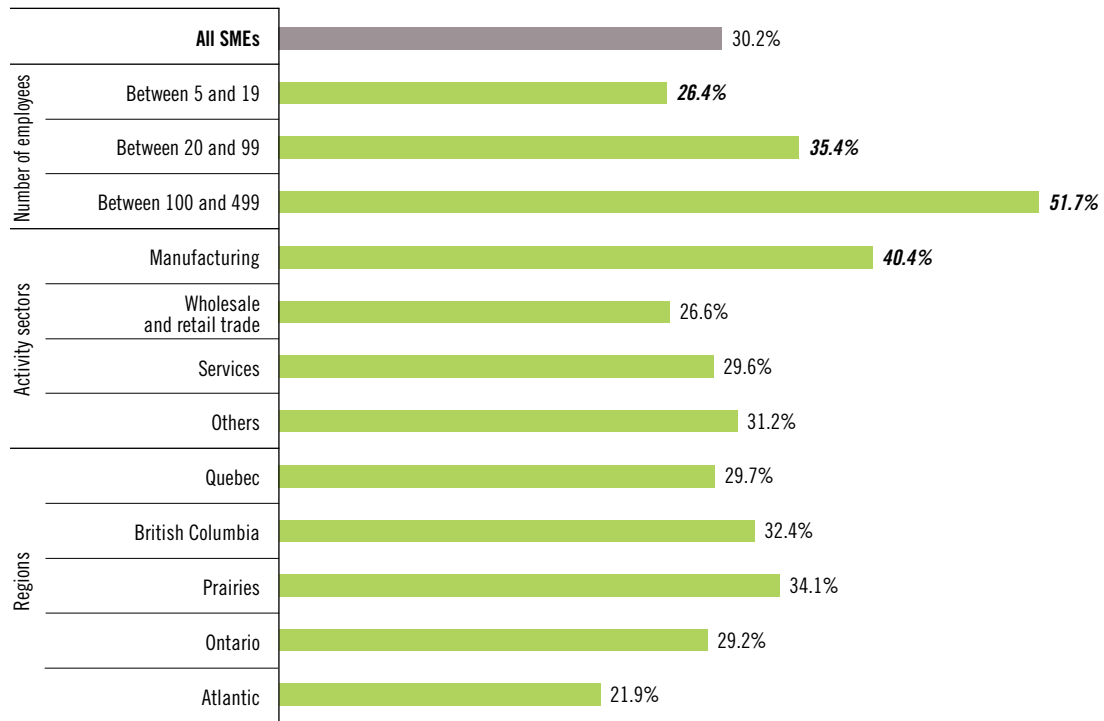
In this chart percentages that are significantly higher or lower than the others are in bold and italics.



### Application sharing or shared editing

Application sharing lets several users work on the same document simultaneously, using different computers. SMEs with 100-499 employees use this type of tool most often (51.7%), compared to SMEs with 20-99 employees (35.4 %) or those with 5-19 employees (26.4%).

Figure 38  
Use of shared editing tools by Canadian SMEs



Base: Canadian SMEs (n: 2,013)

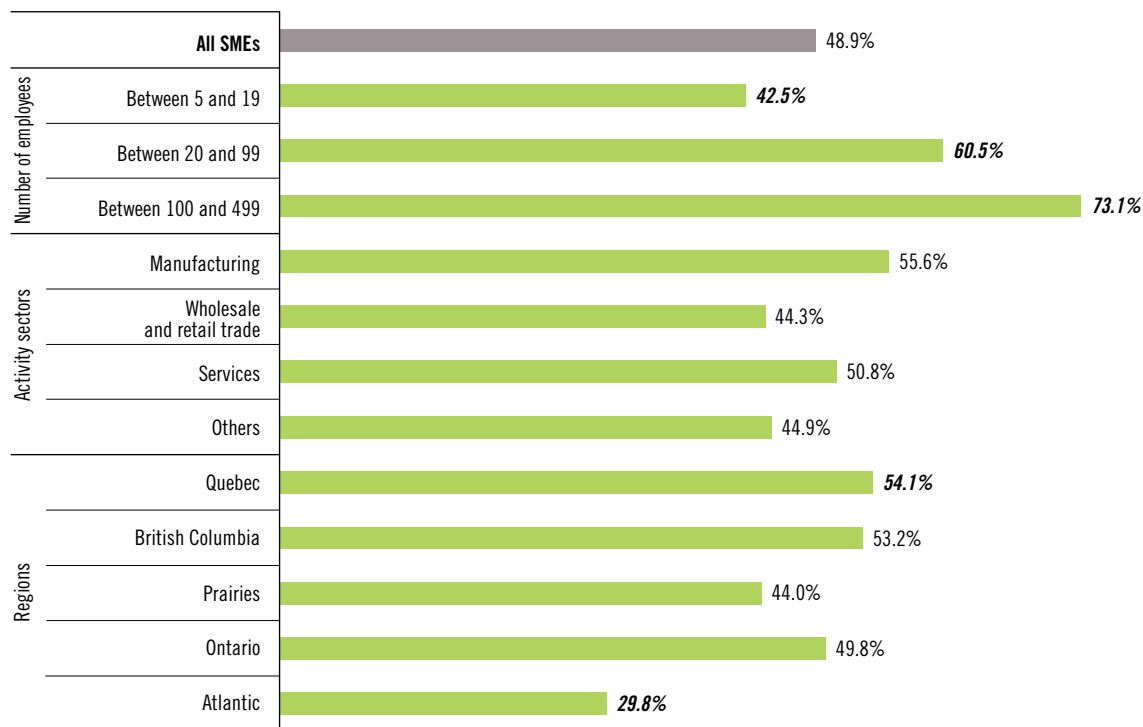
Question: Do your employees use application sharing or shared editing such as Google Docs?

Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.

### Task or agenda management

Task or agenda management is the second most-often used collaborative tool among Canadian SMEs (48.9%). The use rate of this tool is 73.1% among SMEs with 100-499 employees and 60.5% among SMEs with 20-99 employees. These percentages are significantly higher than the one for SMEs with 5-19 employees, at 42.5%. Task management is used somewhat more frequently in Quebec (54.1%) than, for example, in the Atlantic (29.8%).

**Figure 39**  
Use of task or agenda management tools by Canadian SMEs



Base: Canadian SMEs (n: 2,013)

Question: Does your company make use of task or agenda management tools such as Outlook, Doodle?

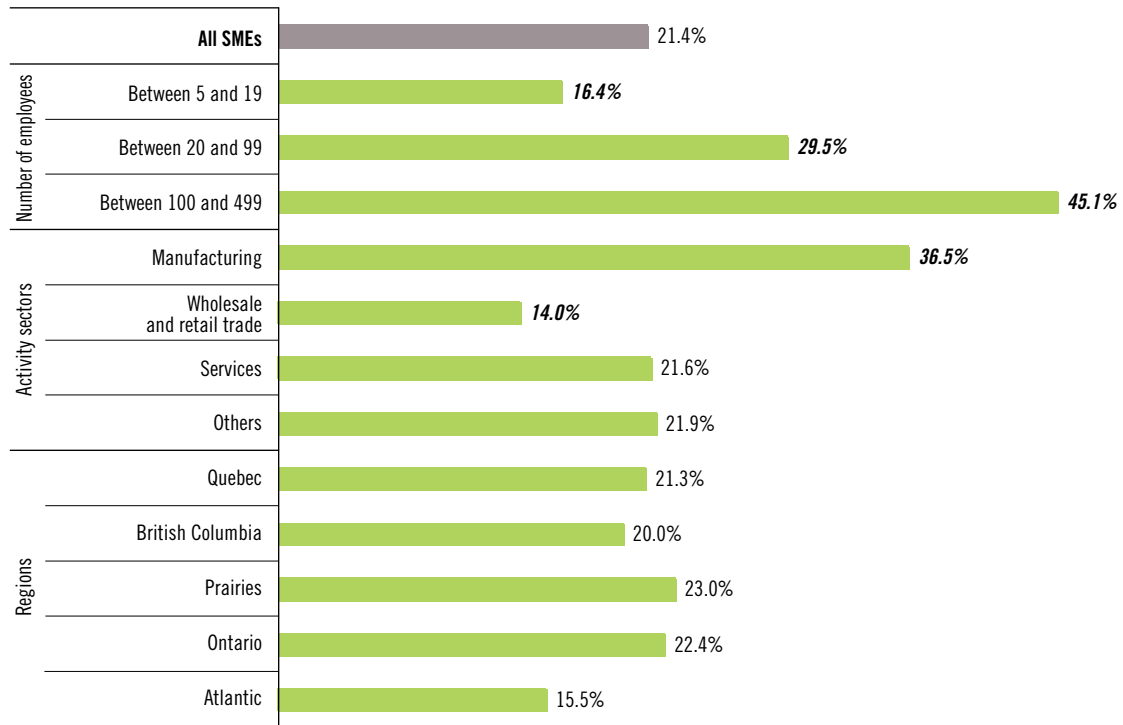
Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.



### Project management

Generally speaking, one out of every five Canadian companies (21.4%) uses project management tools. These tools are more prevalent among companies with 100-499 employees (45.1%) than among SMEs with 5-19 employees (16.4%). A significant difference was also observed between SMEs in the manufacturing sector (36.5%) and those in the wholesale and retail trade sector (14.0%).

**Figure 40**  
Use of project management tools by Canadian SMEs



Base: Canadian SMEs (n: 2,013)

Question: Does your company make use of project management tools such as Microsoft Project Server, MacProject, project-open?

Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.

### Challenges associated with the use of project management software packages\*

To be able to enjoy improved performance from the use of project management software packages, SMEs must first ensure that such technology supports *best project management practices* and that the *quality of the information* generated complies with the flexibility, integration and transversality requirements that are part of the companies' management and operating processes.

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\* For more information:

Raymond, L. and Bergeron, F. (2008), Project management information systems: An empirical study of their impact on project managers and project success, *International Journal of Project Management*, 26 (2), 213-220.

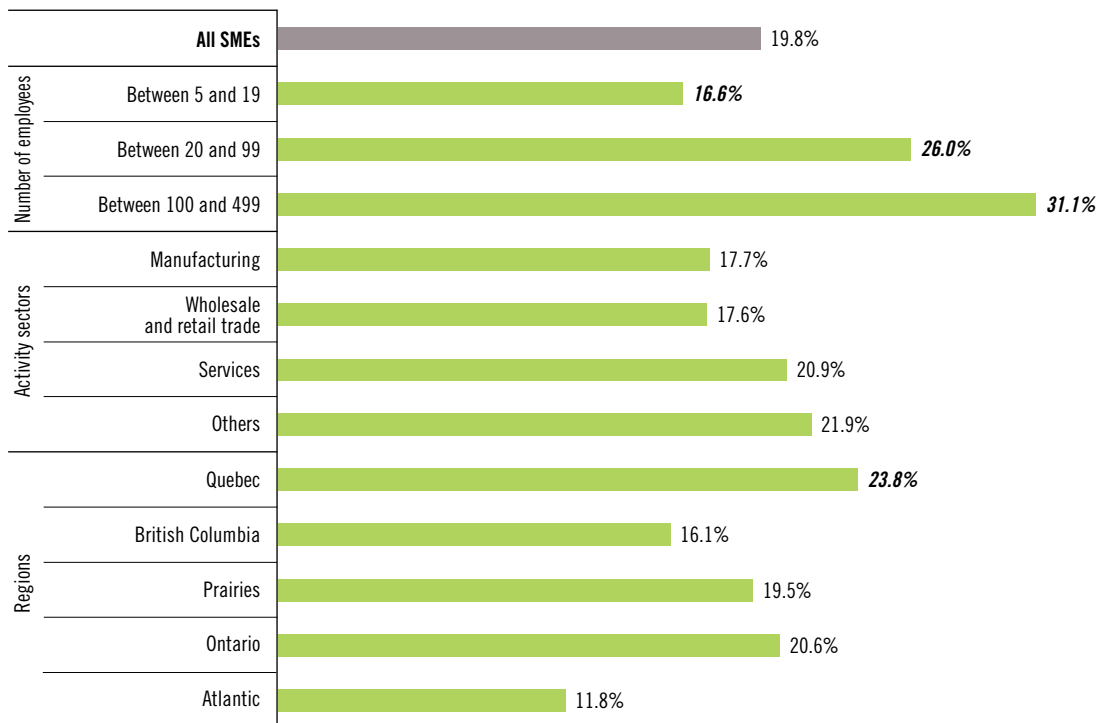


### *Integrated collaborative solutions*

Integrated collaborative solutions entail the simultaneous use of one or more of the tools described above (email, web meetings, videoconferencing or conference calling, task or agenda management and project management).

Integrated collaborative solutions are most often used by SMEs with 100-499 employees (31.1%) as well as SMEs with 20-99 employees (26.0%). Quebec is where the greatest number of SMEs (23.8%) are incorporating collaborative solutions.

**Figure 41**  
**Use of collaborative solutions by Canadian SMEs**



*Base: Canadian SMEs (n: 2,013)*

*Question: Do your employees use an integrated collaborative solution?*

*Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.*





## CHAPTER 5

# INTERNET USE BY CANADIAN AND QUEBEC SMEs

At present 92.8% of Canadian SMEs are connected to the Internet, 96.6% of them at high speed, very high speed and even extreme high speed. It thus becomes highly relevant to consider the various ways in which these companies use the Internet. With this in mind, this chapter considers e-commerce, online banking services (also called e-banking), online government services, Web 2.0 and SMEs' perceptions of the security of online transactions.

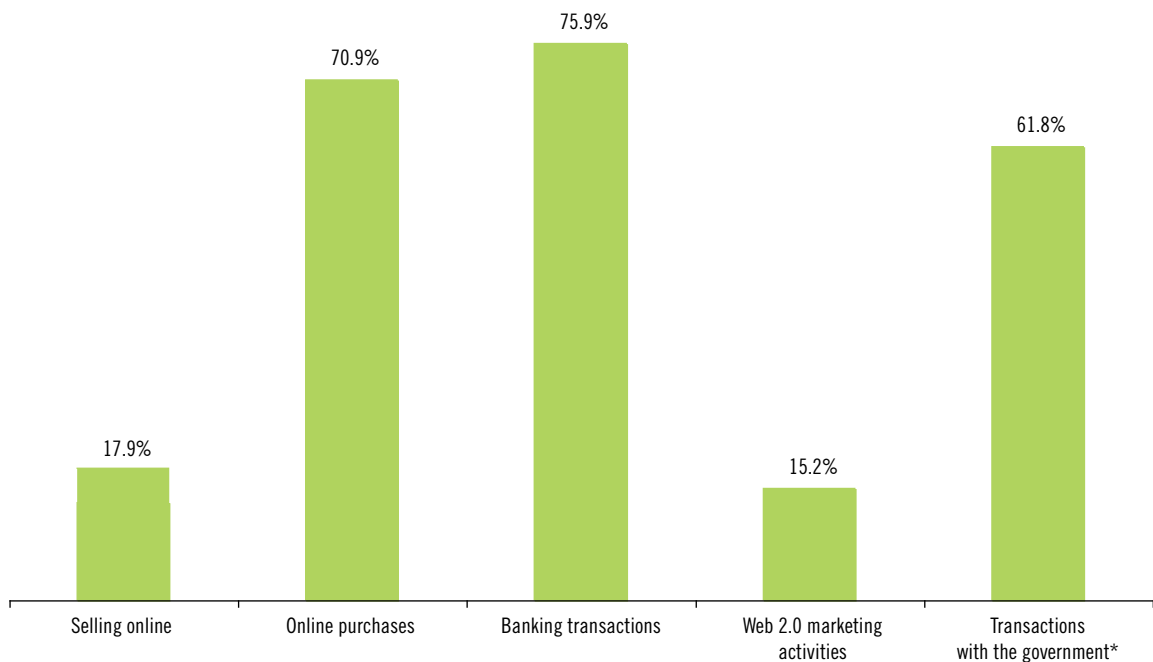
Given that our historical data only covers Quebec, we will limit ourselves to a few comparisons with the results of the *NetPME* survey from 2009.

## 5.1 INTERNET ACTIVITIES AND TRANSACTIONS

As regards online transactions, the survey reveals that a majority of connected Canadian SMEs mainly use the Internet to carry out banking transactions (75.9%) and online purchases (70.9%). The survey also shows that a minority of SMEs with websites engage in selling online (17.9%) as well as activities associated with Web 2.0 (15.2%).

Figure 42

### Online activities of Canadian SMEs



Base: Connected Canadian SMEs (n: 1,930), except for transactions with the government.

\* For transactions with the government, the base consists of connected Quebec SMEs (n: 960).

Question: Over the past year, has your company taken part in the following online activities?

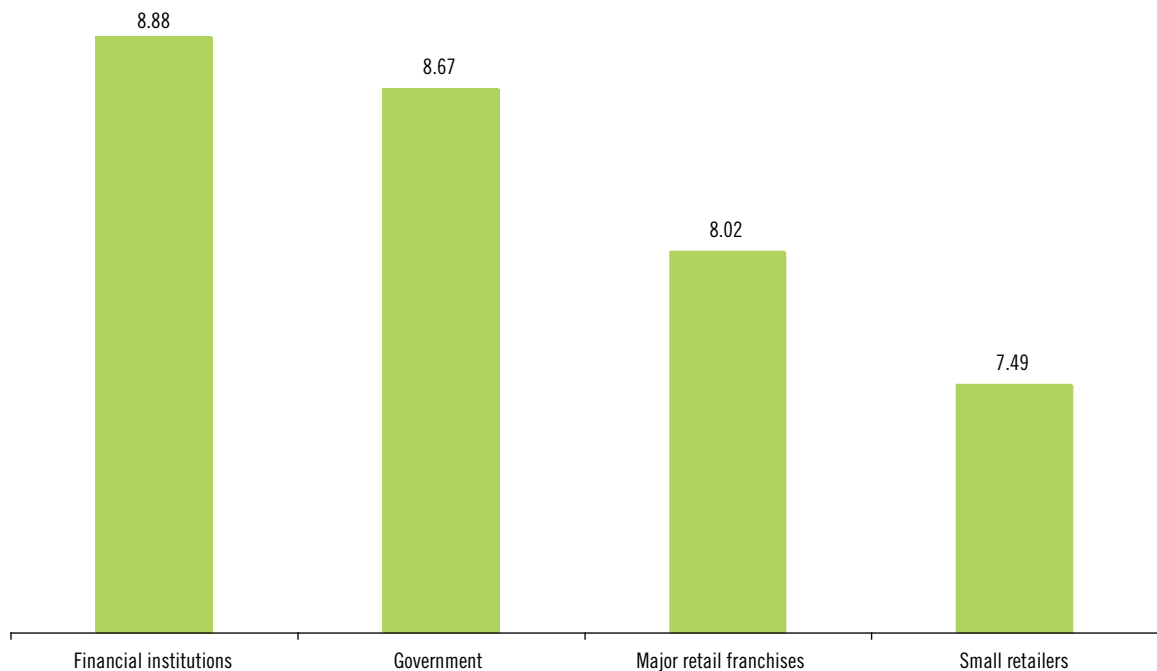


## 5.2 PERCEPTION OF THE SECURITY OF INTERNET TRANSACTIONS AMONG CANADIAN SMES

A majority of connected Canadian SMEs believe that online transactions with various organizations such as financial institutions, the government and major retail franchises (or large corporations) are secure. The average ratings (on a scale of 0 to 10) with regard to security for these organizations are 8.88, 8.67 and 8.02 respectively. On the other hand, these same Canadian SMEs feel that online transactions with small retailers (or other SMEs) are less secure, giving them an average rating of 7.49 out of 10.

Figure 43

Perception of the security of online transactions among Canadian SMEs



Base: Connected Canadian SMEs (n: 1,930)

Question: On a scale of 0 to 10, where 0 indicates "Not at all secure" and 10 "Totally secure", how would you rate the security of your company's online transactions with the following organizations?

### *Perception of the security of online transactions with financial institutions*

Like the majority (78.9%) of connected Canadian SMEs, which gave a high rating (8 or more) to the security of online transactions with financial institutions, SMEs with 100-499 employees gave a rating of 8 or more in the highest proportions (90.1%). The same applies to SMEs in the wholesale and retail trade sector (84% gave a rating of 8 or more), compared to the manufacturing sector (76.2% gave a rating of 8 or more) or the services sector (78.6% gave a rating of 8 or more).

### *Perception of the security of online transactions with the government*

67.8% of connected Canadian SMEs consider online transactions with the government to be highly secure, and gave them a rating of 8 or more out of a possible 10. More SMEs in the wholesale and retail trade sector (72.5%) than in other sectors trust the government with regard to transaction security.

### *Perception of the security of online transactions with major retail franchises*

By giving a rating of 8 or more out of 10, connected Canadian SMEs indicate that they consider online transactions with major retail franchises to be very secure. Slightly more SMEs in the wholesale and retail trade sector (53.3%) than in other sectors trust major retail franchises with regard to transaction security, as do manufacturing SMEs (53.1%).

### *Perception of the security of online transactions with small retailers*

Only 37.0% of connected Canadian SMEs gave the security of Internet transactions with small retailers a rating of 8 or more out of a possible 10. Again, more SMEs in the wholesale and retail trade sector (47.7%) than in other sectors trust small retailers with regard to transaction security.

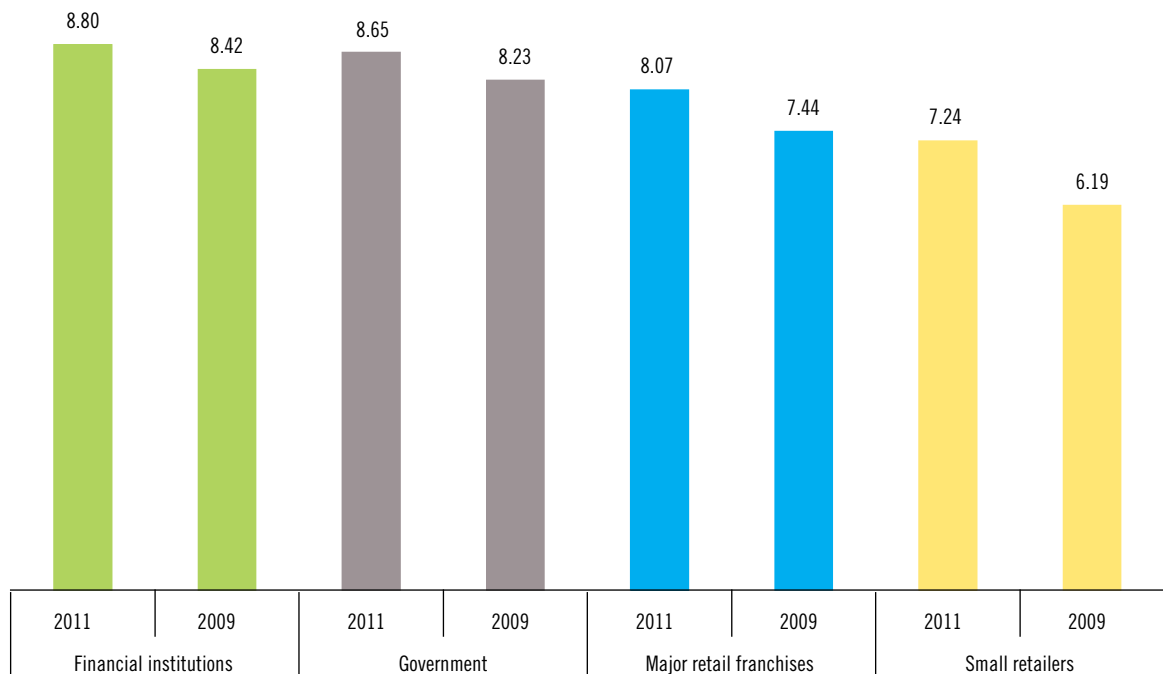


### Perception of the security of online transactions among Quebec SMEs

In 2011 the perception of connected Quebec SMEs was highly similar to that of all Canadian SMEs with regard to the security of online transactions with financial institutions, the government and both major retail franchises and small retailers. From 2009 to 2011 we observe a slight increase in the ratings associated with SMEs' feelings of security with regard to such transactions.

Figure 44

### Perception of the security of online transactions among Quebec SMEs



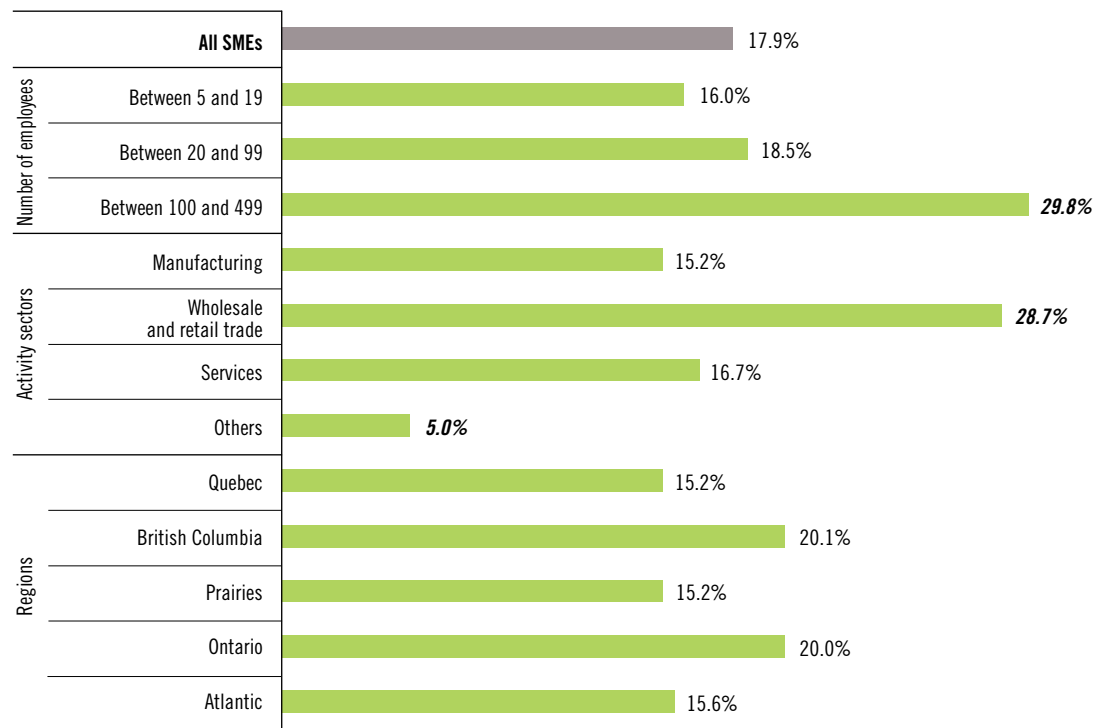
Base: Connected Quebec SMEs (n: 960 in 2011 and 1,621 in 2009)

Question: On a scale of 0 to 10, where 0 indicates "Not at all secure" and 10 "Totally secure", how would you rate the security of your company's Internet transactions with the following organizations?

### 5.3 ONLINE SALES OF PRODUCTS AND SERVICES

Online selling of products and services is not yet popular among SMEs, with only a minority of Canadian SMEs (17.9%) making use of the Internet to sell their products and services.

Figure 45  
Selling online among Canadian SMEs



Base: Canadian SMEs with websites (n: 1,544)

Question: Does your company sell online?

Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.

29.8% of Canadian SMEs with 100 - 499 employees sell their products and services online, compared to 18.5% of SMEs with 20 - 99 employees and 16.0% of companies with 5 - 19 employees.

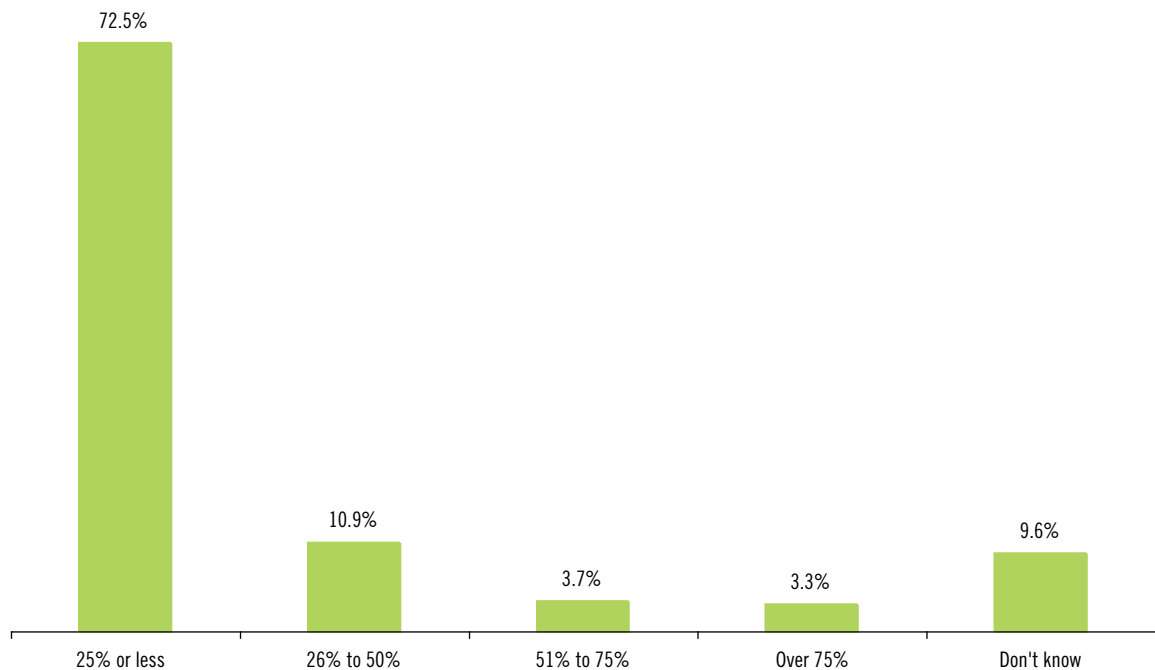
An analysis by activity sector reveals that SMEs in the wholesale and retail trade sector (and particularly the retail trade sector) are more actively selling their products and services online (28.7%) than SMEs in the services (16.7%), manufacturing (15.2%) or other sectors (5.0%). A fair number of SMEs in the arts, entertainment and recreation sector (31.7%) also sell online.



Comparing the 5 major regions in Canada gives a variance of 5% between online selling rates. The percentage is highest in British Columbia (20.1%) and Ontario (20.0%), and lowest in the Prairies (15.2%), Quebec (15.2%) and the Atlantic (15.6%).

Online sales represent only 25% or less of the total sales of those Canadian SMEs that make use of this particular sales channel.

**Figure 46**  
**Percentage of Canadian SMEs' total sales online**



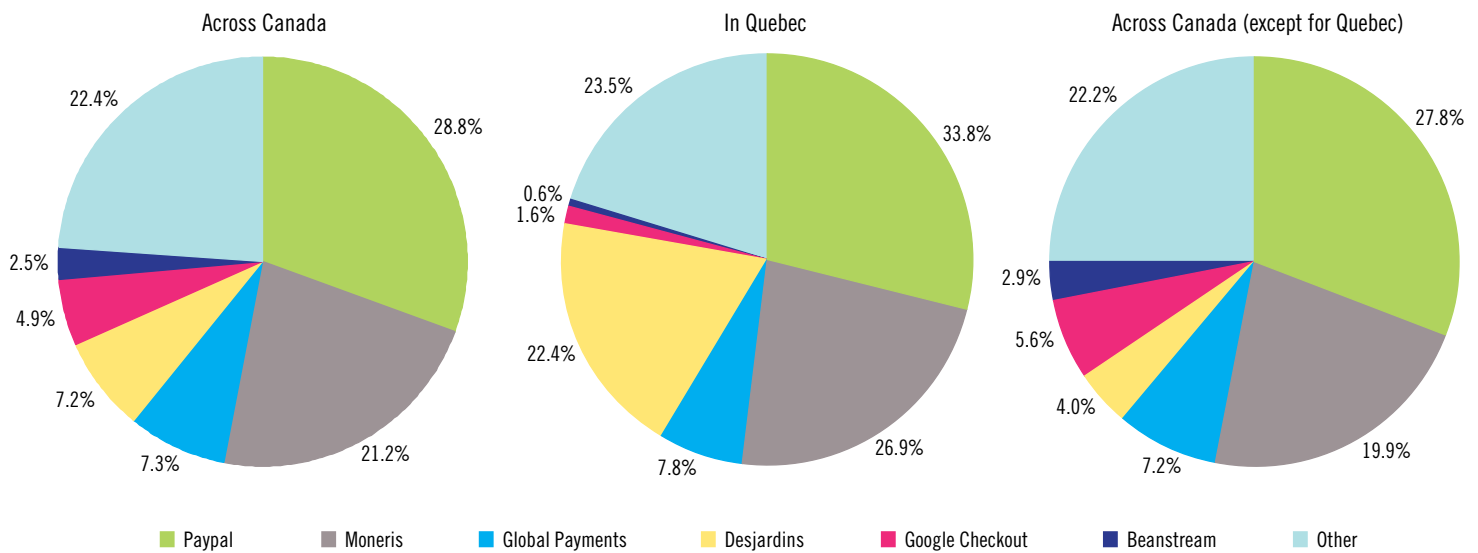
*Base: Canadian SMEs that sell online (n: 293)*  
*Question: Approximately what percentage of your total sales is done online?*

The largest online sales by SMEs are in British Columbia, where 41.3% of the province's SMEs that sell online report that 25% or more of their total sales are generated via this channel. The equivalent figure is 17.9% in Quebec, 12.1% in Ontario, 9.6% in the Prairies, and 9.6% in the Atlantic.

### Internet payment solutions

Across Canada, the two Internet payment methods most widely used by SMEs are clearly PayPal (28.8%) and Moneris (21.2%). The situation is somewhat different in Quebec, where the most popular methods are PayPal (33.8%) and Desjardins (22.4%).

Figure 47  
Internet payment solutions used by SMEs



Base: Canadian SMEs that sell online (n: 293)  
Question: What Internet payment solutions do you use when selling products or services online?

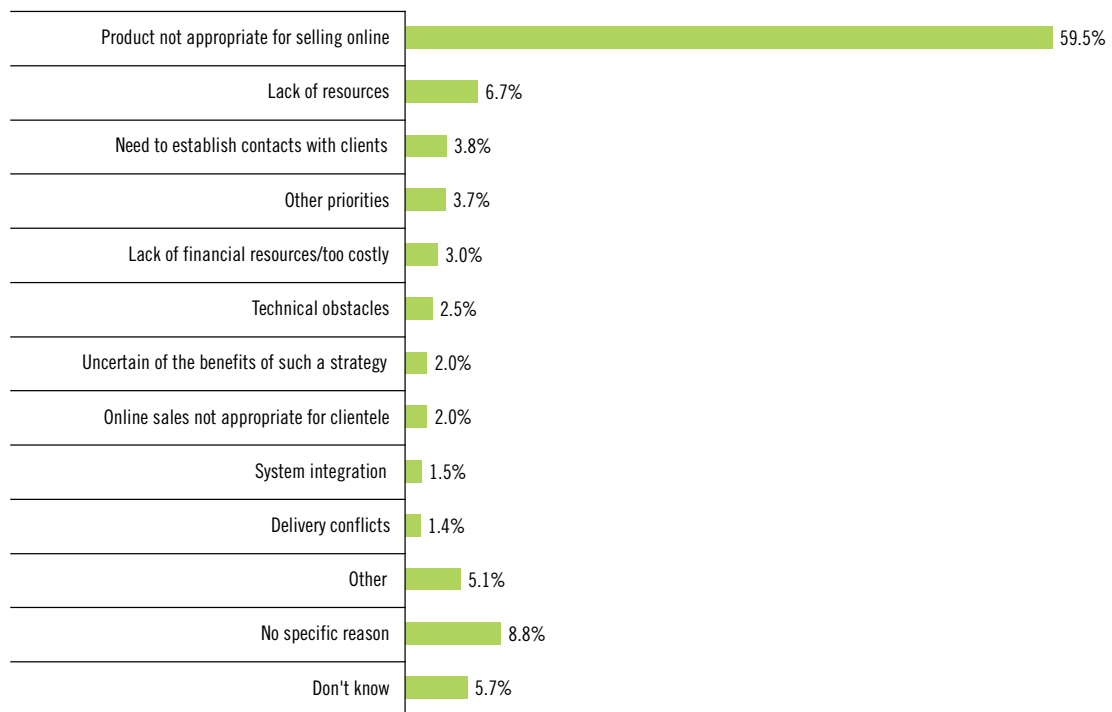


### *Obstacles or factors preventing Canadian SMEs from selling online*

We asked SMEs to describe the main obstacles or factors preventing them from selling online. Generally speaking, “product not appropriate for selling online” is the main obstacle or factor discouraging a good number of Canadian SMEs from selling online (59.5%). However, for 8.8% of Canadian SMEs, no specific reason was given as a factor that hindered selling online.

Figure 48

### **Obstacles or factors preventing Canadian SMEs from selling online**



*Base: Canadian SMEs that do not sell online (n: 1,246) – Total of 3 responses*

*Question: What are the primary obstacles or factors preventing your company from selling online?*

## 5.4 ONLINE PURCHASES

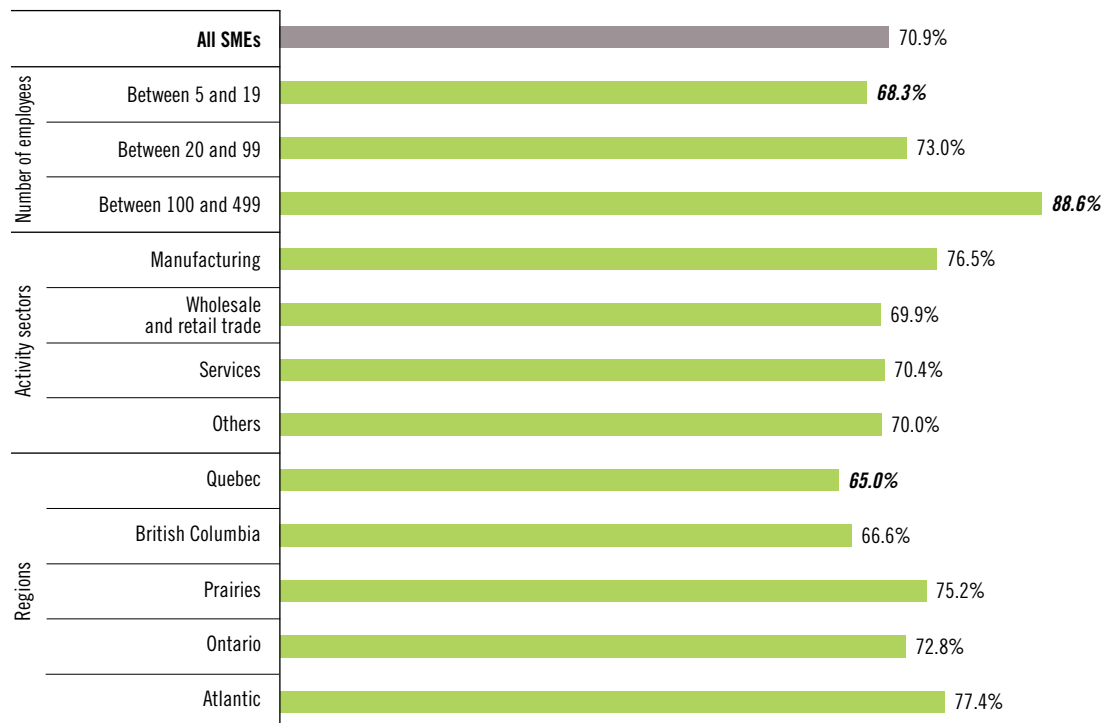
Generally speaking, 70.9% of connected Canadian SMEs made purchases online over the past year.

Larger connected Canadian SMEs, namely those with 100-499 employees, are more likely to carry out online purchases (88.6%) than SMEs with 5-19 employees (68.3%) and those with 20-99 employees (73.0%).

More specifically, online purchases are more prevalent among SMEs in the information and cultural industries (93.7%), educational services (83.6%), professional, scientific and technical services (82.2%), and wholesale trade sector (81.4%). 76.5% of companies in the manufacturing sector and 67.3% of those in the retail trade sector carry out online purchases, while public services and agriculture, forestry, fishing and hunting are the two sectors where the lowest percentage of SMEs purchase online (54.1% and 57.4% respectively).

Compared to the rest of Canada (72.5%) the lowest percentage of connected SMEs to make online purchases is Quebec (65.0%).

Figure 49  
Online purchases by Canadian SMEs



Base: Connected Canadian SMEs (n: 1,930)

Question: Over the past year, has your company made online purchases?

Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.

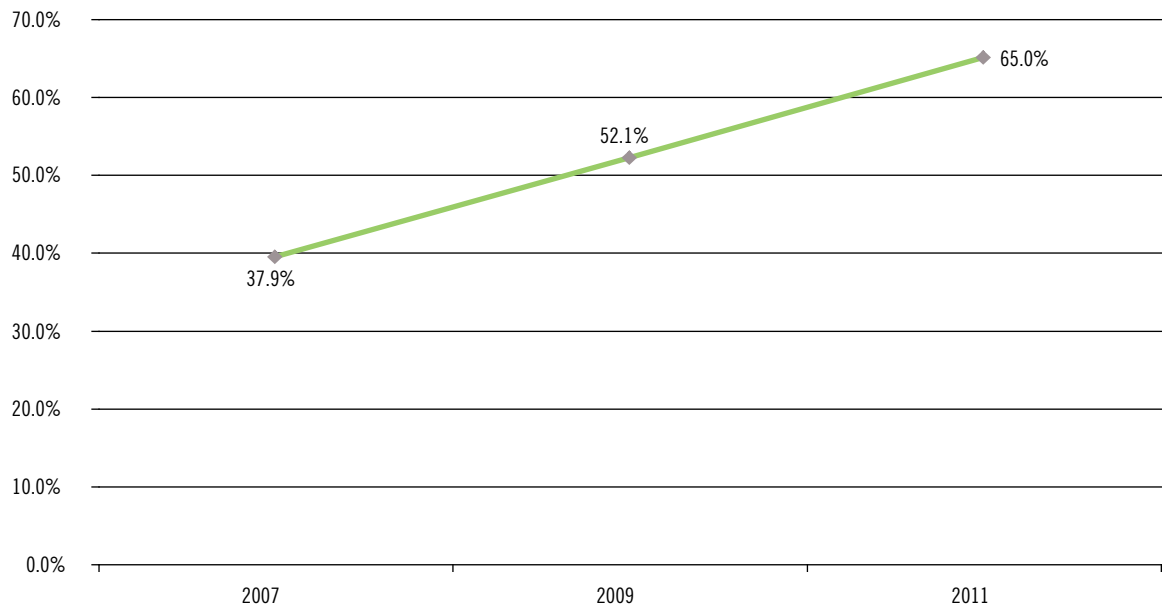


### *Progress of online purchases in Quebec*

There has been a rise in online purchases by connected Quebec SMEs since 2007. The percentage of SMEs that made purchases online rose from 37.9% in 2007 to 52.1% in 2009, and then to 65.0% in 2011, which represents respective hikes of 14.2% and 12.9% per 2-year period.

Figure 50

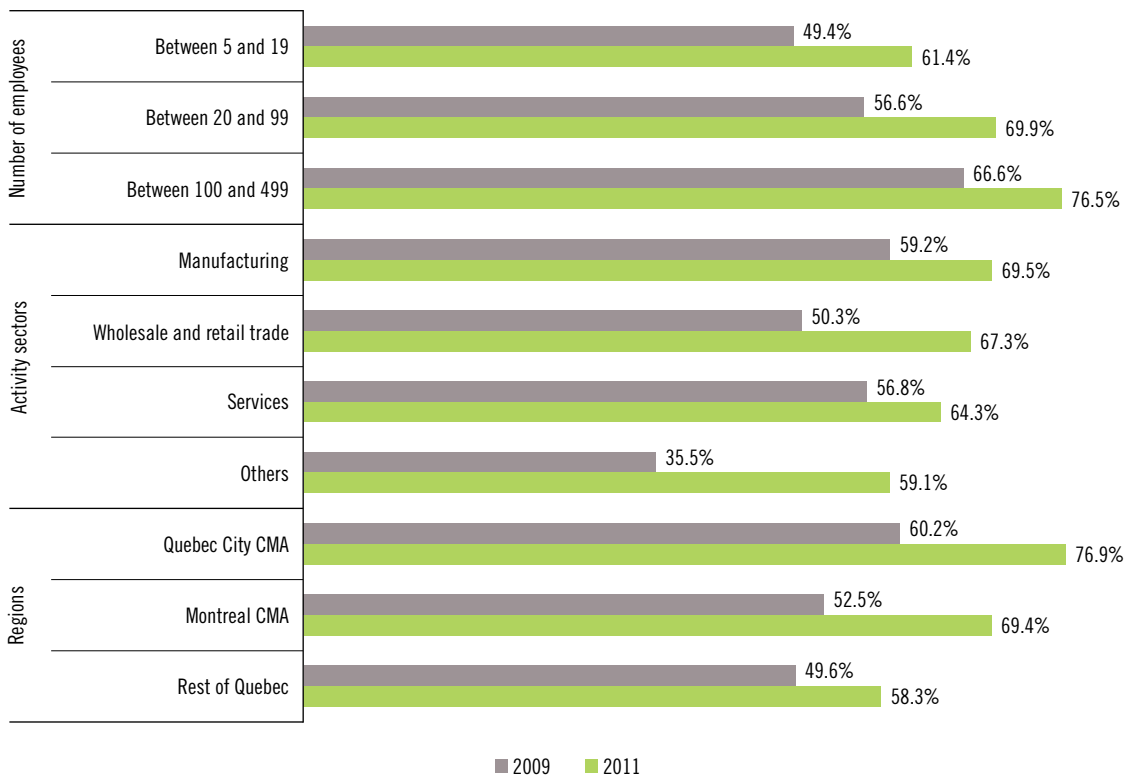
#### **Online purchases by Quebec SMEs**



*Base: Connected Quebec SMEs (n: 960 in 2011 and 1,621 in 2009)  
Question: Over the past year, has your company made online purchases?*

Between 2009 and 2011 Quebec SMEs from “other sectors” experienced the greatest growth (23.6%) in terms of making online purchases, compared to SMEs in the manufacturing sector (10.3%), the wholesale and retail trade sector (17.0%) and the services sector (7.5%).

**Figure 51**  
**Comparison of Quebec SMEs purchasing online in 2009 and 2011**



*Base: Connected Quebec SMEs (n: 960 in 2011 and 1,621 in 2009)*  
*Question: Over the past year, has your company made online purchases?*



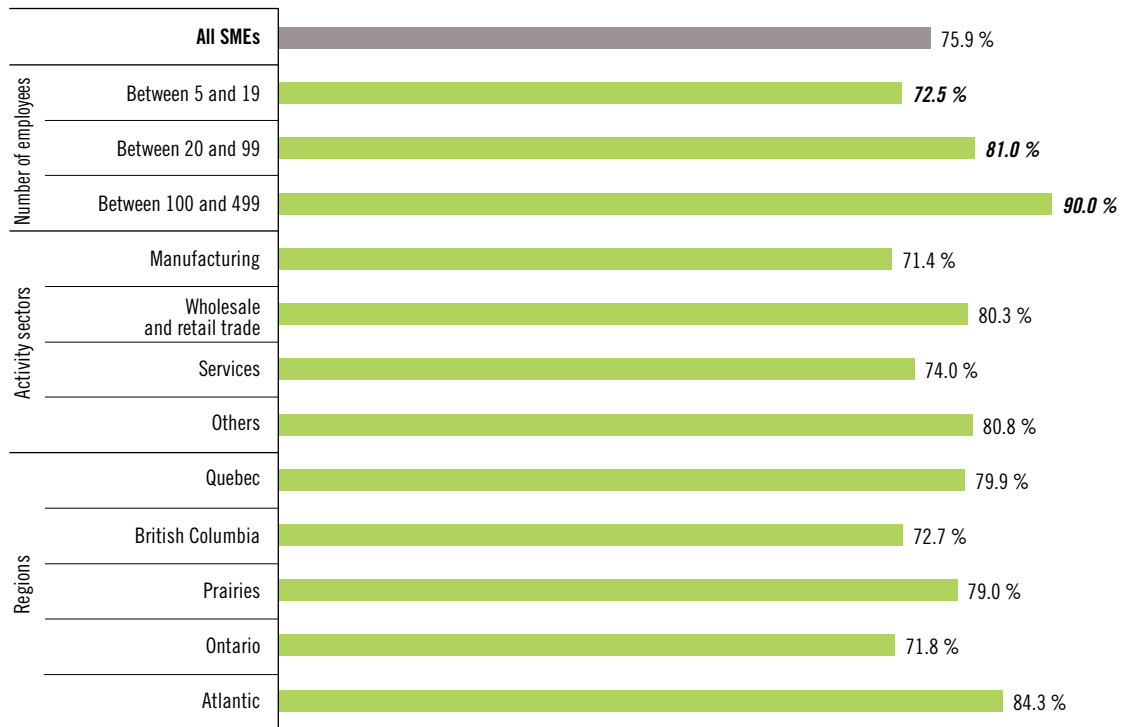
## 5.5 ONLINE BANKING SERVICES (E-BANKING)

Generally speaking, 75.9% of connected Canadian SMEs banked online over the past year.

Use of the Internet for banking transactions is dependent on company size. Most (90.0%) of larger connected Canadian SMEs (100-499 employees) carry out banking transactions online, compared to connected SMEs with 20-99 employees (81.0%) and those with 5-19 employees (72.5%).

There are also some economic sectors - such as wholesale trade (97.5%) and finance and insurance (92.4%) - where online banking is more popular.

Figure 52  
E-banking by Canadian SMEs



Base: Canadian SMEs connected to the Internet (n: 1,930)

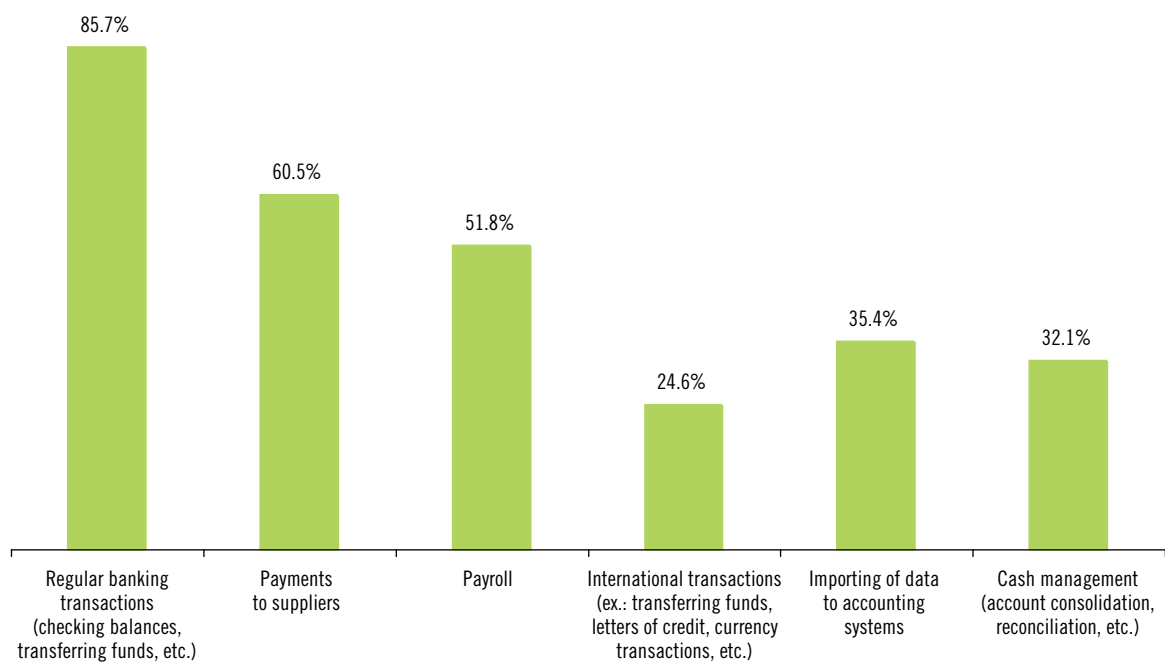
Question: Over the past year, has your company carried out online banking transactions?

Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.

We also asked the connected Canadian SMEs that engaged in e-banking over the previous year to provide us with details as to the types of online transactions they carry out with their financial institutions.

We learned that regular banking transactions (checking account balances, transferring funds, etc.) are most popular with Canadian SMEs. The majority of SMEs that carry out online banking transactions (85.7%) avail themselves of these particular services. Next are payments to suppliers (60.5%), payroll (51.8%), international transactions (24.6%), importing data to accounting systems of SMEs (35.4%) and lastly, cash management (32.1%).

**Figure 53**  
**Types of banking transactions done online by Canadian SMEs that do such transactions**



*Base: Canadian SMEs that carry out banking transactions online (n: 1,576)  
Question: Does your company carry out any of the following transactions online with financial institutions?*

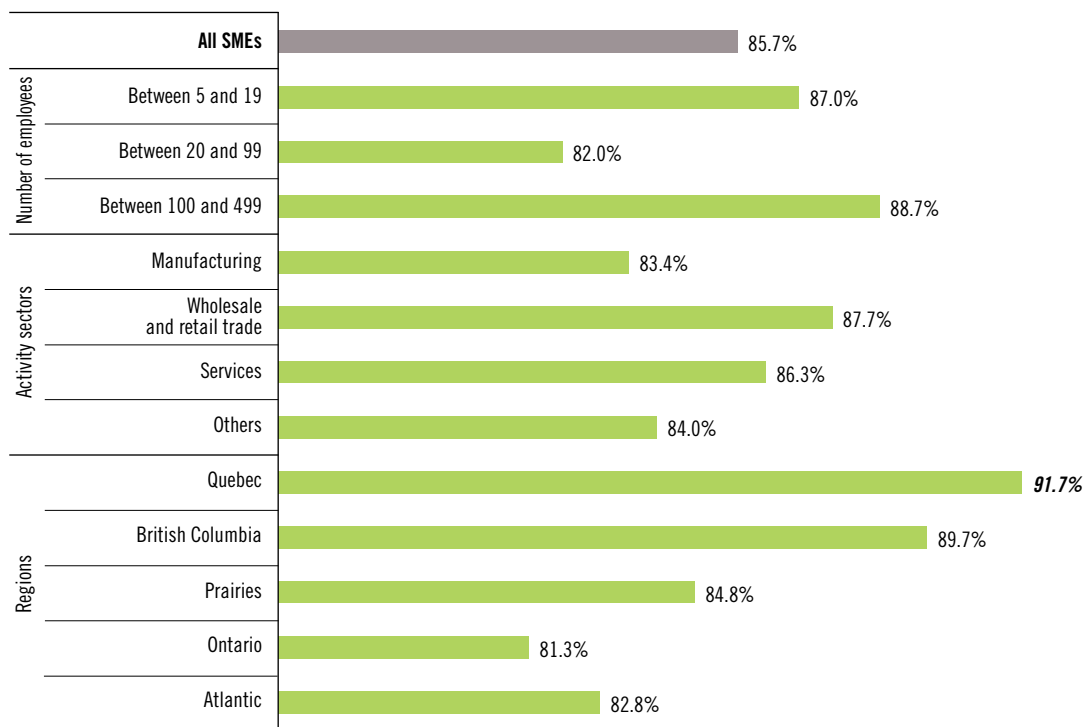


### Regular banking services

In 2011, 85.7% of Canadian SMEs engaging in e-banking carried out regular banking transactions. Quebec boasts the greatest percentage of companies to carry out regular banking transactions online (91.7%), compared to the rest of Canada (73.9).

Figure 54

Use of regular online banking services by Canadian SMEs that do such operations online



Base: Canadian SMEs that carry out banking transactions online (n: 1,576)

Question: Does your company carry out regular banking transactions online with financial institutions?

Note: In this graph, those percentages that are significantly higher than the others are italicized and in bold.

### Online payments to suppliers

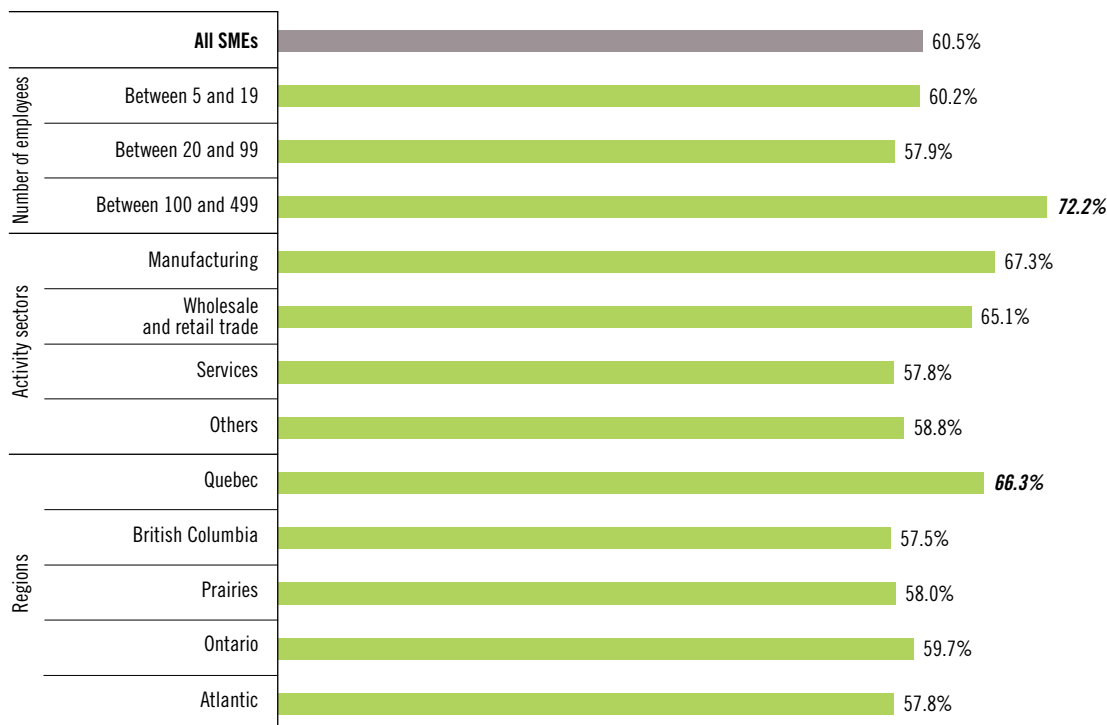
In 2011, 60.5% of Canadian SMEs engaging in e-banking also made online payments to suppliers.

This payment method is increasingly popular among SMEs with 100-499 employees (72.2%). 57.9% of SMEs with 20-99 employees also rely on this method, while the equivalent figure is 60.2% for SMEs with 5-19 employees.

This payment method has been adopted by 66.3% of Quebec companies, compared to 58.7% elsewhere in Canada and more specifically, 57.5% in British Columbia, 58.0% in the Prairies, 59.7% in Ontario and 57.8% in the Atlantic.

Figure 55

#### Online payments to suppliers by Canadian SMEs that do banking online



Base: Canadian SMEs that carry out banking transactions online (n: 1,576)

Question: Does your company make online payments to suppliers via financial institutions?

In this chart percentages that are significantly higher than the others are in bold and italics.

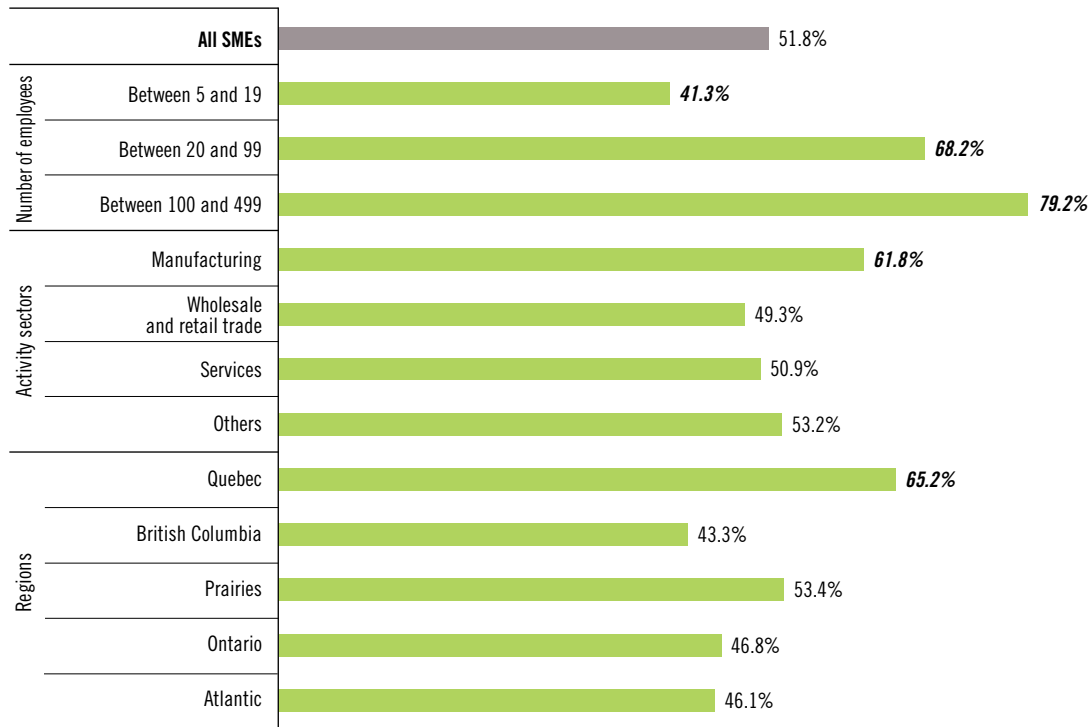


### Payroll transactions

In 2011, one out of every two Canadian SMEs (51.8%) that engaged in e-banking with financial institutions also used their services for its payroll.

More specifically, SMEs with 100-499 employees (79.2%) and 20-99 employees (68.2%), along with Quebec SMEs (65.2%), are the ones most likely to use the payroll services of financial institutions.

**Figure 56**  
Use of Internet payroll transactions by Canadian SMEs that do banking online



*Base: Canadian SMEs that carry out banking transactions online (n: 1,576)*

*Question: Does your company carry out online payroll transactions with financial institutions?*

*Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.*

### International banking transactions

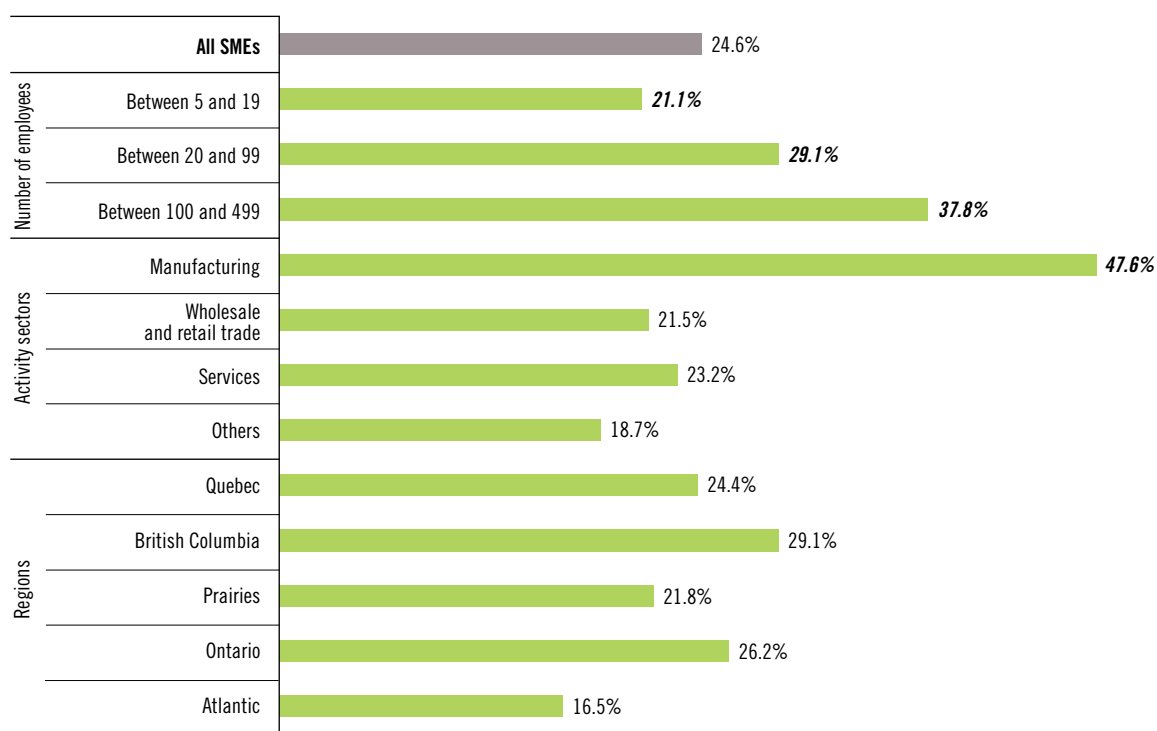
Only a quarter (24.6%) of the Canadian SMEs that did e-banking with financial institutions also used their international banking services.

More specifically, SMEs with 100-499 employees (37.8%) make the greatest use of these services, compared to 21.1% of Canadian SMEs with 5-19 employees and 29.1% of those with 20-99 employees.

Canadian SMEs in the manufacturing sector stand out from the crowd; 47.6% of them also use the international banking services of financial institutions (compared to 21.5% of companies in the wholesale and retail trade sector, 23.2% in the services sector and 18.7% in the other sectors).

Figure 57

### International e-banking transactions by Canadian SMEs that do banking online



Base: Canadian SMEs that carry out banking transactions online (n: 1,576)

Question: Does your company carry out international banking transactions online with financial institutions?

Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.



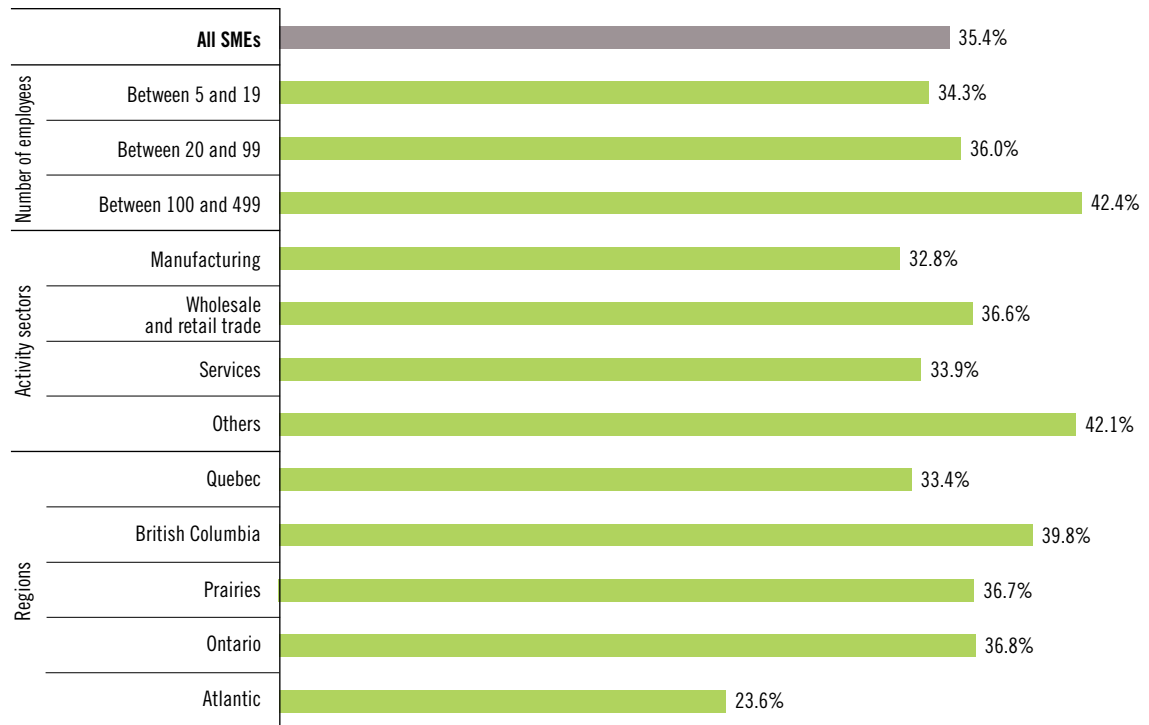
### Importing data to accounting systems

One third (35.4%) of Canadian SMEs that did e-banking with financial institutions also used the services offered by these institutions for importing data to their accounting systems.

Again, as was the case for payments to suppliers, payroll and international banking transactions, Canadian SMEs with 100-499 employees (42.4%) make the greatest use of services for importing data to their accounting systems. Conversely, only 34.3% of Canadian SMEs with 5-19 employees and 36.0% of SMEs with 20-99 employees do so.

Figure 58

### Importing of data to accounting systems (via the Internet) among Canadian SMEs that do banking online



Base: Canadian SMEs that carry out banking transactions online (n: 1,576)

Question: Does your company import data to its accounting systems (via the Internet) through financial institutions?

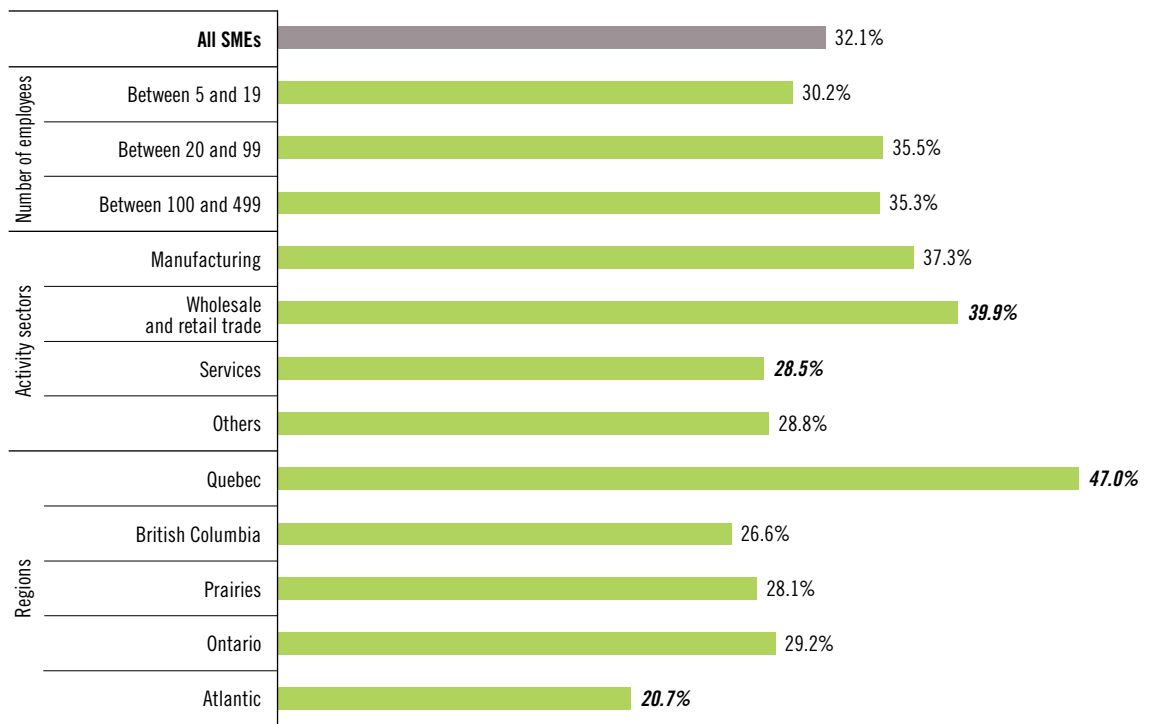
### Cash management

Nearly one third (32.1%) of Canadian SMEs that did e-banking with financial institutions also used the cash management services offered by these institutions.

Use of these services is much more prevalent in Quebec (47.0%) than in Ontario (29.2%), the Prairies (28.1%), British Columbia (26.6%) and the Atlantic (20.7%).

Figure 59

#### Use of Internet cash management systems by Canadian SMEs that do banking online



Base: Canadian SMEs that carry out banking transactions online (n: 1,576)

Question: Does your company do cash management online with financial institutions?

Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.



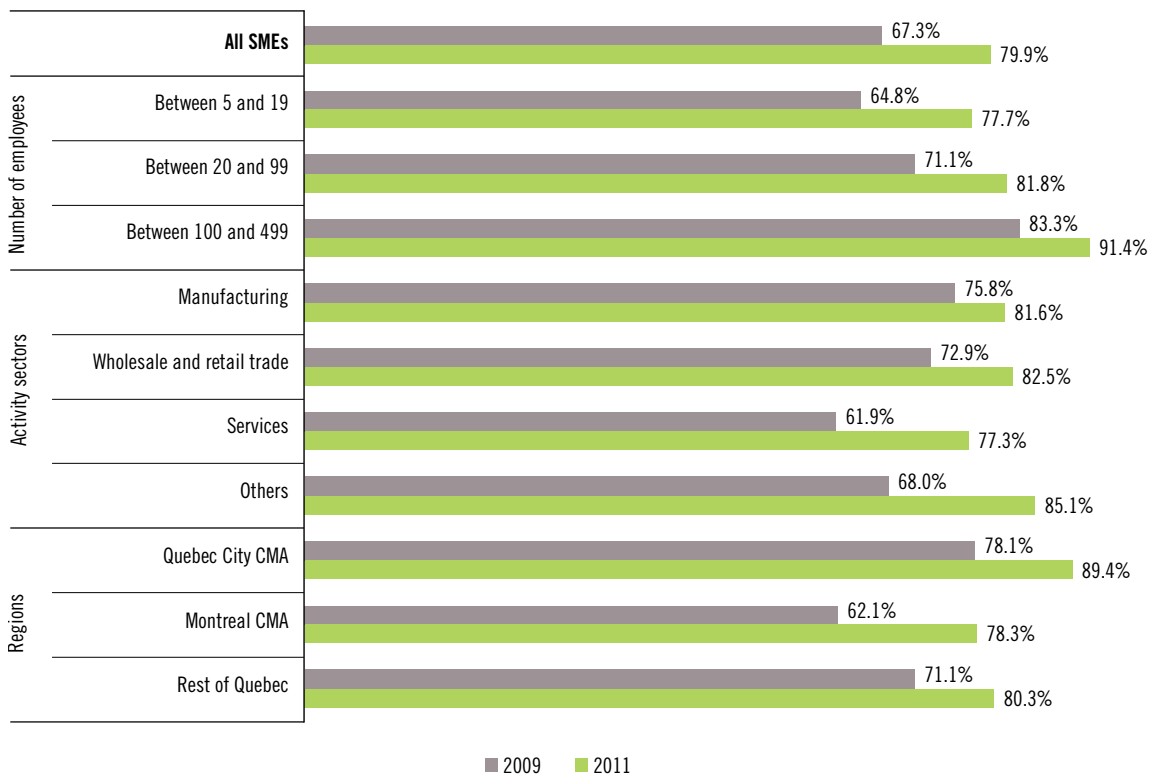
### Progress in the frequency of banking transactions by Quebec SMEs

The *NetPME 2011* survey shows that connected Quebec companies are increasingly likely to do banking transactions on the Internet. Growth of 12.6% was recorded between 2009 (67.3%) and 2011 (79.9%).

Strong growth of 16.2% (from 62.1% in 2009 to 78.3% in 2011) was recorded among SMEs in the Montreal CMA. In 2011 we observe that 89.4% of SMEs in the Quebec City CMA and 78.3% of those in the Montreal CMA do banking transactions online.

Figure 60

### Comparison of Quebec SMEs doing banking transactions online in 2009 and 2011



Base: Connected Quebec SMEs (n: 960 in 2011 and 1,621 in 2009)  
 Question: Over the past year, has your company done online banking transactions?

## 5.6 WEB 2.0

Web 2.0 refers to the Internet technology and use that constitute the Social Web, by allowing users to interact with web page content as well as among themselves. This section analyzes the use of Web 2.0 by Canadian SMEs. More specifically, we looked for the activities for which companies use Web 2.0 applications, the specific applications they are using, and their degree of satisfaction with the results obtained.

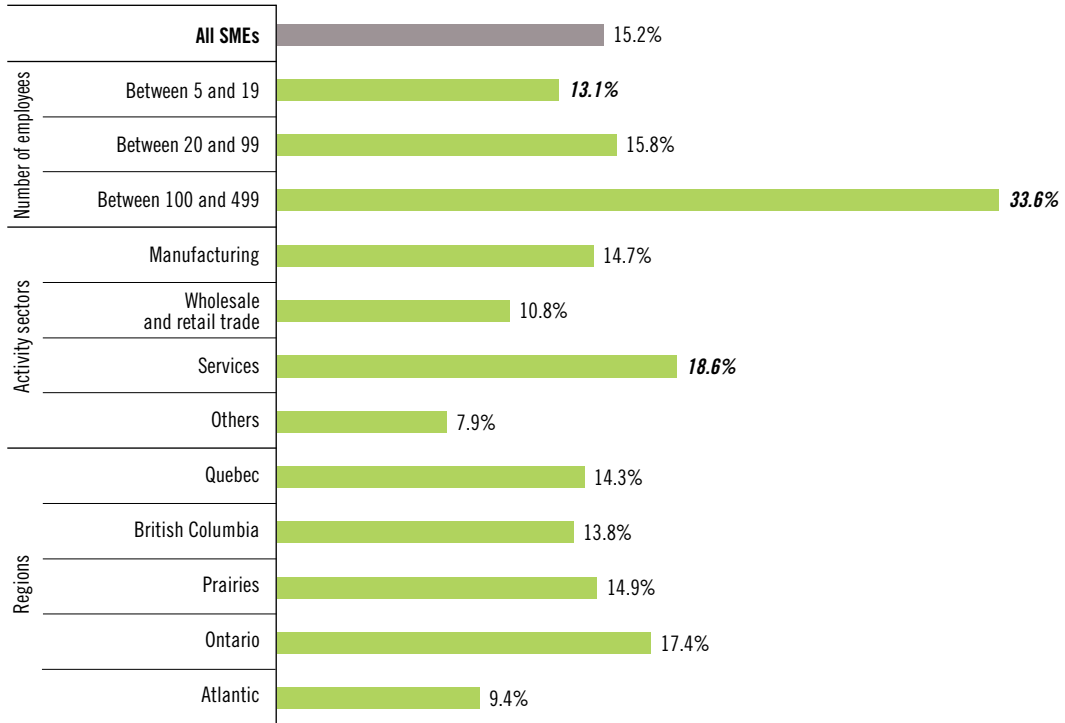
### 5.6.1 Web 2.0 in communications and marketing strategies

The use of Web 2.0 applications in communications and marketing strategies is not very popular among connected Canadian SMEs; only 15.2% of these companies are using Web 2.0 for this purpose.

The greatest use of Web 2.0 in communications and marketing strategies is found among connected SMEs with 100-499 employees. One third of these companies (33.6%) incorporate Web 2.0 in this manner, compared to 13.1% of SMEs with 5-19 employees and 15.8% of SMEs with 20-99 employees. We also noted that Web 2.0 is more often used in the communications and marketing strategies of SMEs in the services sector (18.6%) than in manufacturing (14.7%), wholesale and retail trade (10.8%) or others (7.9%).



**Figure 61**  
**Use of Web 2.0 applications in the communications or marketing strategies**  
**of connected Canadian SMEs**



*Base: Connected Canadian SMEs (n: 1,930)*

*Question: Does your company use Web 2.0 applications in its communications or marketing strategies?*

*Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.*

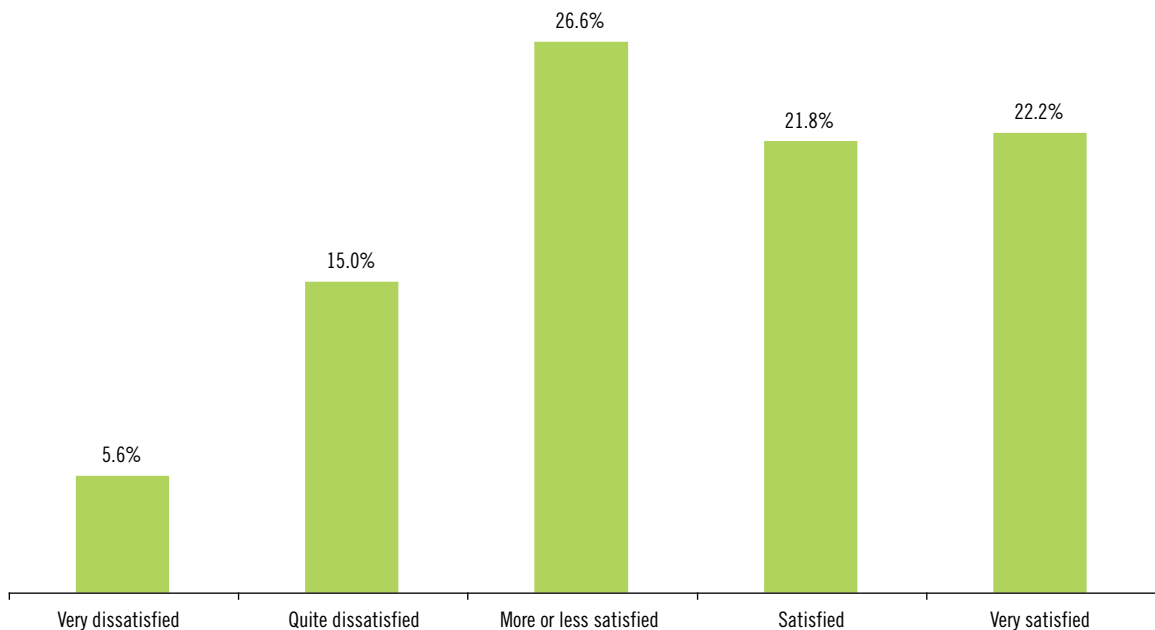
### *Degree of satisfaction following the use of social media*

Generally speaking, leaders of Canadian companies that have incorporated social media into their communications and marketing strategies are satisfied with the ensuing results, rating their satisfaction at an average of 3.44 out of 5. A total of 22.2% of companies claimed to be very satisfied.

SMEs in the services sector are more satisfied with the use of social media in their marketing programs than SMEs in other activity sectors. 48.8% of them claim to be satisfied or very satisfied. The equivalent percentage is 34.6% among SMEs in the manufacturing sector.

Figure 62

### **Canadian SMEs' degree of satisfaction with social media**



*Base: Canadian SMEs incorporating Web 2.0 into their communications or marketing strategies (n: 315)*

*Question: On a scale of 1 to 5, how satisfied are you with the results following the use of social media in your communications and marketing strategies?*



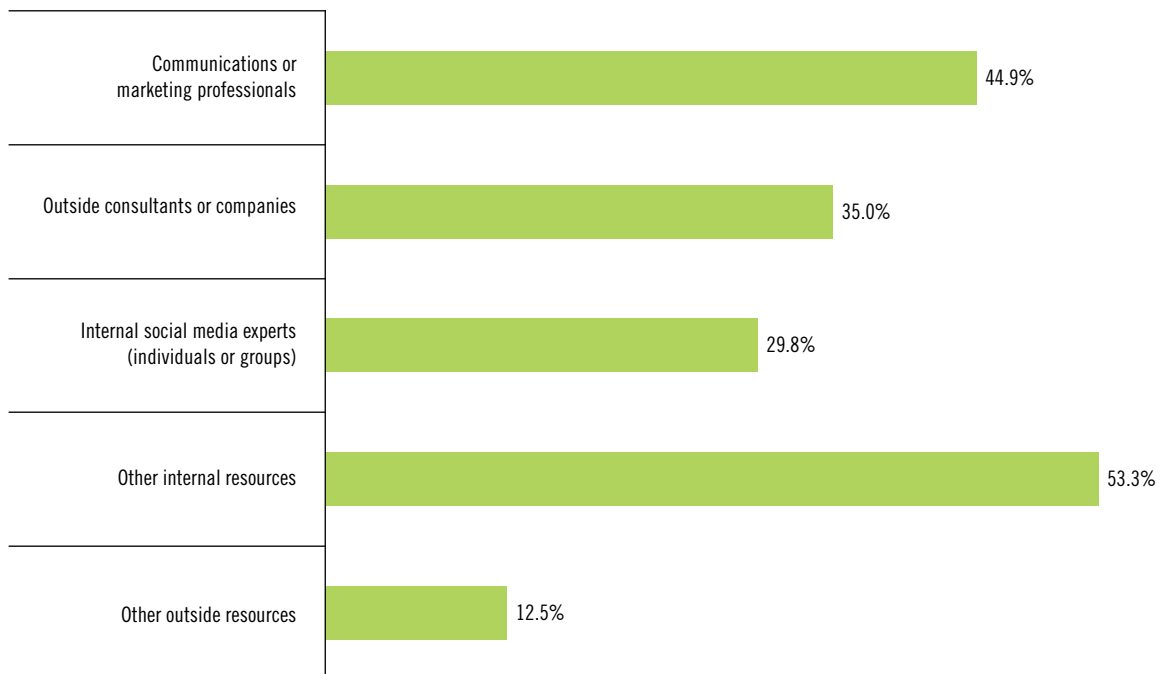
### Management of Web 2.0 marketing strategies

Generally speaking, the development of Web 2.0 marketing strategies is entrusted to specialists, communications or marketing professionals (44.9%), outside consultants or companies (35.0%) or internal social media experts (individuals or groups) (29.8%).

Outside consultants or companies are more frequently called upon by SMEs with 100 - 499 employees (52.2%) than by SMEs with 5 - 19 employees (27.9%).

Figure 63

### Responsibility for the development of Web 2.0 strategies within Canadian SMEs



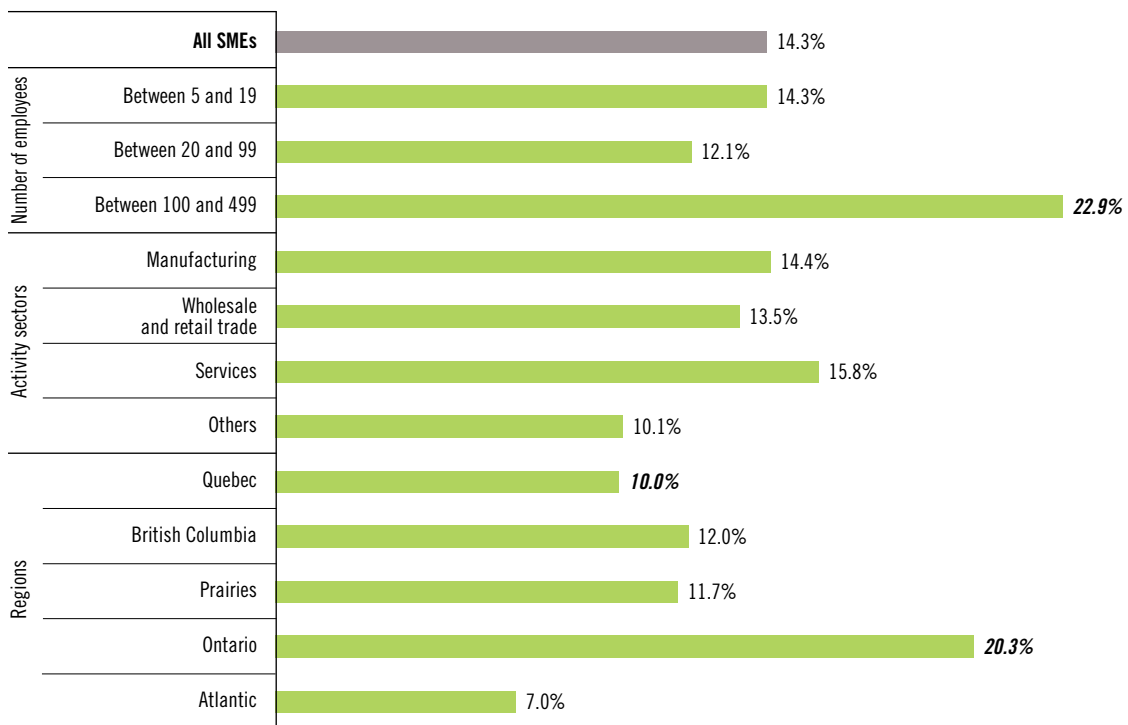
Base: Canadian SMEs incorporating Web 2.0 into their communications or marketing strategies (n: 315)  
Question: To whom does your company entrust the development of Web 2.0 marketing strategies?

## 5.6.2 Internal employees and Web 2.0

Having internal resources responsible for Web 2.0 applications does not appeal to a great many connected Canadian SMEs, as a mere 14.3% of Canadian SMEs have adopted this approach. Most of the companies to have done so are SMEs with 100-499 employees (22.9%), more specifically those with between 250 and 499 employees (43.8%).

The use of internal Web 2.0 applications is also more popular among SMEs in Ontario (20.3%), distinct from the SMEs in the rest of Canada, particularly in Quebec (10.0%).

Figure 64  
Internal use of Web 2.0 applications with employees



Base: Connected Canadian SMEs (n: 1,930)

Question: Does your company make internal use of Web 2.0 applications with employees?

Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.



### Challenge associated with Web 2.0 applications\*

To be able to enjoy improved performance from the use of Web 2.0 applications, SMEs must first select applications that can be seamlessly incorporated into their intranets to extend the scope of their *mobile Internet-based marketing strategies* and support *strategic human resources practices*, particularly with regard to employee recruitment and loyalty.

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\* For more information:

Bell, J. and Loane, S. (2010), 'New-wave' global firms: Web 2.0 and SME internationalisation, *Journal of Marketing Management*, 26 (3-4), 213-229

Fabi, B., Lacoursière, R., Raymond, L. and St-Pierre, J. (2010), HRM capabilities as a determinant and enabler of productivity for manufacturing SMEs, *Human Systems Management*, 29 (3), 115-123.

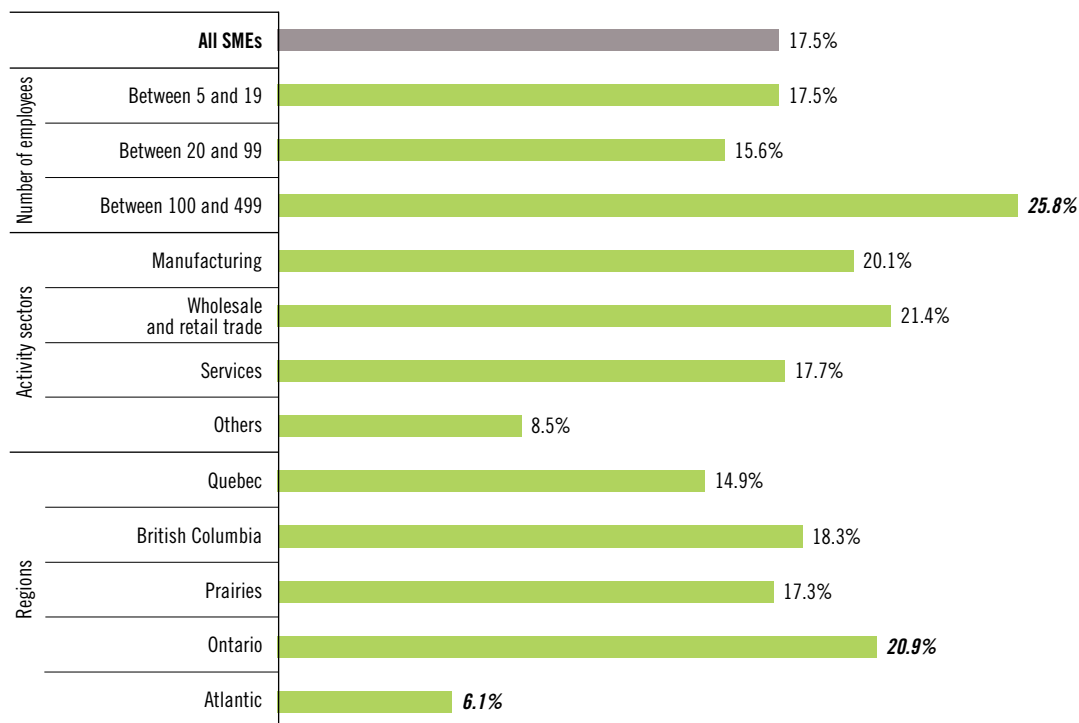
### 5.6.3 Web 2.0 in partner or supplier relationships

The use of Web 2.0 applications in partner or supplier relationships is also not very popular among connected Canadian SMEs; only 17.5% of these companies use Web 2.0 for this purpose.

The greatest use of Web 2.0 in partner and supplier relationships is found among connected SMEs with 100-499 employees. They are used in this manner by one quarter (25.8%) of SMEs with 100-499 employees (and 30.8% of SMEs with between 250 and 499 employees). The equivalent figures are 17.5% for SMEs with 5-19 employees and 15.6% for SMEs with 20-99 employees.

The use of such Web 2.0 applications is also more popular among SMEs in Ontario (20.9%), distinct from the SMEs in other regions, particularly British Columbia (18.3%), the Prairies (17.3%), Quebec (14.9%) and the Atlantic (6.1%).

Figure 65  
Use of Web 2.0 in partner or supplier relationships



Base: Connected Canadian SMEs (n: 1,930)

Question: Does your company use Web 2.0 applications in its partner or supplier relationships?

Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.

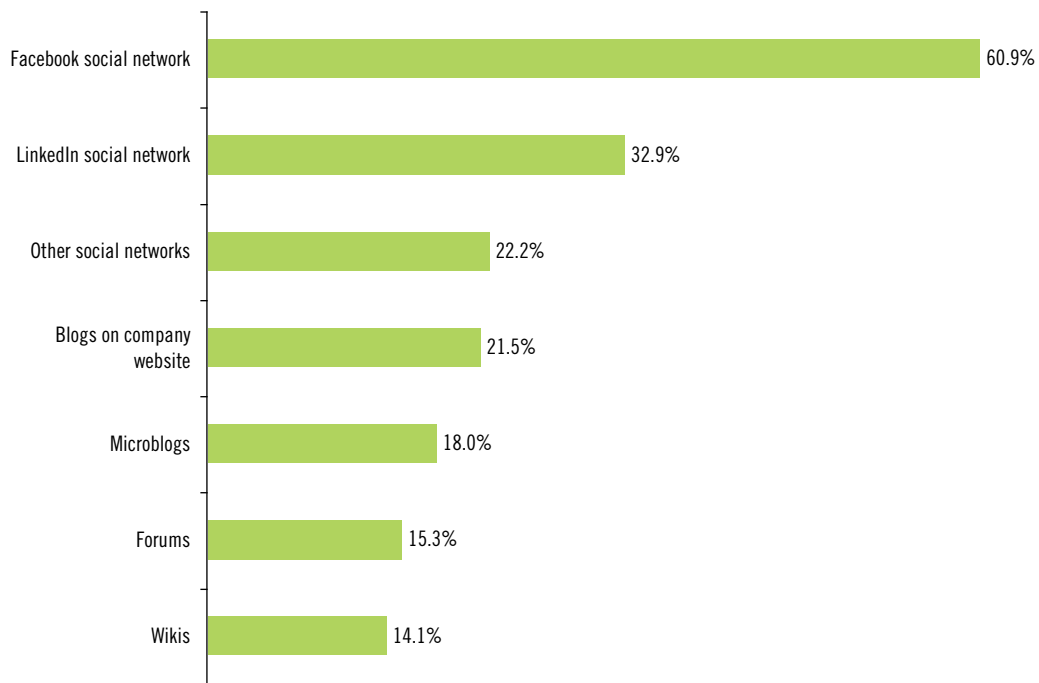


#### 5.6.4 Use of Web 2.0 applications by companies

Over the past year, the Facebook social network was by far the application most used by Canadian SMEs (60.9%). It is followed by LinkedIn (32.9%), then other social networks (22.2%). Facebook is more popular among SMEs in the services (70.9%) and wholesale and retail trade (65.9%) sectors than in the manufacturing sector (29.1%).

Figure 66

Use of Web 2.0 applications by Canadian SMEs over the last year



Base: Connected Canadian SMEs making use of Web 2.0 (n: 515)

Question: Which of the following Web 2.0 applications has your company made use of over the past year?

### *Interest in Web 2.0 applications*

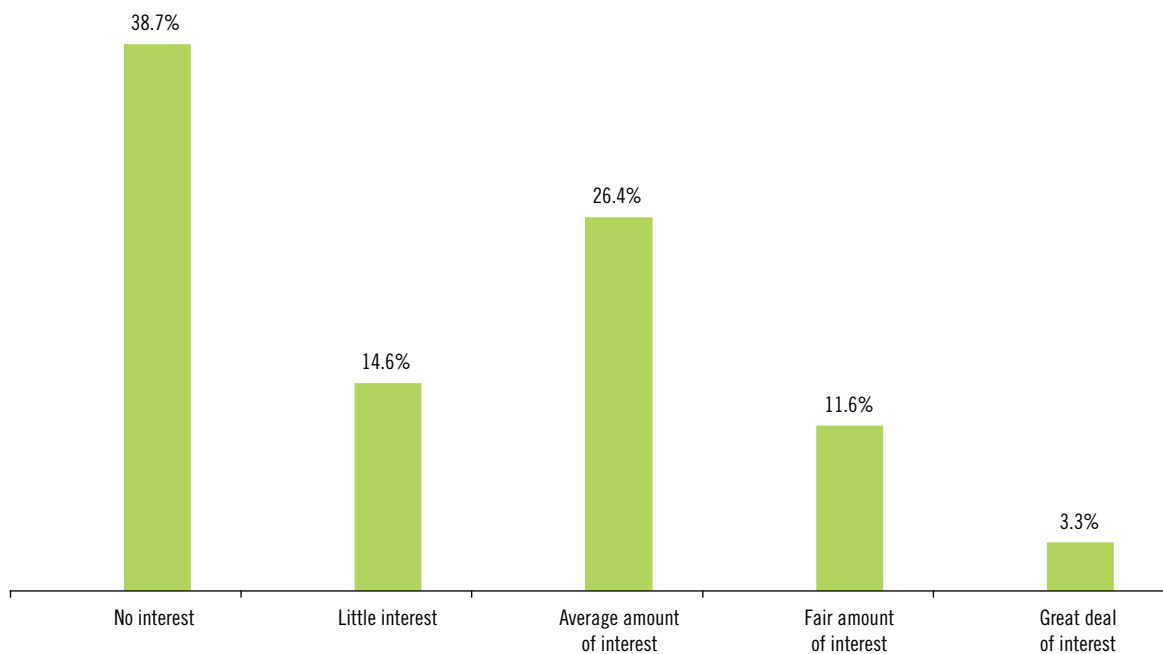
At present, those Canadian SMEs that have yet to incorporate Web 2.0 applications are split in their opinions of these tools. Their opinions also vary according to the specific application being considered.

#### *Interest in Web 2.0 applications as a component of communications and marketing strategies*

41.3% of Canadian SMEs that are not yet using Web 2.0 applications claim to be interested in incorporating such tools into their communications and marketing strategies.

Figure 67

**Interest in incorporating Web 2.0 applications into their communications or marketing strategies among Canadian SMEs that do not currently use them**



*Base: Canadian SMEs incorporating Web 2.0 into their communications or marketing strategies (n: 1,415)*

*Question: On a scale of 0 to 10, please rate your interest in incorporating Web 2.0 applications into your company's communications or marketing strategies.*

SMEs with 100-499 employees and SMEs in the manufacturing sector have a greater interest for Web 2.0 as a communications and marketing tool.

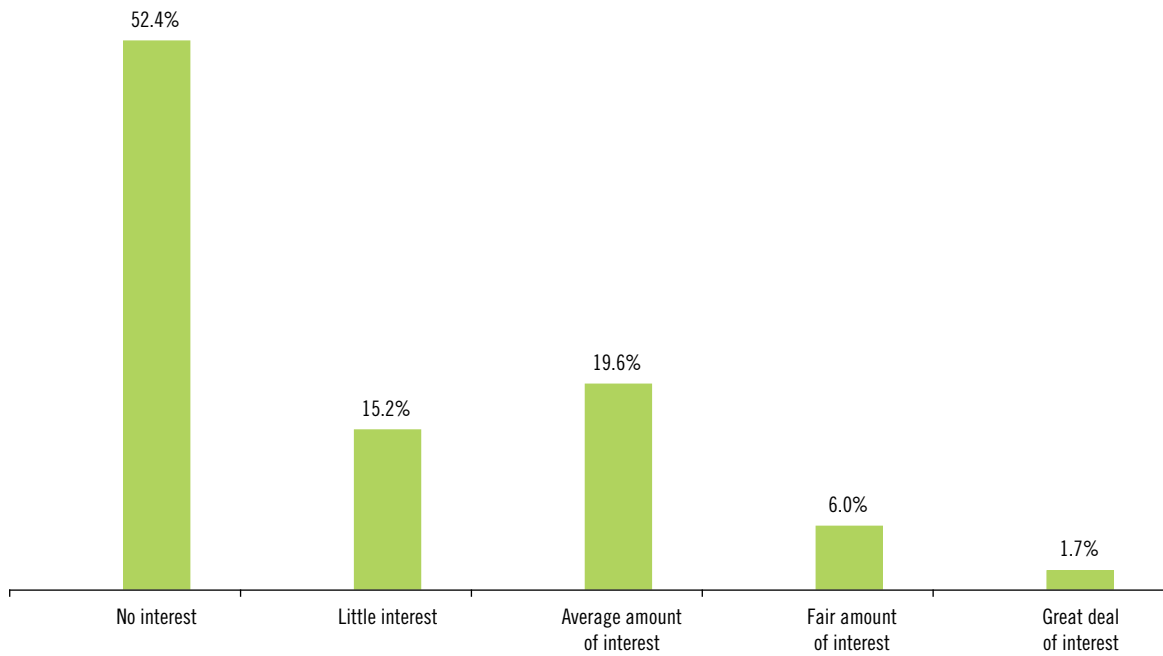


*Interest for Web 2.0 applications used internally with employees*

27.3% of Canadian SMEs that are not yet using Web 2.0 applications claim to have an interest in such tools for internal use with their employees.

Figure 68

**Canadian SMEs' interest in using Web 2.0 applications internally with their employees**



*Base: Canadian SMEs not using Web 2.0 internally with their employees (n: 1,415)*

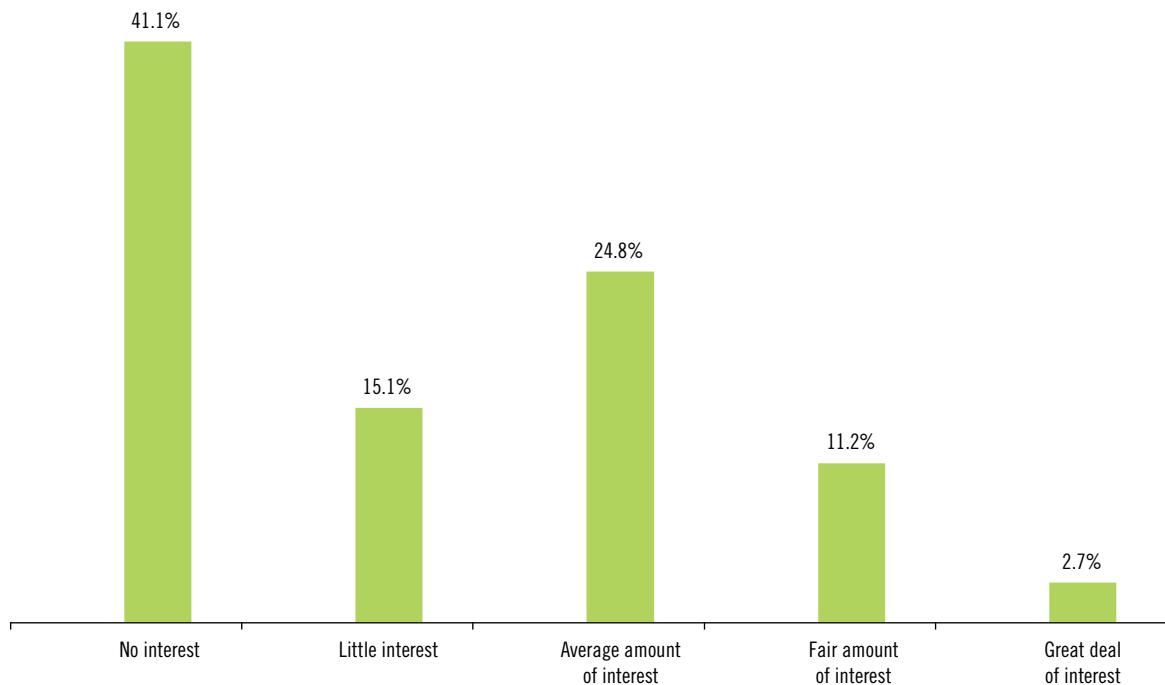
*Question: On a scale of 0 to 10, please rate your potential interest in incorporating Web 2.0 applications as tools for internal use with employees.*

*Interest for Web 2.0 applications in partner and supplier relationships*

38.7% of connected Canadian SMEs that are not yet using Web 2.0 applications claim to be interested in such tools for use in their partner and supplier relationships.

Figure 69

**Interest in using Web 2.0 applications in their partner or supplier relationships among Canadian SMEs that do not currently use them**



*Base: Canadian SMEs not using Web 2.0 in their partner or supplier relationships (n: 1,415)*

*Question: On a scale of 0 to 10, please rate your potential interest in incorporating Web 2.0 applications into your company's partner or supplier relationships.*

SMEs in the manufacturing sector are more prone to making use of Web 2.0 applications than those in other sectors. Their interest in using Web 2.0 applications in their partner or supplier relationships is 3.36 out of a possible 10, compared to 2.84 out of 10 for wholesalers and retailers and 2.80 out of 10 for SMEs in the services sector.



## 5.7 ONLINE GOVERNMENT SERVICES

In this section we will be examining online government services, as well as assessing the extent to which Quebec SMEs use the services portal of the government of Quebec.

### 5.7.1 Social media and online government services

In light of the growing popularity of social media, we wanted to analyze the importance to Canadian SMEs of government services incorporating blogs, microblogs, discussion forums, instant messaging and social networks such as Twitter and Facebook.

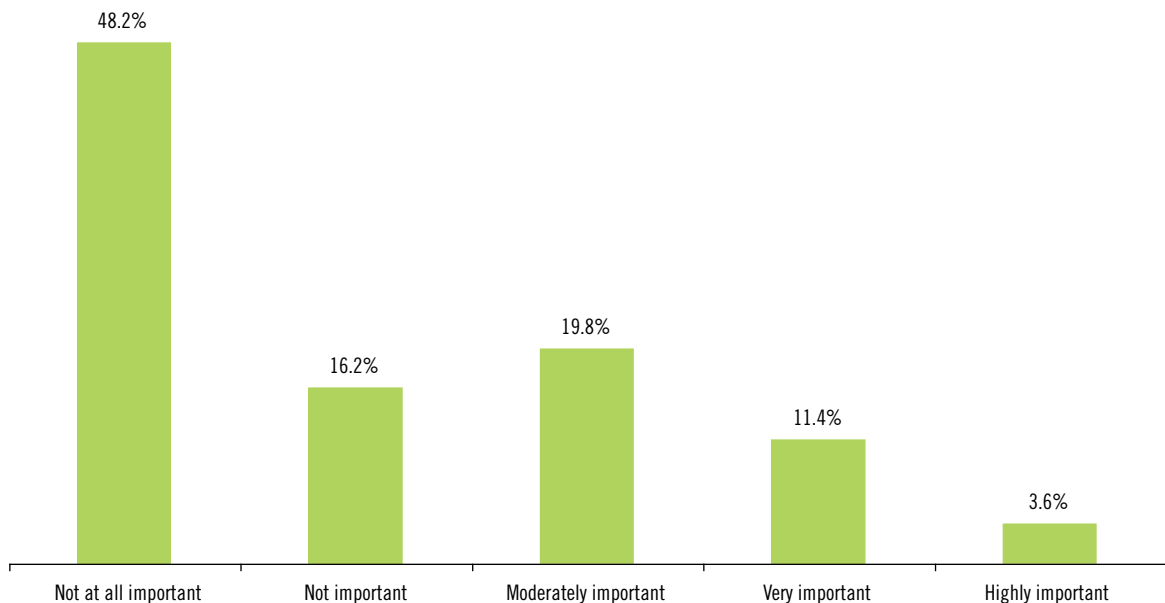
#### *Social networks*

Very few Canadian SMEs consider that the incorporation of social networks into online government services is important to their companies. To date, a mere 15.0% of SMEs feel that the use of such networks is very important or highly important, compared to the 48.2% of SMEs that do not believe they will use online government services that incorporate social networks such as Facebook and Twitter.

SMEs with fewer than 20 employees are even more firm (50.9%) in resisting the incorporation of social networks into government services, particularly when compared to SMEs with 100-499 employees (28.7%).

Figure 70

#### Canadian SMEs' interest in online government services incorporating social networks



Base: Connected Canadian SMEs (n: 1,930)

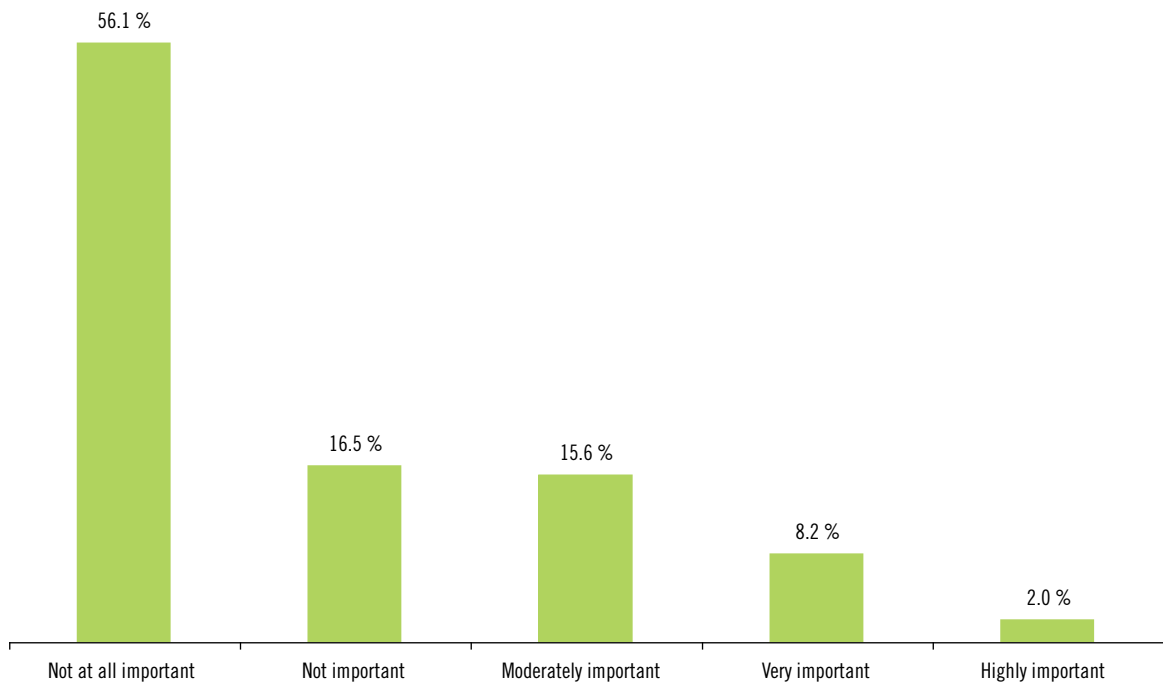
Question: On a scale of 0 to 10, how important do you feel it is that your company use online government services that incorporate social networks (Facebook, Twitter, etc.)? ?

## Blogs

Slightly more than half (56.1%) of Canadian SMEs consider that it is not at all important for their companies to use government services incorporating blogs. Again, SMEs with 5-19 employees (59.4%) are less keen than SMEs with 100-499 employees (40.6%) on the notion of incorporating blogs into their use of online government services.

Figure 71

### Canadian SMEs' interest in online government services incorporating blogs



Base: Connected Canadian SMEs (n: 1,930)

Question: On a scale of 0 to 10, how important do you feel it is that your company use online government services that incorporate blogs?



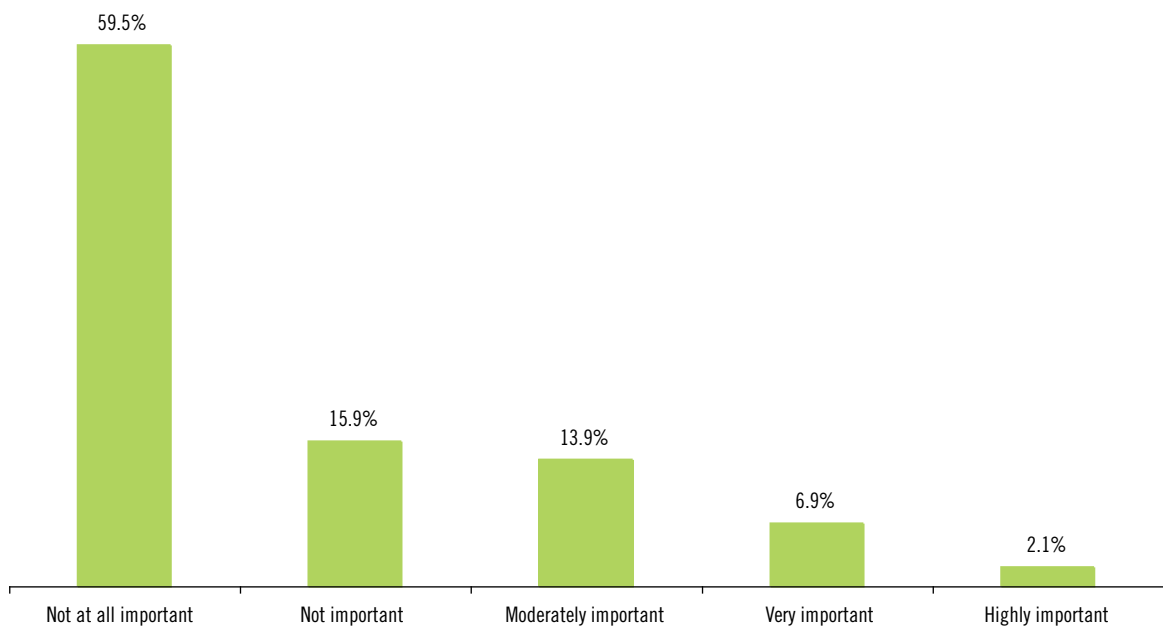
### Microblogs

As is the case for blogs, a good number of Canadian SMEs (59.5%) feel that using online government services incorporating microblogs such as Twitter is not at all important for their company.

SMEs with 5-19 employees are the most reticent, with 62.2% of them considering the incorporation of microblogs as not important, compared to 44.1% of SMEs with 100-499 employees.

Figure 72

### Canadian SMEs' interest in online government services incorporating microblogs



Base: Connected Canadian SMEs (n: 1,930)

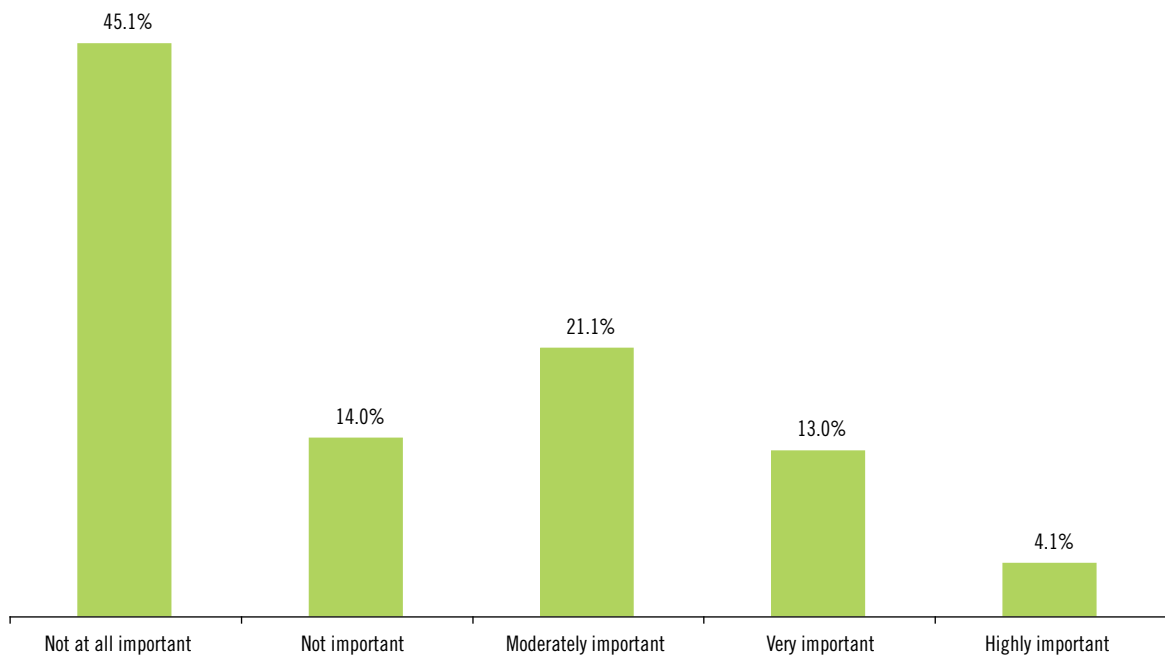
Question: On a scale of 0 to 10, how important do you feel it is that your company use online government services that incorporate microblogs?

## Forums

The integration of forums into online government services is considered as very important or highly important by 17.1% of connected Canadian SMEs. SMEs with 5-19 employees are the most reluctant group, with 48.2% of them feeling that it is not at all important to their companies.

Figure 73

### Canadian SMEs' interest in online government services incorporating forums



Base: Connected Canadian SMEs (n: 1,930)

Question: On a scale of 0 to 10, how important do you feel it is that your company use online government services that incorporate forums?

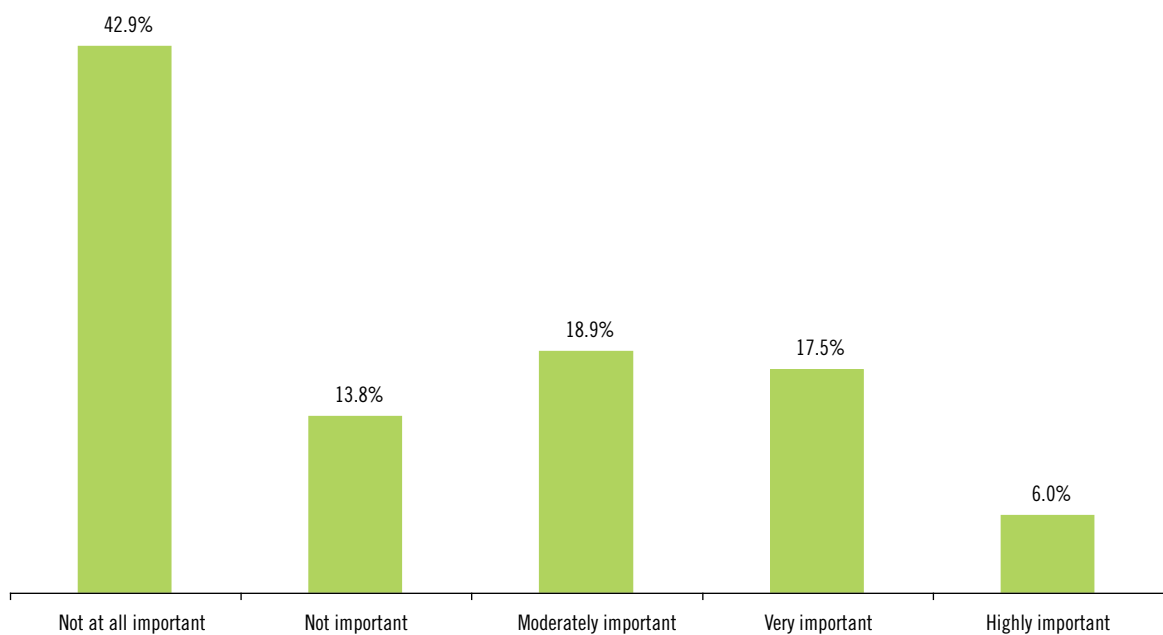


### *Instant messaging*

Connected Canadian SMEs have a more positive outlook on the incorporation of instant messaging into online government services. It is considered important by 42.5% of all Canadian SMEs. Twice as many SMEs in British Columbia (57.3%) as in Quebec (28.4%) believe that the incorporation of instant messaging into online government services is not important.

Figure 74

Canadian SMEs' interest in online government services incorporating instant messaging



*Base: Connected Canadian SMEs (n: 1,930)*

*Question: On a scale of 0 to 10, how important do you feel it is that your company use online government services that incorporate instant messaging?*

## 5.7.2 Communications with the government of Quebec

The *NetPME 2011* survey reveals that 61.8% of connected Quebec SMEs used the Internet to communicate with the government of Quebec over the past year. This is similar to the figure for 2009, which was 62.8%. There was thus no change.

More specifically, SMEs with 100-499 employees (74.8%), as well as those in the Quebec City CMA (75.8%) make greater use of the Internet to communicate with government departments and agencies.

In addition, SMEs in the wholesale and retail trade sector are least likely (53.1%) to use the Internet to communicate with government departments and agencies.

Figure 75

### Internet communications with government of Quebec departments or agencies



Base: Connected Quebec SMEs (n: 960)

Question: Over the past year, has your company communicated online with a Quebec government department or agency?

Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.



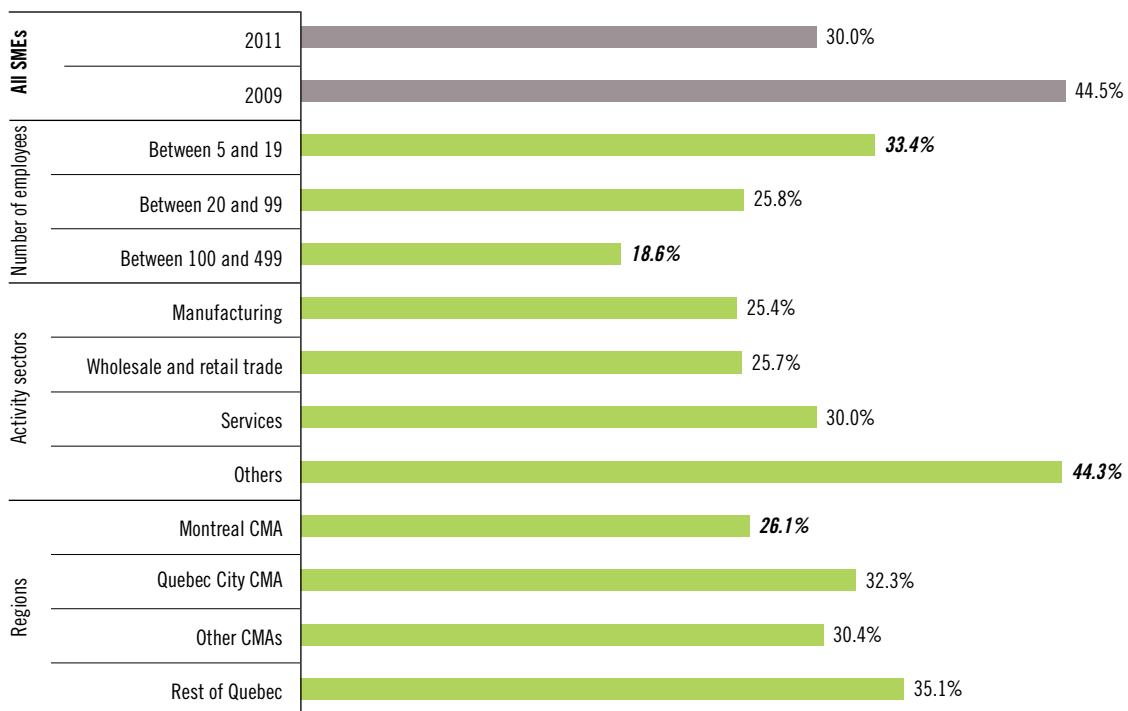
### 5.7.3 Visits to the “Businesses” section of the services portal of the government of Quebec

The results of the *NetPME 2011* survey indicate that only one out of every three connected Quebec SMEs (30.0%) has already visited the “Businesses” section of the services portal of the government of Quebec. This is a decrease of 14.5% over 2009 figures. In spite of this drop in visits, we note that more SMEs (16.8%) did online transactions with the government of Quebec in 2011.

More specifically, SMEs with 5-19 employees (33.4%) are the most likely to consult the “Businesses” section of the services portal of the government of Quebec, compared to those with 100-499 employees (18.6%).

Figure 76

#### Frequency of visits to the “Businesses” section of the services portal of the government of Quebec



Base: Connected Quebec SMEs (n: 960)

Question: Have you ever visited the “Businesses” section of the services portal of the government of Quebec?

Notes:

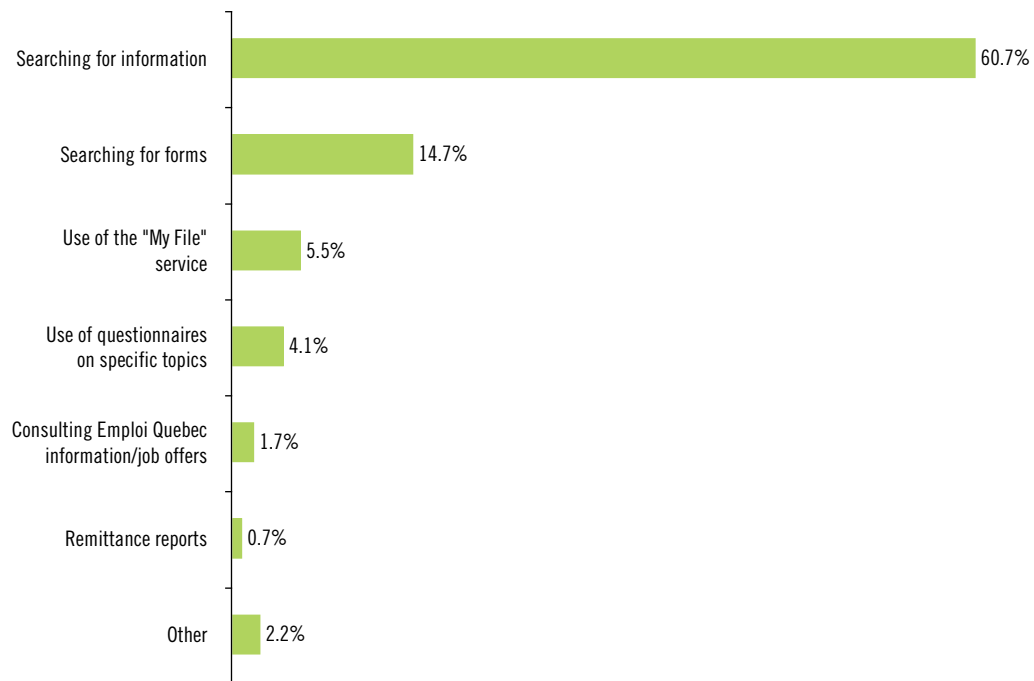
– The visit could have taken place at any time, i.e. there was no reference period.

– In this chart percentages that are significantly higher or lower than the others are in bold and italics.

Searching for information is the main reason given by connected Quebec SMEs (60.7%) for their most recent visit to the “Businesses” section of the services portal of the government of Quebec. The next reason given is searching for forms (14.7%).

Figure 77

**Reasons for visits to the “Businesses” section of the services portal of the government of Quebec**



*Base: Connected Quebec SMEs having visited the “Businesses” section of the services portal of the government of Quebec (n: 286)  
Question: What was the main reason for your most recent visit?*

**5.7.4 Transactions with the government of Quebec**

As it did in 2009, the *NetPME 2011* survey considered the following three types of online transactions with the government of Quebec: submitting contributions, paying taxes (GST/QST) and purchasing or renewing permits or certificates.

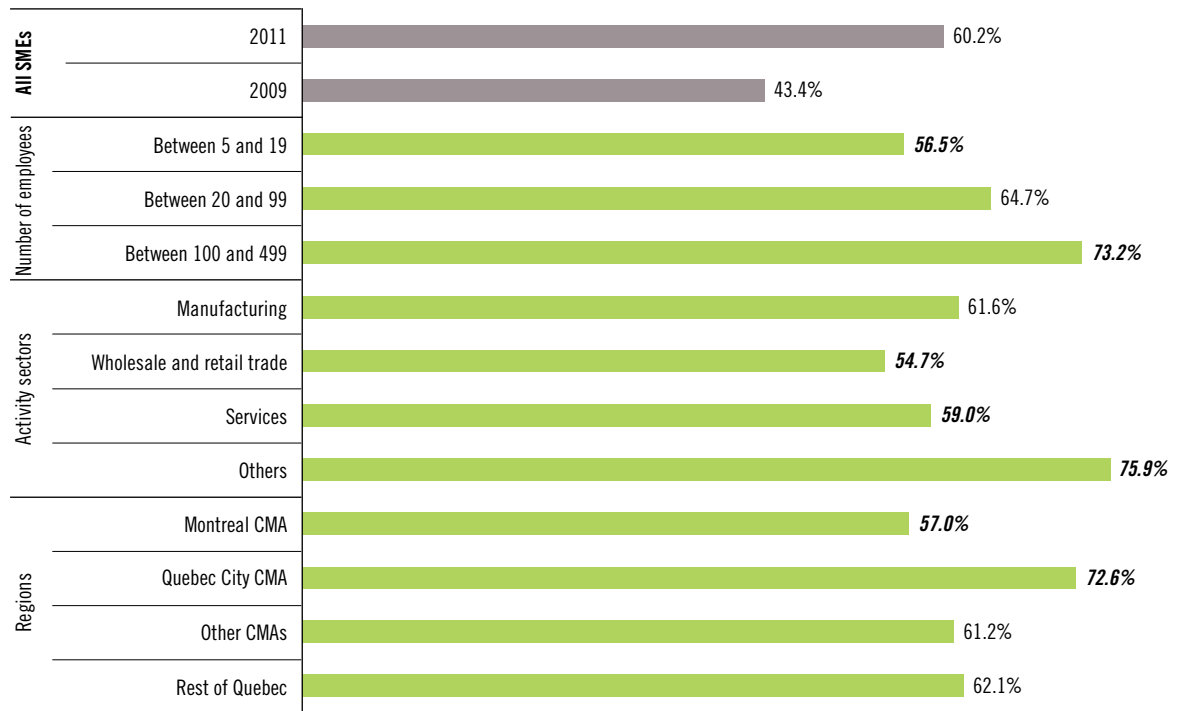
Overall, over half of all connected Quebec SMEs (60.2%) carried out transactions on a government department or agency site over the past year. This represents a significant increase of 16.8%, since in 2009 only 43.4% of connected Quebec SMEs claimed to have done at least one online transaction with the government of Quebec.



This upward trend could be explained by how much easier it has become to deal with the government online. In fact, *NetGouv entreprises 2011*<sup>3</sup> results reveal that 78.0% of executives of Quebec SMEs feel that it is easy to do transactions on government department or agency sites.

It also bears noting that the extent of online transactions with the government of Quebec varies greatly according to company size. For SMEs with 5-19 employees this percentage is 56.5%, but it is 64.7% for SMEs with 20-99 employees and 73.2% for SMEs with 100-499 employees. This percentage also varies depending on the region: 57.0% for SMEs in the Montreal CMA compared to 72.6% for SMEs in the Quebec City CMA and 61.2% for SMEs in other regions of Quebec.

**Figure 78**  
**Quebec SMEs' online transactions with the government of Quebec**



*Base: Connected Quebec SMEs (n: 960)*

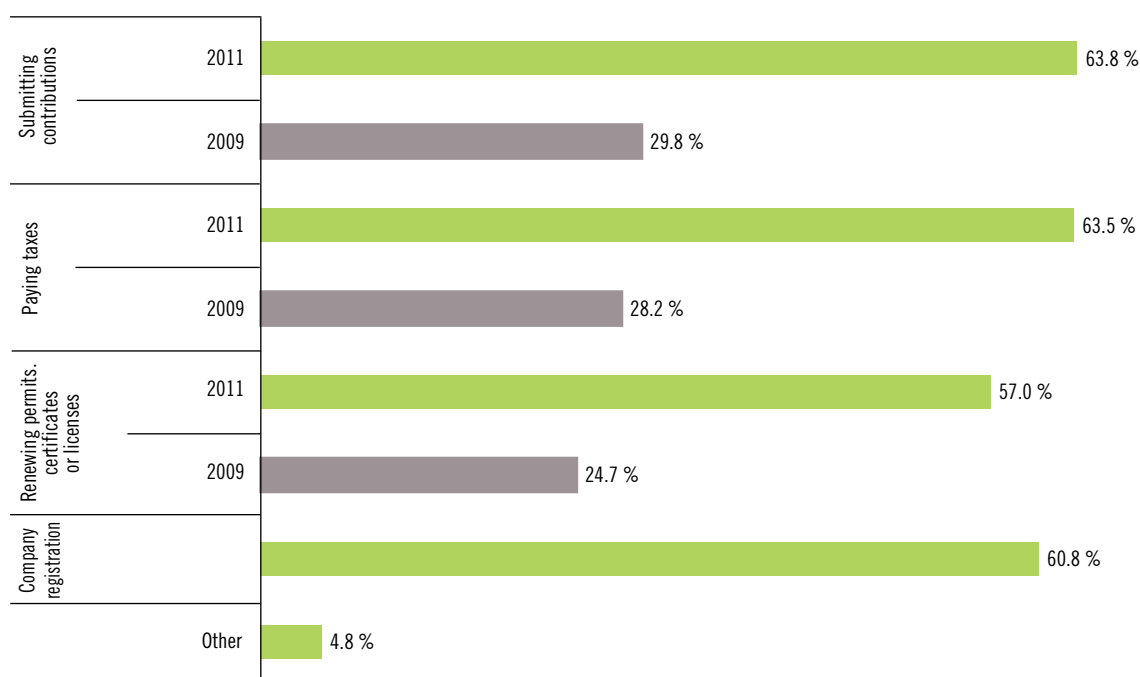
*Question: Over the past year, has your company done online transactions on a Quebec government department or agency site?*

*Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.*

3. *NetGouv entreprises 2011 : Portrait de l'utilisation des services gouvernementaux en ligne par les PME québécoises.* CEFRIO, 2011, page 19.

Carrying out such transactions has obviously gained in popularity among connected Quebec SMEs. Compared to 2009, twice as many connected Quebec SMEs go online to submit contributions (63.8% in 2011 versus 29.8% in 2009), pay taxes such as GST and QST (63.5% in 2011 versus 28.2% in 2009), and purchase or renew permits or certificates (57.0% in 2011 versus 24.7% in 2009). CEFRIO's *NetGouv 2011*<sup>4</sup> survey shows that Revenu Quebec's online services<sup>5</sup> are the ones most used by Quebec SMEs - 81.0% of SMEs used them over the past year.

**Figure 79**  
Types of online transactions with the government of Quebec



*Base: Connected Quebec SMEs that carried out transactions on a government site (n: 602)  
Question: Which of the following transactions does your company carry out on a government of Quebec department or agency site?*

4. *NetGouv entreprises 2011 : Portrait de l'utilisation des services gouvernementaux en ligne par les PME québécoises.* CEFRIO, 2011, page 13.  
5. The other government websites we studied were those of the Commission des normes du travail, the CSST, the Ministère de l'emploi et la solidarité/ sociale/Emploi-Québec and the SAAQ.



### ***Submitting contributions***

In 2001 the connected SMEs in the construction sector were the most active in submitting contributions on government of Quebec department or agency websites (78.1%). The Montreal CMA had a lower rate of use (58.1%) than that of the regions in Quebec taken as a whole.

### ***Paying taxes (GST/QST)***

Paying taxes (GST/QST) on government of Quebec department or agency sites is much more prevalent among connected SMEs in the retail trade sector (70.8%). However, GST/QST payments are much less frequent among connected SMEs in the Quebec City CMA (43.1%).

### ***Purchasing or renewing permits or certificates***

A greater number of connected Quebec SMEs in the construction (73.2%) and transportation and warehousing (77.2%) sectors purchase or renew permits or certificates on line via a government of Quebec site. This is also the case for connected SMEs with SMEs with 20-99 employees (63.8%) compare to those with 100-499 employees (61.4%) or those with 5-19 employees (52.5%).

### ***Company registration***

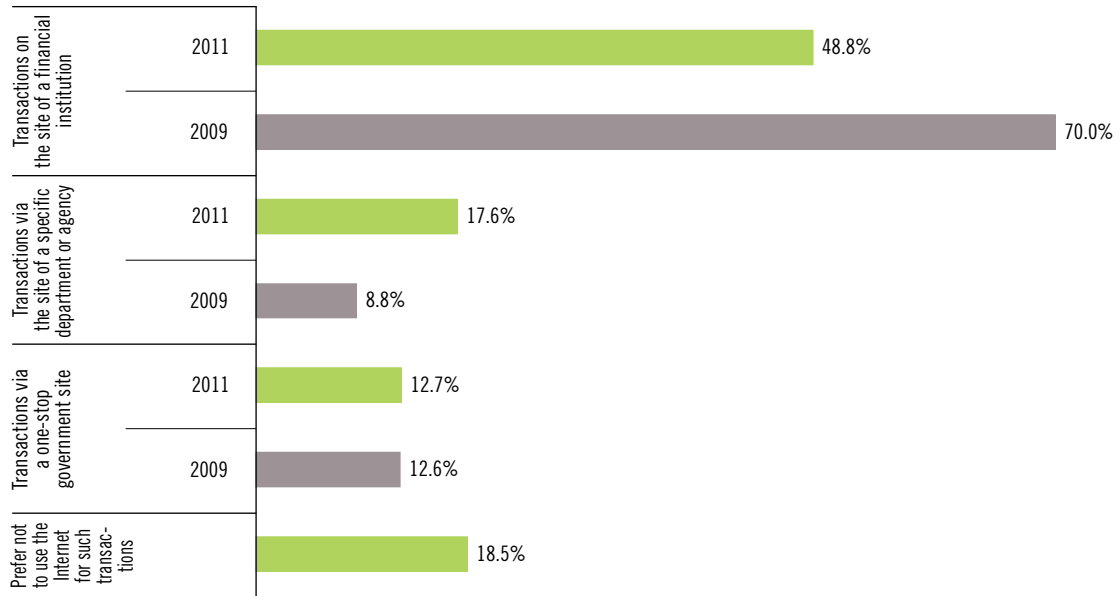
As a new feature, the *NetPME 2011* survey assessed the extent to which connected Quebec SMEs registered their company on government of Quebec sites. SMEs with 20-99 employees do so the most (71.7%), compared to companies with 5-19 employees (54.7%) and those with 100-499 employees (60.6%). This practice is also more prevalent among connected SMEs in the Montreal CMA (65.6%) than those in the other CMAs in Quebec (51.6%).

### 5.7.5 Preferences with regard to online financial transactions

We once again felt it germane to ask Quebec SMEs about their preferences with regard to financial transactions. We observed that only 48.8% of Quebec SMEs prefer to carry out their transactions on the site of a financial institution in 2011, compared to 70.0% in 2009; this is a decrease of 21.2%. In contrast to this trend, transactions on the site of a specific department gained ground, and are now preferred by 17.6% of SMEs.

Figure 80

Preferences with regard to online financial transactions with the Quebec government



Base: Connected Quebec SMEs that carried out transactions on a government site (n: 602)

Question: Which of the following options does your company prefer for carrying out its financial transactions with the government of Quebec?



## CHAPTER 6

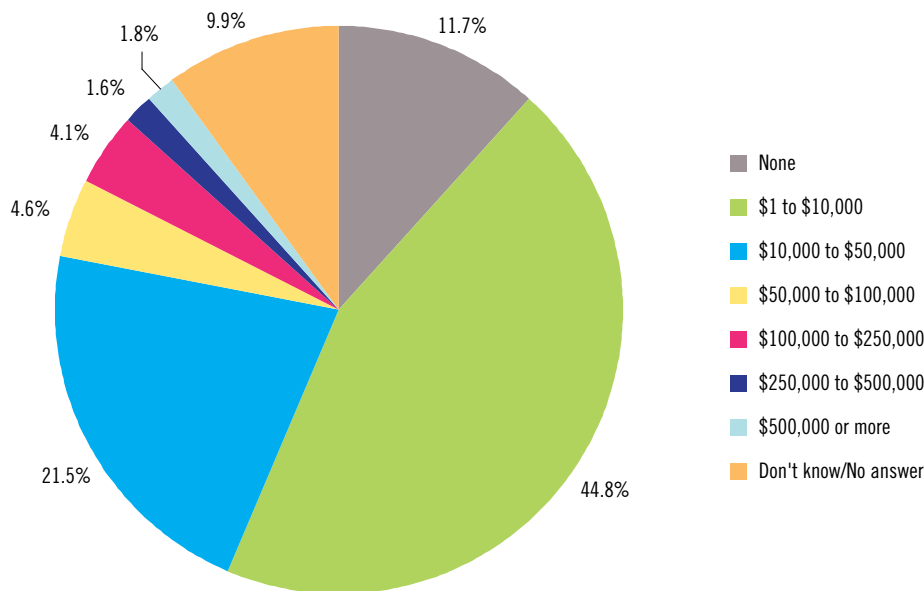
# INVESTMENTS IN ICT, OBSTACLES TO THE ADOPTION OF ICT AND POSSIBLE SOLUTIONS

The computerization of processes and the incorporation of ICT into any company - including SMEs of course - require investments in equipment, applications and human resources. We started by asking how much the 2,013 SMEs that participated in this survey invested in ICT over the past year. These investments include equipment, human resources, consulting services and other related investments. We then found out which types of resources - internal or external - Canadian SMEs used for the management and development of their technological resources.

## 6.1 INVESTMENTS IN ICT OVER THE PAST 12 MONTHS

Most Canadian SMEs (88.3%) made investments in ICT over the past 12 months. This survey specifically reveals that 44.8% of Canadian SMEs invested up to \$10,000 in ICT during that period. 21.5% of SMEs invested between \$10,000 and \$50,000 in ICT, while 12.1% invested more than \$50,000.

Figure 81  
Investments in ICT by Canadian SMEs during the past 12 months



Base: Canadian SMEs (n: 2,013)

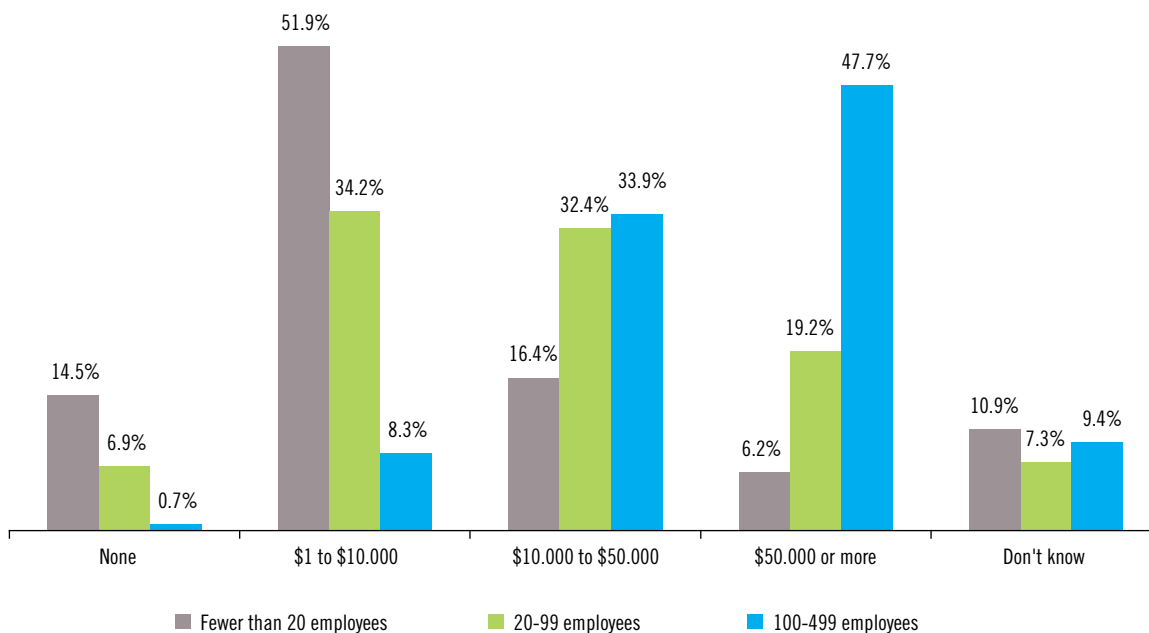
Question: Approximately how much has your company invested in ICT in the past 12 months, including equipment, human resources, consulting services and all other types of investments?

More SMEs with 100-499 employees invested significant amounts in ICT over the past 12 months. 12.2% of them invested \$500,000 or more, a figure matched by only 2.0% of companies with 20-99 employees and 0.7% of companies with fewer than 20 employees. Over half of the SMEs with 15-19 employees (51.9%) invested less than \$10,000, and 14.5% of them made no investments whatsoever in ICT over the past 12 months.



Figure 82

Investments in ICT by SMEs over the past 12 months, based on company size



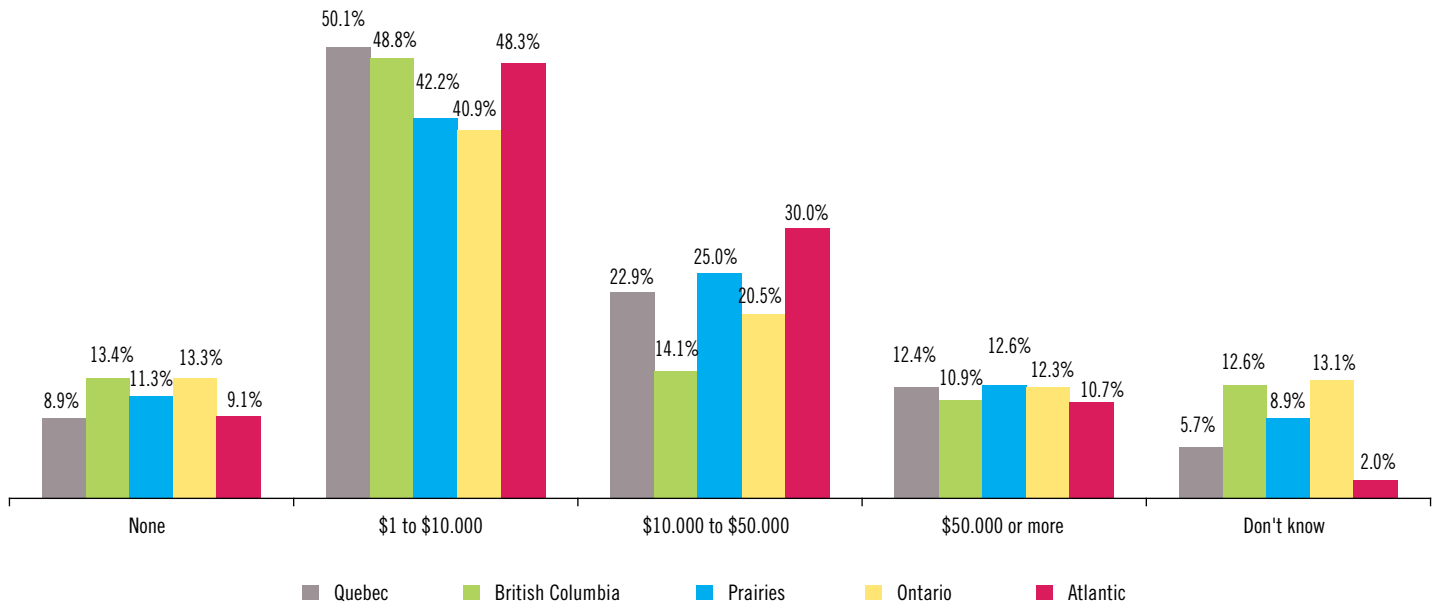
Base: Canadian SMEs (n: 2,013)

Question: Approximately how much has your company invested in ICT in the past 12 months?

A comparison of investments in ICT by SMEs in the five major regions of Canada shows that in Quebec and the Atlantic the highest number of SMEs invested \$1 - \$50,000. We found that 73.0% of Quebec SMEs and 78.3% of SMEs in the Atlantic invested under \$50,000, whereas the equivalent figures are 67.2% in the Prairies, 62.9% in British Columbia and 61.4% in Ontario.

Figure 83

Investments in ICT by SMEs over the past 12 months, based on region where company is located



Base: Canadian SMEs (n: 2,013)

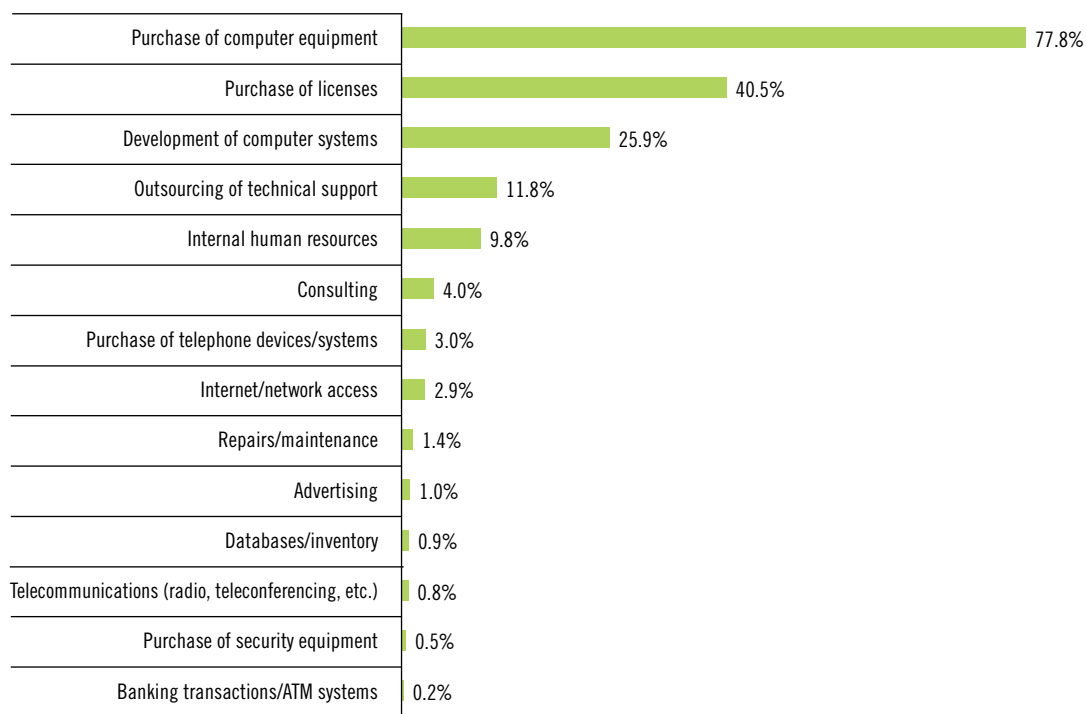
Question: Approximately how much has your company invested in ICT in the past 12 months?



## 6.2 TYPES OF INVESTMENTS IN ICT BY CANADIAN SMEs

As previously mentioned, the majority of Canadian SMEs (88.3%) made investments in ICT over the past 12 months. The *NetPME 2011* survey reveals that these investments consisted primarily of purchasing computer equipment and licenses. Of the Canadian SMEs that made investments in ICT over the past 12 months, 77.8% invested in the purchase of computer equipment and 40.5% in the purchase of licenses.

Figure 84  
Types of investments in ICT by SMEs



Base: Canadian SMEs that invested in ICT over the past 12 months (n: 1,699) – Total of 3 responses  
Question: What types of investments in ICT did you make?

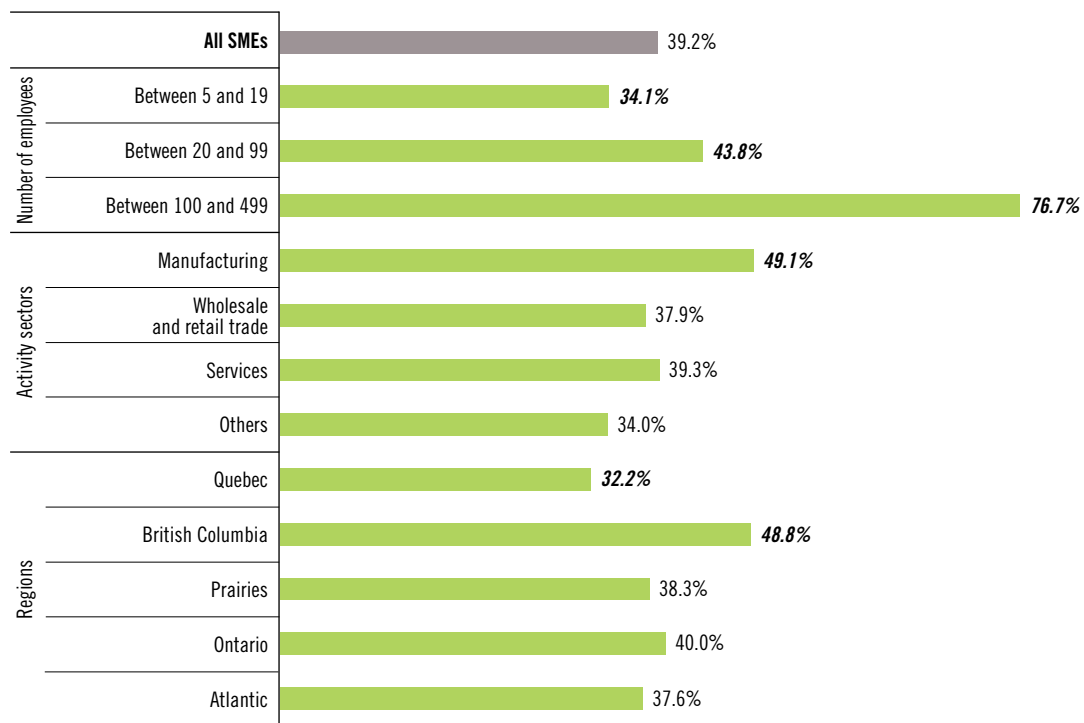
### 6.3 MANAGEMENT AND DEVELOPMENT OF TECHNOLOGICAL RESOURCES

39.2% of all Canadian SMEs have at least one internal staff member with the skills required for managing and developing their technological resources (for example, an ICT expert or specialist). Among SMEs with 100-499 employees this percentage jumps to 76.7%, and to 87.8% among SMEs with between 250 and 499 employees.

49.1% of SMEs in the manufacturing sector have at least one internal ICT expert or specialist. The equivalent figure is 39.3% for the wholesale and retail trade sector, 37.3% for the services sector and 34.0% for the other sectors. In British Columbia 48.8% of SMEs have at least one ICT specialist or expert, compared to 40.0% in Ontario, 38.3% in the Prairies, 37.6% in the Atlantic and 32.2% in Quebec.

Figure 85

#### Internal personnel with the skills required for managing and developing the technological resources of Canadian SMEs



Base: Canadian SMEs (n: 2,013)

Question: Does your company have at least one internal staff member with the skills required for managing and developing your technological resources, such as an IT expert or specialist?

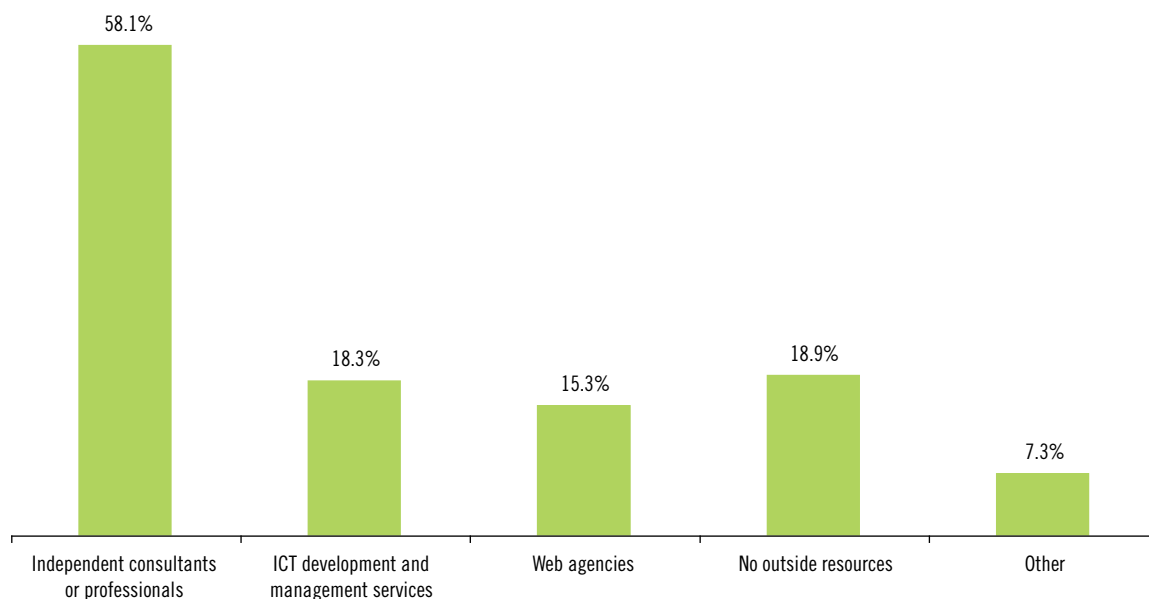
Note: In this chart percentages that are significantly higher or lower than the others are in bold and italics.



When they need an ICT expert or specialist for managing and developing their technological resources, 58.1% of Canadian SMEs call on independent outside consultants or professionals. These professionals are more often called upon by SMEs in the manufacturing sector (69.1%) and SMEs with 20 to 499 employees (72.6% for SMEs with 20-99 employees and 73.5% for SMEs with 100-499 employees). Only 53.1% of SMEs with 15 -19 employees rely on such resources.

Figure 86

**Types of external resources SMEs rely on for managing and developing their technological resources**



*Base: Canadian SMEs relying on at least one resource specialized in ICT (n: 1,117)*

*Question: What type of external resources does your company rely on for the development of your technological resources?*

## 6.4 MAIN OBSTACLES OR FACTORS PREVENTING CANADIAN SMEs FROM ADOPTING ICT

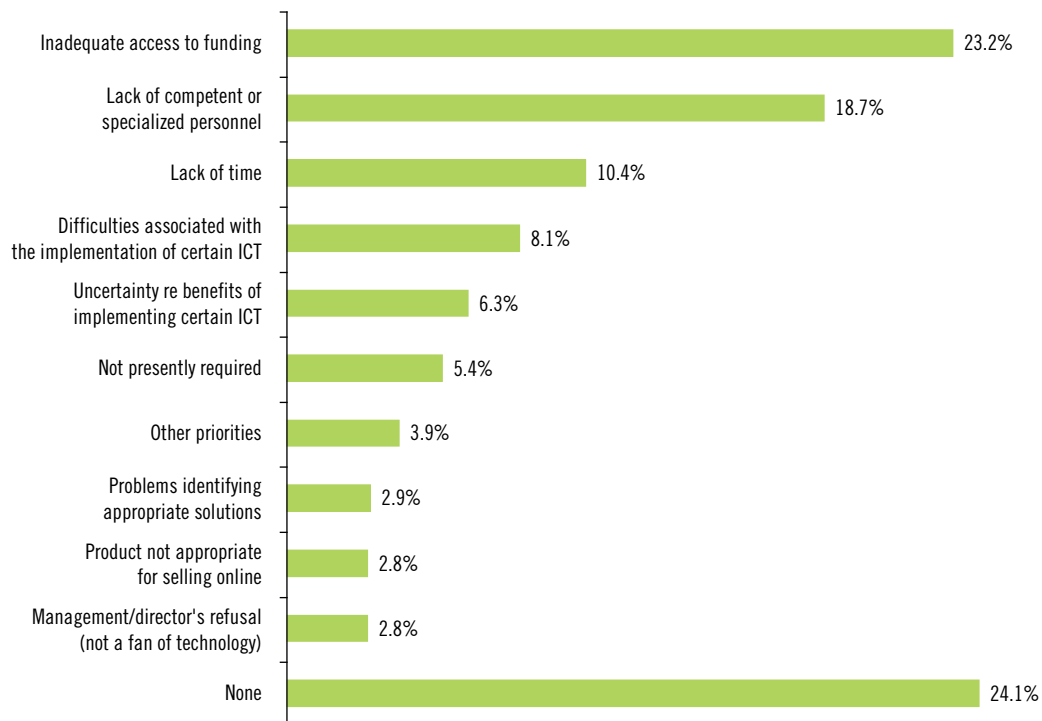
In this section we consider the main obstacles or factors preventing Canadian SMEs from adopting ICT.

The main obstacle identified in the survey is associated with funding. 23.2% of the Canadian SMEs surveyed stated that access to funding was inadequate. Although they have greater financial resources, more SMEs with 100-499 employees (32.1%) than SMEs with 15-19 employees (21.7%) or those with 20-99 employees (25.0%) cited funding as the main factor preventing them from adopting ICT.

Lack of competent or specialized personnel was the next factor cited, by 18.7% of the Canadian SMEs surveyed. Third was a lack of time (10.4% of SMEs). Lastly, it bears noting that 24.1% of Canadian SMEs did not cite any factors as constituting obstacles or preventing them from adopting ICT (including software applications and systems, Internet applications, collaborative tools, etc.).

Figure 87

### Main obstacles or factors preventing Canadian SMEs from adopting ICT



Base: Canadian SMEs (n: 2,013) – Total of 3 responses

Question: What are the main obstacles or factors preventing your company from adopting ICT, including software applications and systems, Internet applications, collaborative tools, etc.?

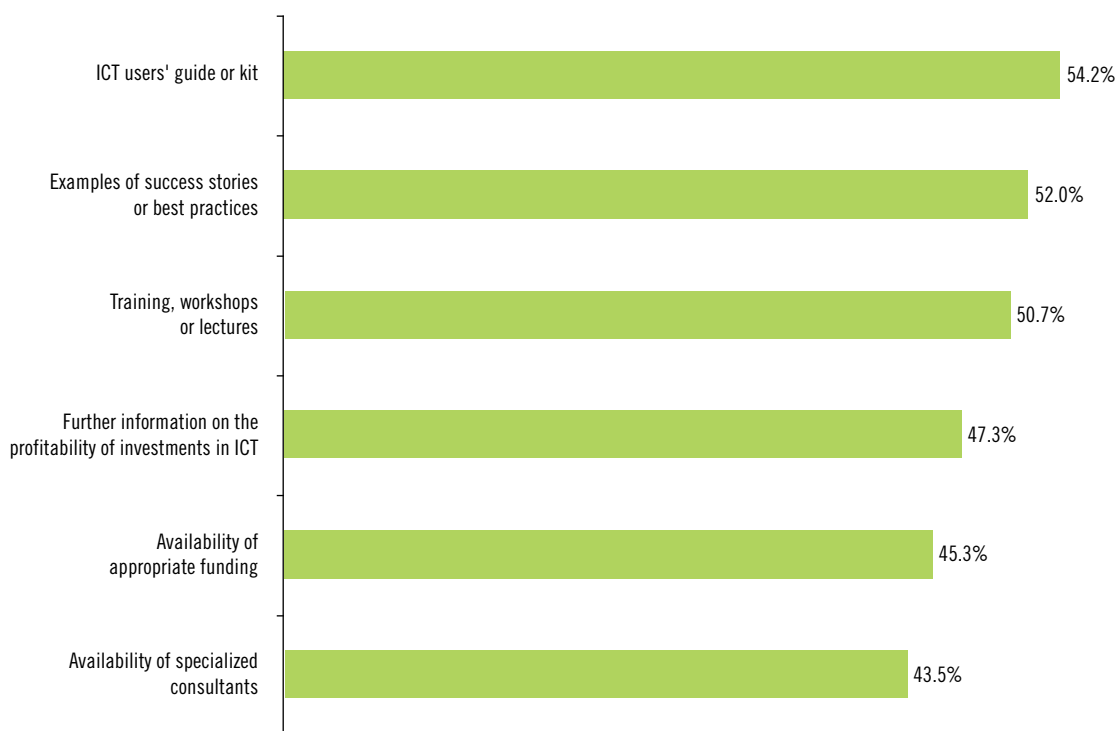


## 6.5 SOLUTIONS TO HELP SMEs ADOPT OR MAKE GREATER USE OF ICT

To encourage the adoption or greater use of ICT by Canadian SMEs, *NetPME* respondents were given a list of various factors and how useful each one would be. Our results show that over half of Canadian SMEs (54.2%) would be interested in having access to a kit or guide to using ICT, examples of successes or best practices (52.0%), and related training, lectures or workshops (50.7%).

Figure 88

Solutions suggested by SMEs to encourage greater use of ICT in Canada



Base: Canadian SMEs (n: 2,013)

Question: Which of the following elements would be most useful in helping your organization adopt or make greater use of ICT?



## Conclusion

The *NetPME 2011* survey considered the responses of slightly over 2,000 Canadian SMEs in order to draft a current and realistic portrait of their computer resources, the type of connection they use, and the extent of their Internet use. Results clearly show that Internet connection is no longer an issue, with the majority of Canadian SMEs (92.8%) now connected to the Internet and most of these (96.6%) using high speed, very high speed or extreme high speed connections.

In considering the only province for which we have longitudinal data (Quebec), we observed constant growth in the Internet connection rate for SMEs. In 2011, 94.6% of Quebec SMEs are connected to the Internet. The equivalent rate was 86.5% in 2009 and 84.6% in 2007.

The 2011 edition of *NetPME* also undertook an in-depth analysis of the various activity sectors in which Canadian SMEs are active, namely manufacturing, services, and wholesale and retail trade, in addition to comparing results on the basis of company size and geographical location. As was the case in Quebec in previous years, the acquisition and use of ICT is vastly more advanced among larger Canadian SMEs, i.e. those with 100-499 employees, as well as among SMEs in the manufacturing sector. This latter sector boasts the highest Internet connection rate (97.6%) and is also the sector with the largest percentage of SMEs making use of office suites (92.3%), enterprise resource planning (ERP) software packages (34.4%) and Internet tools such as websites (78.2%) or intranets (49.2%). SMEs in the manufacturing sector use the most “open source” software or systems (36.3%) and collaborative tools such as email (95.2%), project management tools (36.5%) and shared editing (40.4%).

### Overall challenges associated with IT use\*

To be able to enjoy improved economic, social and environmental performance from IT use, SMEs must develop their IT capabilities, namely the resources and skills related to their technological infrastructure and IT management. Such development must be consistent with SMEs' strategic choices (quality, productivity, innovation, globalization) and in line with their other strategic capabilities (strategic human resources management, network development, new product and service development, new market development).

\* For more information:

Raymond, L. and St-Pierre, J. (2011), Strategic capability configurations for the internationalization of SMEs: A study in equifinality, *International Small Business Journal*, (available online at <http://isb.sagepub.com/content/early/2011/07/13/0266242610391325>).

Raymond, L. and St-Pierre, J. (2010), Strategic capabilities for product innovation in SMEs: A gestalts perspective, *International Journal of Entrepreneurship and Innovation*, 11 (3), 209-220.

Raymond, L., St-Pierre, J., Fabi, B. and Lacoursière, R. (2010), Strategic capabilities for the growth of manufacturing SMEs: A configurational perspective, *Journal of Developmental Entrepreneurship*, 15 (2), 123-142.

Rivard, S., Raymond, L. and Verreault, D. (2006), Resource-based view and competitive strategy: An integrated model of the contribution of information technology to firm performance, *Journal of Strategic Information Systems*, 15 (1), 29-50.

An analysis of the results of *NetPME 2011* in the five major regions of Canada also revealed interesting differences.

**Quebec** specifically stands apart with regard to the high use of integrated management or ERP packages (32.2%) task management applications (54.1%) and integrated collaborative solutions (23.8%). Quebec also distinguishes itself from the other major regions in Canada in terms of using the Internet for regular banking transactions (91.7%) and cash management (47.0%). However, Intranet use among Quebec SMEs is less widespread (34.2%), as is the use of websites (65.7%), web meetings (14.3%) and video or audio conferencing (21.7%). Quebec has fewer SMEs doing online purchasing (65.0%), online advertising and marketing (43.7%) and using internal Web 2.0 application with their employees (10.0%) than the rest of Canada.

As regards **Ontario**, the most obvious differences with the other major regions of Canada concern use of CRM (27.3%) and SCM (15.9%) packages and collaborative tools such as web meetings (28.4%) and video or audio conferencing (35.2%). Ontario SMEs use internal Web 2.0 applications with their employees (20.3%) or their partners and suppliers (20.9%) more frequently than SMEs in the other Canadian regions.

The **Prairies** region, which comprises Saskatchewan, Manitoba and Alberta, makes the greatest use of mobile Internet keys (40.3%). This region also differentiates itself by a greater use of email (93.2%), as a collaborative tool.

**British Columbia** distinguishes itself by having a much higher percentage of SMEs with at least one employee who has the skills needed for managing and developing technology resources (48.8%). It also has the highest percentage of SMEs doing all their sales on the Internet (25%). It makes less use of ERP packages (17.8%) and its SMEs are less interested in using Web 2.0 for marketing and communications (51.4% were not interested at all).

SME executives in the **Atlantic** region, comprising the provinces of New Brunswick, Newfoundland, Nova Scotia and Prince Edward Island, report that there is a significant shortage of resources, which is an obstacle to doing online sales (25.1%) and using ICT (32.5%).

In light of the *NetPME 2011* survey results, it appears obvious that Canadian SMEs still have a long way to go before being able to boast of having fully embraced ICT. The challenges are numerous, and as this report illustrates, vary significantly depending on SME size, geographical location and activity sector. Bearing in mind that SMEs account for 54.3% of Canada's GDP<sup>6</sup>, we hope that decision makers will use the information in this cross-country portrait to encourage constructive ICT strategies for all SMEs.

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6. Statistics Canada (2011), Small, Medium-sized and Large Businesses in the Canadian Economy: Measuring Their Contribution to Gross Domestic Product in 2005.

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