2006

Net Impact Canada

small and medium-sized enterprises

Year after year of research among large organizations has shown that the diffusion of information and communication technology (ICT), from sophisticated network infrastructure to highly customized enterprise applications, has almost reached a saturation point. The technology manufacturing sector, academics, integration consultants and researchers have preached the importance and benefits of investing in technology infrastructure and businesses got it. Yet it is not clear whether the same benefits from ICT reaped by large enterprises are being experienced within the small and medium enterprises.

Illuminas

Executive Summary

Year after year of research among large organizations has shown that the diffusion of information and communication technology (ICT), from sophisticated network infrastructure to highly customized enterprise applications, has almost reached a saturation point. The technology manufacturing sector, academics, integration consultants and researchers have preached the importance and benefits of investing in technology infrastructure and businesses got it. Yet it is not clear whether the same benefits from ICT reaped by large enterprises are being experienced within the small and medium enterprises.

The global marketplace has become even more complicated with investments in ICT lowering barriers to entry and increasing the competitive pressures felt by organizations of any size. Previous research conducted by Cisco Systems and Illuminas has shown the dramatic impact that ICT infrastructure can have on driving business productivity within the large enterprise organization.

What is clear from much of the research in the public domain is that small and medium businesses (fewer than 250 employees) are making significant investments in ICT with the goal of improving productivity, lowering costs and simply keeping up with what is increasingly becoming a flat world†.

† *The World Is Flat: A Brief History of the Twenty-first Century by Thomas L. Friedman.*

Net Impact Research Series

For the last seven years, Cisco's Net Impact Research Series has measured the impact of various information and communication technologies on business processes, organizational behaviors and on the operating outcomes of both private and public sector enterprises in the US, Canada, Latin America and the Middle East. Much of the Net Impact research has focused on the productivity impact of information and communication technology (ICT) as it relates to basic financial performance.

Productivity — how efficiently business resources can be used to create economically valuable outputs — is a core concept in long-term business success, and a subject that remains top-of-mind for business leaders. In recent years, market conversations have continued to focus on the rate of productivity growth as companies are now operating in a generally healthier global business environment and at the same time paying closer attention to the overall growth equation for their businesses. Because of productivity's ability to help companies navigate rapidly shifting market conditions, and its general importance to the business community, Cisco Systems has sponsored this ongoing series of research studies.

In 2006, the Net Impact research series shifts its focus to small and medium enterprises (SME) — Net Impact SME, to gauge the level of investment in ICT within the largest segment of businesses in the world. While previous Net Impact studies were designed to measure specific productivity metrics and develop associated best practices for using ICT, the focus of Net Impact SME is to provide a simple snapshot of how SMEs are using ICT and to see if there are any key relationships between level of ICT investment and business performance.

The primary goals of the Net Impact SME study

Extend the Net Impact research model beyond the large enterprise to evaluate how ICT is helping SMEs succeed in their unique competitive, regulatory, and operating environment

Focus on how organizations use ICT to support effective business practices

Study the impact of ICT on business operations and processes

Determine if the same relationships between ICT and business productivity that exist within the large enterprise are being experienced by the SME

Net Impact Canada 2006

This report is the fifth in a series of Cisco sponsored Net Impact studies in Canada. Net Impact Canada 2006 focuses entirely on the small and medium enterprise and primarily on the small enterprise with fewer than 100 employees. Net Impact SME is based on a research model developed by Cisco Systems and Illuminas (formerly Momentum Research Group). Illuminas conducted the research in partnership with Cisco Canada and infoCanda, a premier provider of business and consumer data. infoCanada carried out the phone-based data collection, while the data analysis and interpretation was conducted by Illuminas, who also authored the report.

This report focuses primarily on the results from interviews conducted with 200 Canadian SMEs in June and July of 2006 (a brief description of the methodology used for this study is provided in Appendix 1). Throughout the report, comparisons are made to previous Net Impact Canada studies to provide some understanding of how the Canadian SME's approach to using ICT has changed over time. Further, the report also draws on additional Net Impact studies conducted in the U.S. to provide a comparison to large enterprises (those with more than 1,000 employees) and how they leverage ICT for business advantage.

Key Findings

- Canadian SMEs interviewed are taking a "big business" approach to their ICT investments and becoming more sophisticated, mirroring some of the ICT investments made by large enterprises, albeit at a level more realistic for the SME
- Three-quarters of the SMEs interviewed are using networking hardware and software and network security solutions to automate, enhance or improve business processes
- Approximately 50% of SMEs interviewed report that their ICT strategy is aligned with business strategy
- More than one-third of SMEs interviewed (38%) are early adopters, exploring various technologies and/or implementing them as soon as possible to gain competitive advantage
- One area for improvement is measurement – only 28% have metrics in place to monitor the performance of their ICT investments
- SMEs rank customer relationships as most critical to their success
- 79% report that ICT has had a positive impact on their customer service and support processes
- Half report that technology is enabling them to find new customer prospects
- 75% improved customer service, increased speed in information processing and improved communications with customers
- Technology is a key factor in enabling Canadian small businesses to achieve greater efficiency and growth
- Canadian small businesses are optimistic about anticipated future growth
- 59% report an increase in revenue over last year; 67% expect revenue to increase again in upcoming year
- 80% report increased speed in information processing and nearly 75% report increased availability of information to support decision-making processes
- Having a large number of direct competitors — most respondents report having more than 20 — drives increased adoption in ICT

Detailed Findings

The ICT Infrastructure of the SME

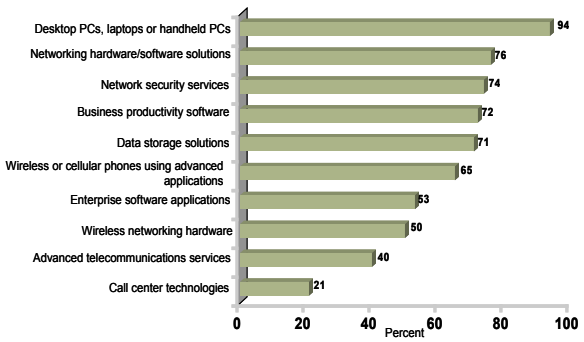
For almost all of the Net Impact studies, the starting point within organizations researched is an analysis of the ICT infrastructure. The goal of this analysis is not to provide an exhaustive audit. Rather, the studies seek to provide a view into the ICT infrastructure in a way that allows conclusions to be drawn about the relative sophistication of that infrastructure relative to previous years (time series analysis) and relative to organizations of different sizes. In addition, the question about ICT infrastructure goes beyond whether a technology is installed to ask whether the technology is being used to automate, enhance or improve existing business processes.

Each wave of Net Impact research has seen a change in the technologies tracked due to the rapid pace of adoption and the changing nature of technology needs as it relates to changes in the business environment. For example, year after year we continuously have looked at the percentage of organizations that are using desktop and notebook computers to automate, enhance or improve business processes. We no longer look at this data point within large enterprise organizations because it is quite clear that this technology has reached a saturation point. Security technology, on the other hand, has been the number one investment focus among organizations of all sizes for the last five years and has not quite reached a saturation point for certain types of security technologies.

One of the key findings of Net Impact SME Canada is that the ICT infrastructure of small and medium sized enterprises looks very similar to the ICT infrastructure of a large enterprise. No longer do we see small or medium sized businesses operating without the minimum technology of a desktop or notebook PC. In fact, we see a much higher percentage of small and medium enterprises making investments in

networking hardware and software, network security solutions, basic productivity software and even enterprise-class software solutions.

Among the Canadian organizations surveyed, PCs are nearly universal with 94% of organizations indicating that they have desktop PCs, notebook PCs or handheld PCs installed. Three-quarters of the Canadian SMEs interviewed have implemented networking hardware/software (76%) and network security solutions (74%).



Business productivity software is also widely adopted for automating business processes. With the market penetration rates for office productivity applications, we might expect this number to be higher. For some small businesses, however, productivity suites such as Microsoft Office® may not be needed as many of these businesses are likely running point-of-sale systems or other specialized software.

Data storage solutions are being used by almost three-quarters of those businesses surveyed, and while this may not be as sophisticated as storage area networks (SANs) or a data warehouse, it is clear that many of these small businesses are investing in solutions to store and manage data.

Some of the more advanced or sophisticated ICT categories, while not universally adopted, are showing up in half or more of the small and medium enterprises interviewed for this study. For example, one would expect most small businesses to rely on their cell phones, but the data indicates that 65% of small businesses are using advanced applications such as two-way paging, walkie-talkie, Short Message Service (SMS) and global positioning system (GPS) to impact business processes. These advanced applications are allowing the small business to increase employee mobility while maintaining or improving communications between the business and customers.

Half of the companies interviewed are using wireless network technology to automate enhance or improve business processes. While not surprising, this level of usage is on par with most large enterprises according to data from Net Impact United States Private Sector, Second Edition. Small and medium businesses have great flexibility and control over the implementation and use of wireless technology while large enterprises typically avoid the use of wireless because of security concerns.

How Sophisticated is the ICT Infrastructure of the Large Enterprise?

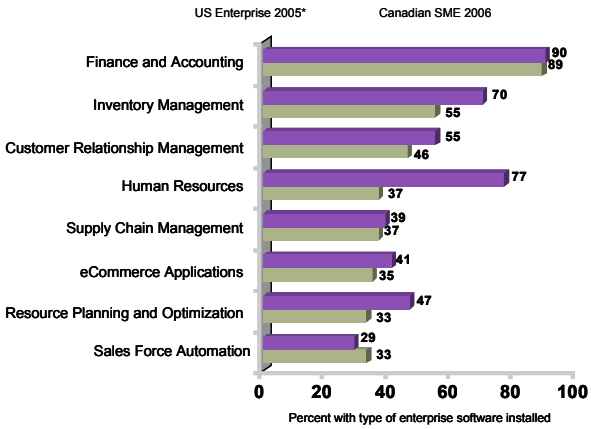
The Net Impact US Private Sector Study, Second Edition provides some perspective on the level of investment and sophistication of ICT infrastructure at enterprise organizations (those with 1,000 or more employees).

- 92% have all network entry points secured by a firewall
- 94% have implemented server-based virus detection and containment
- 71% have implemented a layered security system
- 53% have installed storage area networks (SAN) to store and manage data
- 47% have implemented a centralized data warehouse
- 47% have wireless LAN access in at least one location

How are SMEs Using Enterprise Software?

Slightly more than half of the companies interviewed are using enterprise software to automate, enhance or improve business processes. This is one of the key data points that suggests that the small business is behaving like the large enterprise with respect to investments in ICT. The study did not attempt to identify the brands of enterprise software installed but did provide greater detail on which business areas small businesses were automating using ICT, including enterprise software.

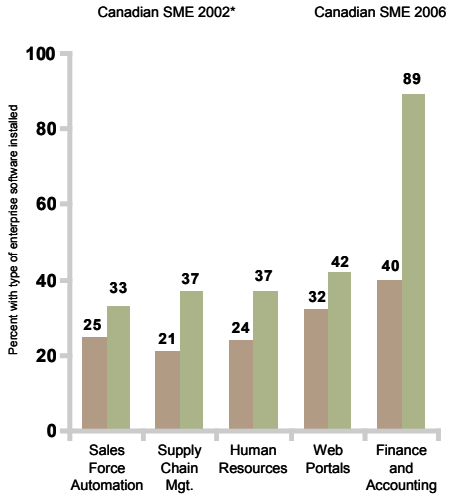
Interestingly, the types of enterprise software being used within small businesses map very closely to the enterprise software being used at large enterprises based on results from Net Impact US 2005. The applications in which we see the greatest difference between the large enterprise and the SME are human resources, resources planning and optimization, inventory management and Customer Relationship Management (CRM). This makes intuitive sense given the sheer difference in the number of employees, customers and overall scope of the large enterprise compared to the small and medium enterprise.



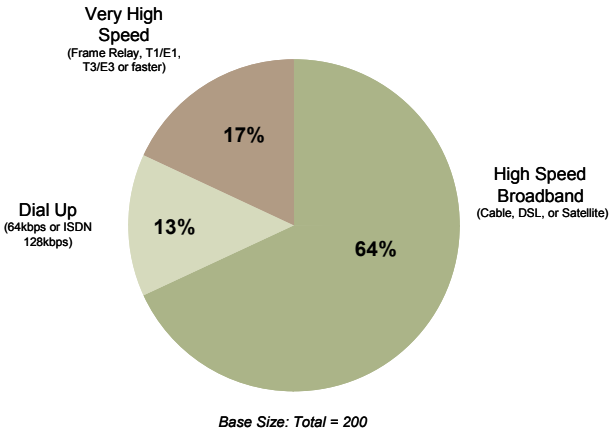
*Source: Net Impact Private Sector: Second Edition, 2005

Increased Investment in ICT since 2002

The Canadian small enterprise continues to invest in ICT infrastructure as evidenced by the increases in installed enterprise software applications over what was observed in Net Impact Canada 2002. Significantly more Canadian SMEs are using enterprise software to automate finance and accounting, HR, supply chains and sales. This study does not suggest that these applications are on the order or magnitude of SAP, Oracle or other true enterprise-class applications. However, many of the large enterprise software companies and other mid-sized software vendors have been building software solutions for the small and medium enterprise. Since 2002, many different software solutions have been developed that scale to the needs and budget of the SME. Programs like QuickBooks® and Microsoft Dynamics GP (formerly Great Plains) have allowed the SME to successfully use technology to manage accounting and finance. Many companies such as ADP or Ceridian have bundled together HR services for the small and medium sized enterprise allowing them to significantly streamline and automate payroll and benefits processes. More importantly, some of these outsourced HR services are even providing Web portals for employees to access benefits information, claims processing and other HR procedures.



*Source: Net Impact in Canada: The Experience of Small and Medium-Sized Enterprises, 2002



Canadian SMEs are Leveraging High Speed Internet Access

One of the clearest indicators of how important ICT has become for the small and medium enterprise is the adoption of broadband technology. It is almost expected that any business today must have Internet access to be able to send and receive email and leverage the Web as an information source. The wide use of the Internet for doing more than email has driven the adoption of broadband. Small businesses are setting up websites that provide customers with information, allow them to download files too large to send through email, and for some, conduct sales transactions with customers.

According to studies cited in Fast Forward 5.0: Making Connectivity Work for Canada, only 56% of small enterprises had broadband access in 2003†. In 2006, broadband access is much more widely available to the small and medium business either through cable or DSL services. Almost 82% of the SMEs interviewed for this study have broadband Internet access and 17% of those SMEs have very high-speed access (frame relay, T1/E1 or faster).

How does this level of bandwidth compare to large enterprises? As larger enterprises typically have multiple sites connected via a wide area network, the Net Impact United States Private Sector study measured the average bandwidth between all locations. More than three-quarters of large enterprises (78%) had an average bandwidth of greater than 128 Kbps between headquarter locations and remote sites with fewer than 50 employees. Viewed another way, 78% of the enterprise organizations studied had broadband Internet access and more than half of those organizations (57%) had a minimum broadband speed of T1/E1 or better between all locations.

The penetration of key technologies within Canadian SMEs indicates that they have either embraced the benefits that ICT can provide to business operations or they are simply reacting to what the global market requires for businesses to integrate or compete within specific industries. What then is driving the Canadian SME to continue their investment in ICT?

Definitions of ICT Categories

In order to include the breadth of information Net Impact Canada 2006 encompasses, the study was designed to forego extreme depth in each ICT category. Instead, respondents were asked about the categories below, and given examples to assure accurate selection.

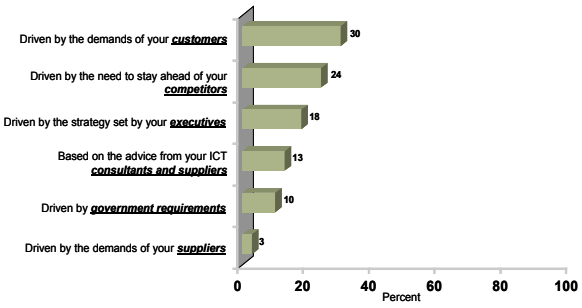
- Desktop PCs, laptops, or handheld PCs (including PDAs)
- Business productivity software (such as word processing, presentations, accounting, email, contact management, etc.)
- Enterprise Software Applications (eCommerce, Customer Relationship Management, Sales Force Automation, Inventory Management, Enterprise Resource Planning)
- Networking hardware/ software solutions (such as servers, routers, hubs, gateways, etc.)
- Data storage solutions (such as file servers, tape drives, storage area networks, or offsite web-based storage)
- Advanced telecommunications services (such as PBX, IP phones, voice over IP, Centrex, IP PBX)
- Wireless or cellular phones using advanced applications (such as two-way paging, walkie-talkie, SMS, GPS, etc.)
- Call center technologies (such as call routing, automated voice response, unified message center, etc.)
- Network security services (virus detection, network intrusion detection, firewalls, VPN, user authentication, etc.)
- Wireless networking hardware (such as wireless LANs, access points or routers)

† *Fast Forward 5.0: Making Connectivity Work for Canada, September 2004 and Statistics Canada, Survey of Electronic Commerce and Technology, 2003.*

What is Driving ICT Investment?

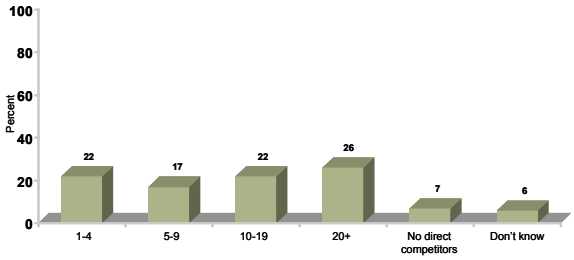
After the dotcom downturn in 2000 and the US recession in 2001/2002, companies switched their business strategy from growth to preservation. Early Net Impact studies of US large enterprises (2002 to 2004) showed that the primary drivers for adoption of ICT were to reduce costs and to stay competitive. Net Impact Canada III and the Net Impact Canada 2004 survey showed that the small and medium enterprise was investing in ICT in order to gain a competitive advantage, increase revenues and reduce costs in that order. A much smaller percentage of SMEs interviewed in 2004 indicated that they were investing in ICT to meet customer demands.

In Net Impact Canada 2006 we took a different approach to looking at the drivers of ICT investment. Rather than look at how a company ranks the importance of several drivers of ICT investment, we asked the respondent organizations to tell us what was the primary driver of their investment in ICT. Meeting the demands of the customer was the primary driver of investment for almost a third of the organizations responding.



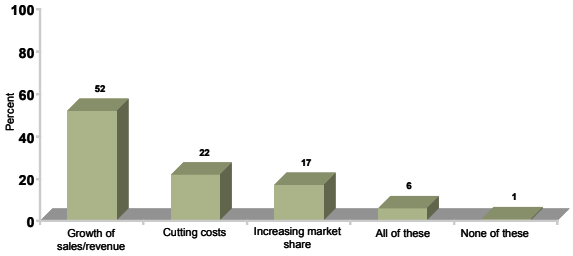
Beyond customer demands, competition is an important but healthy driver of ICT investment as well, with almost a quarter of SMEs indicating that this is the primary driver of their ICT investment. How many competitors does the Canadian SME have (excluding government and social service organizations)? It obviously depends upon the sector the SME operates in, yet just under half (48%) of the SMEs interviewed indicate that they have 10 or more direct competitors and a quarter of those have 20 or more direct competitors. The nature of the market landscape clearly puts customer relationships at the top of the business focus while keeping the competition within the line of site.

What about reducing costs as a driver of investment? Businesses can focus on growth of sales revenue, increasing market share, cutting costs or all of these. Surprisingly, very few SMEs (6%) indicated that as a business they focused on all of three of these strategies. The majority (52%) of the Canadian SMEs interviewed indicated that driving growth of sales revenue was the primary focus of their business. Less than a



quarter (22%) of the SMEs interviewed indicated that cutting costs was their primary business focus and even fewer SMEs (17%) indicated that they were focused on increasing market share.

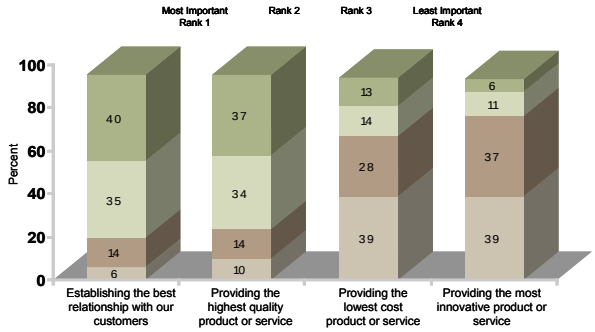
A question posed to SMEs in Net Impact Canada 2004 and modified slightly for Net Impact Canada 2006 focused on how the SME



differentiates itself from competitors. In an extension of Michael Porter's three fundamentals of competitive strategy†, our question asked Canadian SMEs to rank in order of importance four different approaches to differentiate their business: 1) providing the lowest cost product or service, 2) providing the most innovative product or service, 3) providing the highest quality product or service, and 4) establishing the best relationship with customers.

† *Competitive Strategy: Techniques for Analyzing Industries and Competitors, Michael E. Porter, 1980*

More than half of SMEs responding to Net Impact Canada 2004 agreed that providing better customer service and operating more efficiently were competitive advantages gained by investing in ICT. Just under half (49%) of SMEs in 2004 agreed that operating more quickly was a competitive advantage gained by investing in ICT. Only one third of respondents in 2004 agreed that producing better quality products or services was a competitive advantage gained by investing in ICT and about one in seven SMEs believed that producing lower cost products or services was a competitive advantage gained from ICT investments.



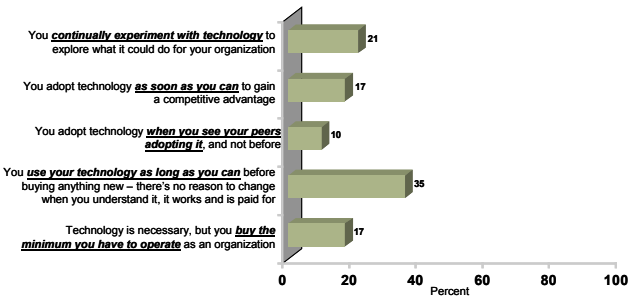
Results from the Net Impact 2006 study show that establishing the best customer relationships remains the most important competitive advantage, ranked number one or two slightly more often than providing the highest quality product or service. Since Net Impact Canada 2004, providing the highest quality product or service has become more important as a competitive advantage to the SME. Providing the lowest cost product or service or the most innovative product or service are ranked significantly lower as business approaches for creating competitive advantage or differentiation.

The SME focus on customer and quality as a business differentiator ties neatly with the top drivers of ICT investment. In a market with increasing global competition where survival means growing revenues and retaining customers, the focus on customer and quality should be the most important differentiator.

The Canadian SME has a clear understanding of how to differentiate their business (customer and quality), what the ultimate business objective is (growth) and why they should continue to invest in ICT (customer demands/needs). But how are Canadian SMEs going about their investments? Are they willing to purchase and implement new technologies just because they are the latest and greatest? Are they willing to take risks by investing in technology that may not provide the ROI they are looking for?

Attitudes and Barriers to ICT Investment

While Canadian SMEs are clearly investing in ICT and many are making investments in more sophisticated technologies such as enterprise software and advanced communication technologies, the typical SME is faced with a variety of internal and external business pressures and different operating strategies. And although well more than half of the SMEs who responded to the survey have a basic ICT infrastructure, why haven't more SMEs made investments in more sophisticated or advanced ICT infrastructure? There are two types of barriers that generally keep businesses from making further investments in ICT attitudinal barriers and organizational barriers. Net Impact Canada 2006 looked at both types of barriers.

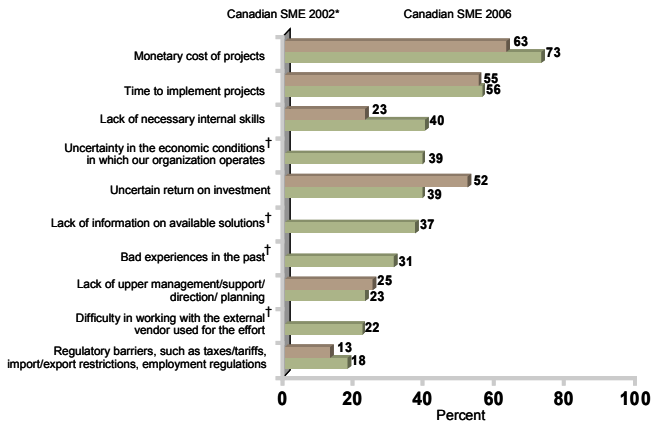


One of the distinct advantages of the typical SME is the absence of strict organizational guidelines for how or when to purchase ICT. Therefore it is not surprising to see that more than a third (38%) of the Canadian SMEs interviewed are willing to experiment with new technologies and adopt new ICT as soon as they can too gain competitive advantage.

Of course the lack of ICT purchase guidelines also presents a challenge to the budget and resource constrained SME. Without the budget and resources of the large enterprise, it can be risky to make investments in ICT. Avoidance of risk is evidenced by the fact that a majority of the Canadian SMEs interviewed for this study (52%) are cautious about their investments, waiting as long as they can before adopting new ICT or until they see peers adopt new ICT. A small percentage (17%) of Canadian SMEs actually view technology as a necessary evil indicating they only buy the minimum technology necessary to run their business.

Having a more open-minded perspective with regards to ICT may help to increase the willingness to experiment with new technologies and lower the perceived risk to being an early adopter. However, simply improving attitudes toward ICT investment isn't enough when the SME is faced with so many organizational barriers that restrict or reduce the ability to invest in ICT. What organizational barriers are the most predominant?

As one might expect, the monetary cost of investing in ICT is the primary barrier to the Canadian SME and this has remained consistent since the first Net Impact Canada study in 2002. Almost two-thirds of the SMEs that responded in 2002 indicated that budget was the most significant barrier to leveraging ICT for competitive advantage and business success. In 2006, this barrier has actually gone higher, with almost three-quarters (73%) of the SMEs indicating that the monetary cost of ICT was the biggest barrier.



*Source: Net Impact in Canada: The Experience of Small and Medium-Sized Enterprises, 2002

† Not asked in 2002.

While the top two barriers to ICT investment have remained the same, several notable changes in perceived barriers have occurred. The Canadian SMEs interviewed in 2006 are much more likely to indicate they lack the necessary technology skills to purchase and implement ICT at their businesses. The key question here for the ICT industry and service providers is if this notable change in perceptions is due to a lack of technical knowledge given the diffusion of ICT into the SME or if ICT has gotten more complex to implement and manage.

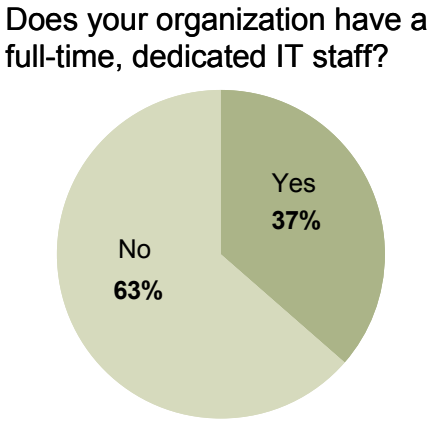
A more positive change in perceptions is the shift in perceptions relative to return on investment from ICT. Clearly in 2002 many more SMEs were skeptical about whether all of the investment in ICT would pay off. While this barrier still exists, it is not as prevalent as it was in 2002.

Net Impact Canada 2006 has shown that the motivation and driver for ICT investment is there and that the Canadian SME has made significant investments in growing their ICT infrastructure. The study also shows that attitudinal and organizational barriers are preventing many SMEs from adopting additional ICT infrastructure. Monetary costs, time constraints and lack of internal resources are the three primary organizational obstacles to adopting additional ICT infrastructure. How then is the Canadian SME managing current infrastructure? What mix of internal and external resources are being used and for what areas?

Internal Capabilities and Processes for Managing ICT

It is logical to assume that the small and medium enterprise is focused on hiring employees for the core of their business and not the context (such as HR or ICT management). Put another way, the SME is more likely to hire an employee who can help generate revenue than hire an employee to handle ICT, which is typically viewed as a cost center.

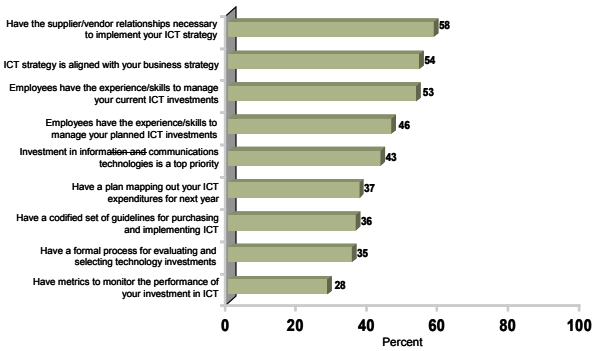
How then does the SME handle the process of determining which ICT to purchase, implementing the ICT once purchased and then managing the ICT infrastructure over time? The answer to that question varies based on the type and complexity of the ICT being purchased or installed and the size and sophistication of the SME. The majority of the Canadian SMEs interviewed for this study do not have a dedicated IT staff. Almost two-thirds of the SME's interviewed do not have a full-time dedicated IT staff person. In many cases, managing ICT is a shared responsibility for most of the basic ICT infrastructure.



Net Impact Canada 2006 took this line of questioning further to assess the SME's internal capabilities for managing ICT and the processes, if any, they had for purchasing and implementing ICT infrastructure. The results indicate that in general, a majority (58%) of the Canadian SMEs interviewed believes they have the necessary ICT supplier and vendor relationships and the internal experience and skills necessary to manage current ICT investments. Just under half (46%) of the SMEs interviewed believe they have the internal experience and skills needed to manage planned ICT investments. These results still indicate, however, that almost half of the SMEs interviewed do not believe they have the experience or skills nor the supplier or vendor relationships to manage their ICT investments.

Beyond supplier/vendor relationships and skilled ICT employees, the SME must also make sure that their investment in ICT is aligned with business strategy — a key best practice that was identified by previous

Net Impact studies. More than half of the SMEs interviewed for this study believe their ICT strategy is aligned with their business strategy. Yet less than half (43%) believe that ICT investment is a top priority for their business, a fact first identified in Net Impact Canada 2004, where the top reason for not adopting ICT was the lack of perceived business need. These two data points, when combined with the cautious ICT investment approach of the SME, suggest that the SME sees the need for a basic ICT infrastructure but does not see the need for anything beyond what is need to successfully operate the business.



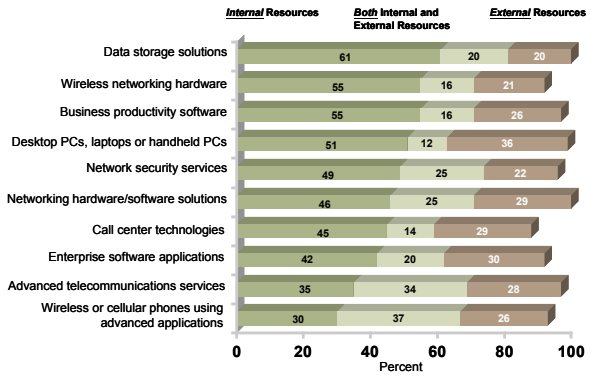
^Those who responded "Agree" or "Strongly Agree" on a five-point scale

While half of the SMEs interviewed have aligned their business and ICT strategies, less than a third on average have a consistent set of processes for purchasing ICT or partnering with external suppliers or vendors. Another key best practice identified by the Net Impact studies was conducting process engineering in conjunction with ICT implementation. Enterprise organizations that conducted process engineering before implementing ICT in specific functional areas saw more positive business outcomes for those functional areas. Without a solid ICT plan or process for purchasing and managing ICT, the SME will be challenged to maximize their return on investment.

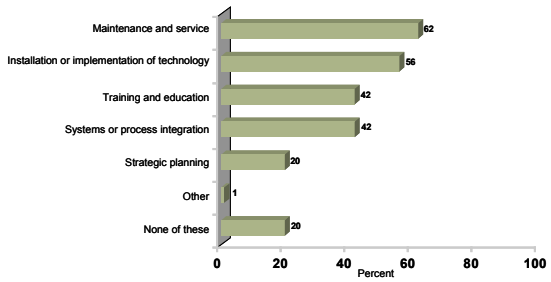
One final best practice identified by the Net Impact studies was the use of metrics for monitoring the performance and impact of ICT on the business. Slightly more than a quarter (28%) of the SMEs interviewed have metrics for monitoring their ICT investments.

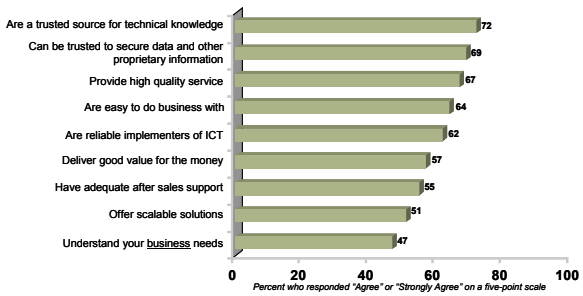
Resourcing Trends: Internal vs. External

One of the key objectives of this study was to understand which pieces of the ICT infrastructure the SME managed using internal resources and which was managed using external resources. The results from the study indicate that on average, more than half of the SMEs are using internal resources to implement and maintain their basic ICT infrastructure, such as PCs, business productivity software, wireless networking hardware and data storage solutions. As the ICT gets more complicated, the trend is for the SME to manage those technologies with both internal and external resources. The complexity of networking hardware and software, network security, call center technologies, enterprise software and advanced communications technologies appear to push more SMEs to leverage external resources to manage these technologies.



What role does the external supplier/vendor play in the implementation and management of ICT for the SME? The two most common activities outsourced include maintenance and installation of technology. Training and education as well as systems or process integration are the other top areas outsourced. Interestingly, relatively few SMEs interviewed for the study indicated that they outsource strategic planning for ICT. A general lack of ICT planning, either using



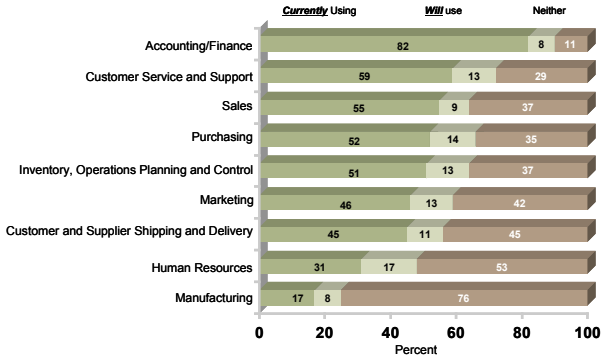


internal or external resources, appears to be a major opportunity for improving the return on ICT investment experienced by the SME.

Why aren't SMEs turning to external resources for their strategic planning? Perceptions of external vendors are very positive overall, with more than two-thirds of SMEs indicating they are satisfied with the external vendors used for each of these areas. However, while satisfaction is positive in general, SMEs included in the study tend to be most satisfied with external resources' capabilities for maintenance and installation of ICT. Other positive perceptions of external vendors include viewing them as a trusted source for technical knowledge (72%), trusting them to secure data and proprietary information (69%) and providing a high quality of service (67%). Areas where perceptions of external vendors are not as unanimously positive include: understanding business needs (47%), availability of scalable solutions (51%) and after-sales support (55%).

The Impact of ICT on Business Processes

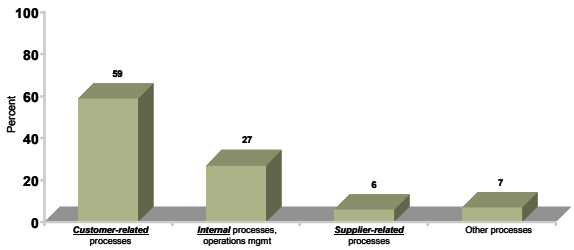
One of the primary focuses of the Net Impact research series is to understand how businesses of all sizes are using ICT to automate,



enhance or improve business functional areas. It is one thing to install technology infrastructure and expect operations to improve and quite another thing to have a strategy and plan for how ICT is going to be used to improve operations. As the data from this study show, just over half of the SMEs interviewed believe their ICT strategy is aligned with their business strategy. One way to understand how the ICT strategy is integrating with the business strategy is to identify which business functions are being automated by ICT.

Accounting and finance is the functional area automated with ICT by more SMEs than any other area. Whether it is QuickBooks, Microsoft Dynamics (GP) or Oracle Financials for SMEs, 90% of the SMEs interviewed are currently using or planning to use ICT to automate their accounting and finance function. Customer service, sales, purchasing, and inventory/operations planning and control are the other functional areas that are being automated using ICT by more than half of the SMEs interviewed. Human resources and manufacturing are the two business functions that seem to get the least support from ICT.

Another way to identify how businesses are using ICT to impact their business and whether they are seeing an impact is by understanding which of three operational areas the business considers to be most critical to their long-term success. Net Impact Canada 2006 asked responding SMEs which was most critical, customer-related processes, internal processes, or supplier-related processes. Based on their



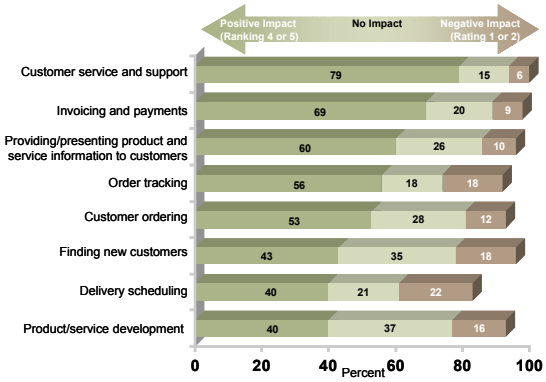
response, a follow-up question was asked to determine what impact their investment in ICT has had on the related processes.

Given what we have already seen in the data, it is not surprising that the operational area most critical to the majority of SMEs (59%) is focused on customer-related processes. Just over one-quarter (27%) of SMEs interviewed indicated that internal processes were the most critical to their success, and only a handful (6%) of responding companies indicated that supplier-related processes were most critical to their success.

On average, just under two-thirds (65%) of the responding businesses are satisfied with their ICT infrastructure's ability to support either customer-related processes or internal processes. Of those SMEs that indicated that supplier-related processes are most critical, only 55% are satisfied with their ICT infrastructure's ability to support those processes. When asked which area has benefited the most from their

investments in ICT an equal number of SMEs chose internal processes and customer-related processes.

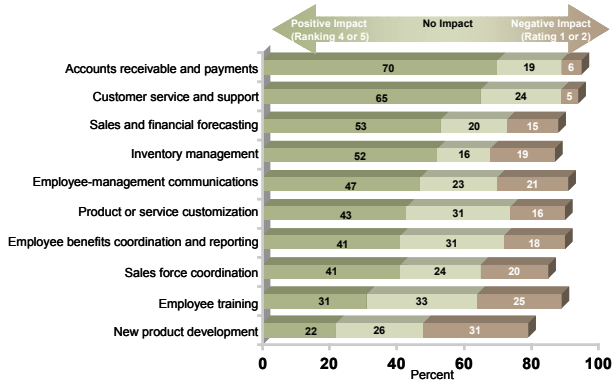
Internal processes are important, but the customer is still king for the SME and the data from Net Impact Canada 2006 supports this fact in many ways. For the majority of SMEs that indicated that customer-related processes are most critical, the key question is which processes were impacted by their ICT investments and how positive or negative was the impact.



Most of the processes tracked for this study are positively impacted by ICT investments according to SMEs interviewed. The catchall category of 'customer service and support' was the set of processes most impacted in a positive way by ICT investments. More than half of the SMEs interviewed also believe that other customer support processes such as invoicing and payments, providing product and service information, order tracking and customer ordering were all positively affected by their investments in ICT.

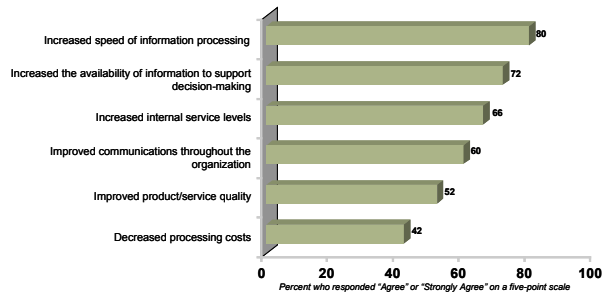
A number of positive impacts were recognized within the customer-related processes as a result of investments in ICT. Approximately three-quarters of those SMEs that believe ICT investments positively impacted customer-related processes indicated that improved customer service, increased speed of information processing, improved customer communications, improved quality and an increased availability of information were all ways in which customer-related processes were impacted.

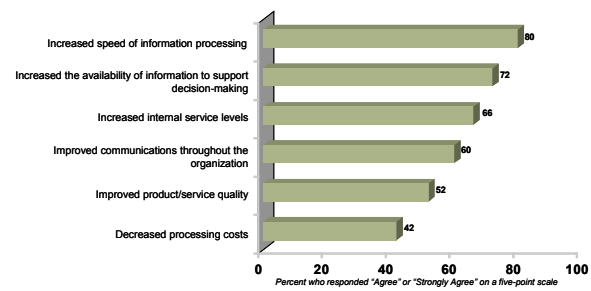
The key internal processes impacted by ICT investment are directly tied to customer relationships. It is no surprise then that as SMEs consider their overall business strategy (customer relationships and product/service quality) they view the most positive impacts of ICT on internal processes that will improve and deepen customer relationships. More than half of the SMEs interviewed believe their ICT investments have



positively affected the following internal processes: accounts receivable and payments, customer service and support, sales forecasting and inventory management. Fewer SMEs see a positive impact of ICT investments on employee-oriented processes such as communications, benefits coordination or employee training. The most striking perceived failure of ICT in terms of its ability to positively impact internal processes is for new product development. Either SMEs don't see the relationship between ICT and new product development or they truly believe that it has either had no impact or a more negative impact on new product development.

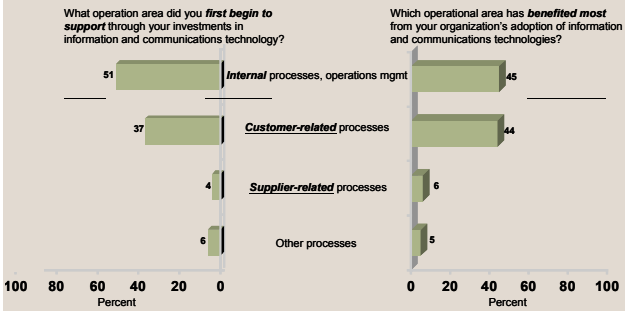
The internal process improvements related to ICT investments are similar to those experienced for customer-related processes. Increased speed of information processing was the most common improvement as was increased availability of information for decision-making. Fewer SMEs see decreased processing costs as a result of investments in ICT.





WAVES OF ICT INVESTMENT: WHICH COMES FIRST–INTERNAL PROCESSES OR CUSTOMER FACING PROCESSES?

Throughout the Net Impact studies, we have sought to understand the sequence of investing in ICT within organizations. Do businesses start with customer-facing ICT investments or do they focus primarily on the back office ICT investments? Early Net Impact research among US enterprises indicated that not only were large businesses focused on reducing the cost of operations, but also their earliest focus for ICT investment was on internal operations. Cost reduction is more about internal processes and less about customer relationships. In fact, to truly get the maximum return from customer-facing technology solutions they must ideally be integrated with internal technology solutions. Linking finance and accounting to customer service and support is an example of this integration.



Large enterprises invested in waves, with most investing first in back office technology and then shifting to the customer-facing solutions. Net Impact Canada 2006 validated this investment chronology; half of the SMEs interviewed first invested in ICT to support internal processes while just over a third of the SMEs indicated that they first supported customer-related processes with their ICT investments.

Business Performance of SMEs Interviewed

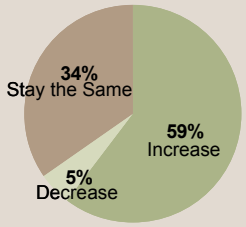
Earlier Net Impact studies looked at the relationship between ICT investment and specific business outcomes such as reduction in cost of goods sold, decreases in operating expenses or increases in revenue. Other Net Impact studies looked at the relationship between best practices in ICT investment and integration and specific business functions such as customer service and support. Over the course of these studies of enterprise organizations (those with 1,000 or more employees), the research identified consistent relationships between these technology investment best practices and business outcomes.

Net Impact 2006 did not specifically ask responding SMEs to provide estimates of the business impact of ICT on basic financial measures. Rather than expect an SME to be able to estimate the financial impact of ICT (so few have metrics), we looked to the data to provide an answer as to the relationship between ICT investment and financial performance.

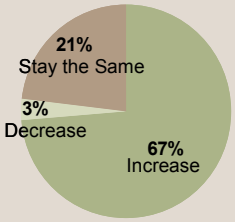
The Canadian SMEs interviewed for this study are growing and expect to continue growing over the next year. Revenue increases are relatively common among this group, with 59% of respondents reporting a revenue increase over the last year and 67% expecting revenue to increase in the upcoming year. While over half of the SMEs surveyed are experiencing increases in operating costs, the percentage of growth actually declines between last year and the upcoming year (61% vs. 54%, respectively). While revenue and operating costs are changing, the number of employees is relatively stable, suggesting that these SMEs are looking to increase overall productivity of their businesses. More than half (56%) of organizations surveyed report no change in the number of employees over the last year and 58% are expecting to have the same number over the next year.

With this positive outlook on business growth one might expect that there is a positive relationship between ICT investment and financial performance. With only 200 companies participating and the varied nature of the businesses interviewed, no solid model was found. Some SMEs are growing simply because the Canadian economy is growing, not as a direct result of ICT investment. Further SME research is planned to look more closely at the relationship between ICT investment and business performance. Research from both the ICT industry and academia has already shown the relationship between ICT investment and positive business performance. As more and more SMEs continue to invest in ICT as a result of customer and competitive pressures, there is a greater opportunity to research and identify the ongoing impact of ICT on financial performance. And if SMEs begin developing and tracking metrics that show the impact of ICT on their business the research will be much more straightforward.

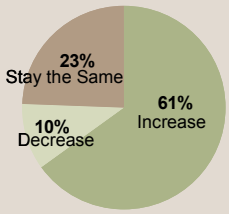
2006 revenue compared with 2005



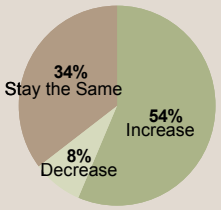
2007 revenue forecast compared with 2006



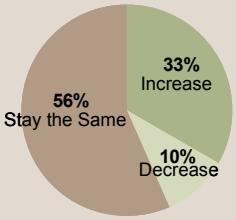
2005 operating expenses compared with 2004



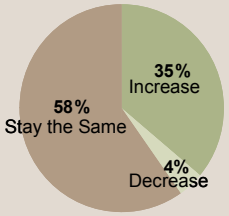
Current 2006 operating expenses compared with 2005



2006 employees compared with 2005

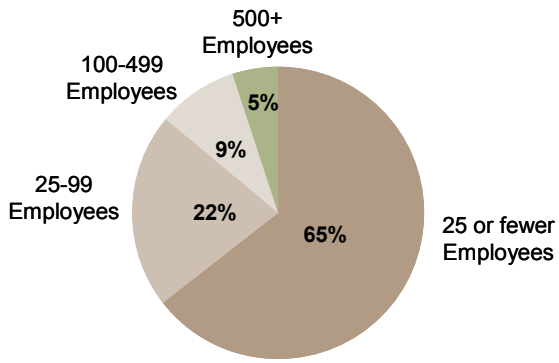


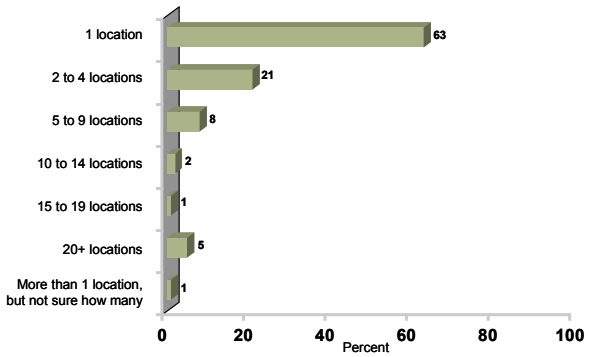
2007 employee forecast compared with 2006



Respondent Organization Demographics

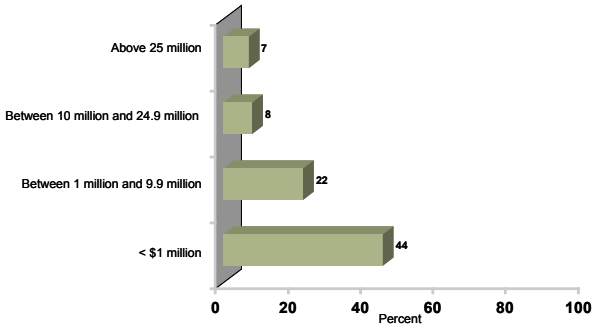
The Canadian SMEs interviewed for this study reflect the behaviors and perceptions of the small or micro business. The majority of the businesses interviewed have fewer than 25 employees across all locations and most operate from a single location. These businesses have been operating for a number of years, with the average business life of $15^{1/2}$ years.

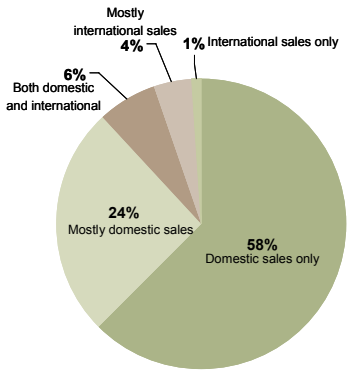




The businesses reflect a variety of different sectors with the highest concentration in the wholesale and retail trade industry (16%). A third of the SMEs interviewed have annual revenues greater than $1 million dollars (CAN) while the larger percentage (44%) have annual revenues of less than $1 million dollars (CAN).

Industries Represented in Net Impact Canada 2006	Total
Other for-profit	19%
Wholesale or retail trade	16%
Professional, scientific and technical services	9%
Other non-profit	8%
Manufacturing	8%
Construction	8%
Healthcare	5%
Repair and maintenance	5%
Finance, insurance, real estate	5%
Government and public administration	5%

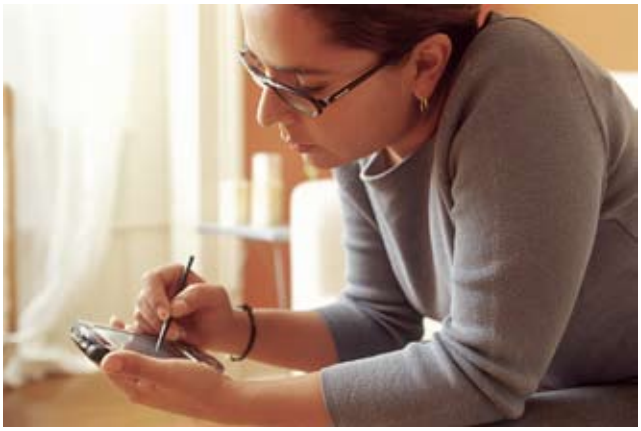




Sources of revenue appears to be evenly split between business and consumer, with more than two-thirds (68%) of SMEs saying they get revenue from consumers and two-thirds (68%) saying they get revenue from businesses or government. A much smaller percentage of the SMEs interviewed (17%) generates revenues from reseller or channel partners.

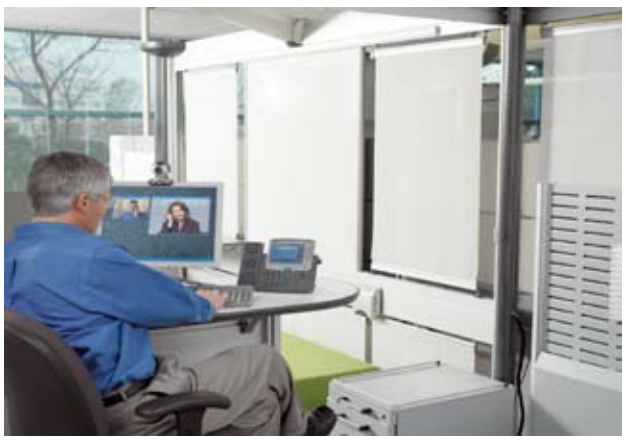
The majority of the revenues for these SMEs is coming from domestic sales, with more than three-quarters indicating that their sales is either domestic only or mostly domestic. Only a small percentage (11%) of the SMEs interviewed for Net Impact Canada 2006 indicate that they get any revenue at all from international sales. ■

Appendix – Study Methodology



A total of 200, 35-minute interviews (19 Web-based and 181 phone-based interviews) were conducted with Canadian small and medium enterprises in late June and early July of 2006. The study targeted senior decision-makers responsible for technology purchase, implementation, and evaluation for their businesses.

Only organizations that are actually using information and communications technologies (ICT) to automate, enhance or improve business processes qualified for the study. The intent of the study was not to provide an estimate of the number of SMEs using ICT versus those not using. Rather, the goal was to understand how those SMEs that have made investments in ICT are using those assets to create competitive advantage.



To complete the phone-based interviews, sample was acquired from infoCANADA, North America's premiere provider of Business and Consumer data. For over 15 years infoCANADA has provided companies with the necessary tools to generate sales leads and turn prospects into paying customers. InfoCANADA maintains the highest accuracy rate in the industry - 99%. InfoCANADA's database is compiled from over 200,000 sources and further verified by 2 million telephone verification calls annually. This database is compiled from telephone directories, annual reports, press releases, city and industry directories, news items/periodicals and new business listings. The sample and quotas set were proportionate to the Canadian business population by province. No additional filtering/targeting was applied during sampling to reach certain groups.

In order to be more consistent with the global lexicon for technology, especially as it relates to the EU and the OECD, this study used information and communications technologies (ICT) to refer to the broader technology category. ■

Net Impact Canada 2006 is based on the Net Impact SME research study design, a joint effort between researchers from Illuminas (formerly Momentum Research Group), the Schulich School of Business, the Wharton School of Business and Cisco Systems. Illuminas was responsible for data collection, analysis and production of the final report.

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