



**Study**

October 2018

# Digitize Now

*How to Make the Digital Shift  
in Your Business*

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# Introduction

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**Small and mid-sized businesses with a higher level of digital maturity enjoy higher sales and profit growth, export more, and innovate more than their peers.**

## Digital maturity matters

The pace of technological change is accelerating. We now live in an increasingly connected, automated and data-driven world where businesses need to embrace new technologies or risk falling behind.<sup>1</sup> These changes are having an important impact on every sector of the economy. Some industries are being redefined; others are being created. Technological change is one of the most significant economic events of the 21<sup>st</sup> century.

To understand how Canadian businesses are adapting to these changes and how they compare with their American competitors, BDC surveyed 2,000 Canadian and 600 American decision-makers and owners of small and mid-sized businesses. We analyzed the results to measure the companies' level of digital maturity, a combination of a company's use of digital technologies in its operations (digital intensity) and its ability to implement change (digital culture).

We found that companies with a higher level of digital maturity (i.e., those that scored high in both digital intensity and digital culture) enjoy higher sales and profit growth than their peers, across all regions and industries. They are also more likely to export and innovate.

## Embrace technology or risk falling behind

These results show that Canadian small and mid-sized businesses need to embrace digital technologies to keep up with the competition. More fundamentally, they also need to establish a digital culture that favours continuous improvement. The inability to manage change is one of the main obstacles facing entrepreneurs as they adopt new technologies. Business owners who are unable to manage the transition and help their business evolve face the biggest risks as digital technologies transform their industries.

In fact, businesses that do not adapt could soon become obsolete. Our survey indicates that a majority of businesses with low digital maturity have performed poorly over the last three years. In addition, a majority of these businesses expect revenue growth to be 0% or lower over the next three years.

## Compare your business

Entrepreneurs who are ready to invest time and money in digitization will be in an advantageous position moving forward. However, to effectively transform your business, it helps to know where you stand.

That's why we've created a free, online [Digital maturity assessment tool](#). You can use this tool to compare your business's digital maturity to that of other Canadian firms in your industry and discover your potential for improvement. Once you're done, you will obtain a detailed, printable report to help you kick off change.

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<sup>1</sup> Sylvie Ratté and Pierre-Olivier Bédard-Maltais, *Future-Proof Your Business* (Montreal: BDC, October 2017).

# Highlights

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**Businesses with an advanced digital maturity profile were 62% more likely than their peers to have enjoyed high sales growth over the last three years.**

This study analyzes the results of a BDC survey of 2,000 Canadian and 600 U.S. entrepreneurs concerning their business's digital maturity.

We evaluated the digital profile of both Canadian and U.S. businesses, and assessed how digital technology adoption and their ability to implement change affected their performance.







Here are the highlights of our research.

- Digital maturity matters. Businesses with higher digital maturity are more likely than their peers to have enjoyed higher sales growth (62%) and profit growth (52%) over the last three years. They are also more likely to have exported (70%) and innovated (329%).
- One in five (19%) Canadian businesses have an advanced digital profile, while more than half (57%) have a conservative profile. These proportions are the same as those we found for U.S. businesses, leading us to conclude there is no digital gap between the United States and Canada among small and mid-sized businesses.
- Businesses with low digital maturity have performed poorly over the last three years. A quarter of these businesses have seen sales plummet in the last few years, compared to less than a fifth of companies in other groups.
- Size matters. Larger businesses tend to be more digitally mature and invest more in their digital capabilities than smaller businesses do.
- We estimate that businesses with fewer than 20 employees have invested \$12,000, on average, in digital technologies in the last 12 months, compared to \$54,000 for businesses with 20 to 99 employees and \$259,000 for businesses with 100 employees or more.
- Quebec stands out with a significantly higher proportion of digitally advanced companies (26%) than other Canadian regions. The proportion of advanced companies in other regions ranges from 15% to 19%.
- Entrepreneurs who want to make the digital shift in their business can start by evaluating their digital maturity using BDC's free [Digital maturity assessment](#) tool.
- Businesses that want to improve their digital maturity should do the following:
  - define and share their vision
  - invest in technology
  - establish a culture of change
  - unleash the power of data
  - work for continuous improvement

# 1 Digital technologies: What are we talking about?

“Digital technologies” refers to any information or communications technology (ICT) used to support or accomplish a business activity.

**Table 1 – Main digital tools used by Canadian entrepreneurs**

Customer-facing activities		
		
<p><b>Communications tools</b></p> <ul style="list-style-type: none"> <li>• Email</li> <li>• <a href="#">Social media</a></li> <li>• Mobile apps</li> <li>• Instant messaging</li> <li>• <a href="#">Websites</a> (including blogs, live chat and forums)</li> <li>• Extranets or electronic data interchange (EDI)</li> </ul>	<p><b>Digital marketing tools</b></p> <ul style="list-style-type: none"> <li>• Ad banners on websites</li> <li>• Search engine optimization</li> <li>• Online video</li> <li>• <a href="#">Email marketing</a></li> <li>• Marketing automation software</li> <li>• <a href="#">Online survey tools</a></li> </ul>	<p><b>E-commerce tools</b></p> <ul style="list-style-type: none"> <li>• <a href="#">E-commerce website builders</a></li> <li>• <a href="#">E-commerce research tools</a></li> <li>• Inventory tracking and shipping tools</li> <li>• Email automation</li> </ul>
Back-office activities		
		
<p><b>Business management and productivity tools</b></p> <ul style="list-style-type: none"> <li>• Office software (e.g., Microsoft Office, Apple iWork)</li> <li>• <a href="#">Project management software</a></li> <li>• <a href="#">Online collaboration tools</a></li> <li>• Management software, such as <a href="#">enterprise resource planning (ERP)</a>, <a href="#">customer relationship management (CRM)</a> and <a href="#">supply chain management (SCM)</a> systems</li> <li>• <a href="#">Accounting and invoicing software</a></li> <li>• <a href="#">Budgeting software</a></li> <li>• <a href="#">Workforce management software</a></li> </ul>	<p><b>Analytical, data storage and data management tools</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Web, social and video content analytics</a></li> <li>• Predictive analytics, data mining and machine learning</li> <li>• Cloud computing</li> <li>• <a href="#">Online data backup services</a></li> </ul>	<p><b>Digital production tools</b></p> <ul style="list-style-type: none"> <li>• Computer-aided design (CAD), manufacturing (CAM), engineering (CAE) and so on</li> <li>• <a href="#">Daily management systems</a></li> <li>• <a href="#">Electronic work instructions</a></li> <li>• <a href="#">Field service management software</a></li> <li>• <a href="#">Digital dashboards</a></li> <li>• Industrial Internet of Things (wireless sensors and analytics)</li> <li>• Automation technologies</li> <li>• 3D printing</li> </ul>

Source: BDC research and CEFRIO.



# What is digital maturity?

**The combination of digital intensity and digital culture helps us determine a company's digital maturity.**

We define a company's digital maturity as a combination of two separate but related dimensions: digital intensity and digital culture.

## Digital intensity

Digital intensity measures the use of digital technologies in a company's operations. Key factors include the following:

- the use of digital tools to interact with customers, partners or suppliers
- the collection and use of data to make decisions
- the digitization and integration of business processes

## Digital culture

Digital culture measures the ability to implement change in a company. Key factors include the following:

- a strong digital strategy and vision
- support from leaders
- appropriate planning
- an environment that rewards risk taking and collaboration
- a focus on training and continuous learning

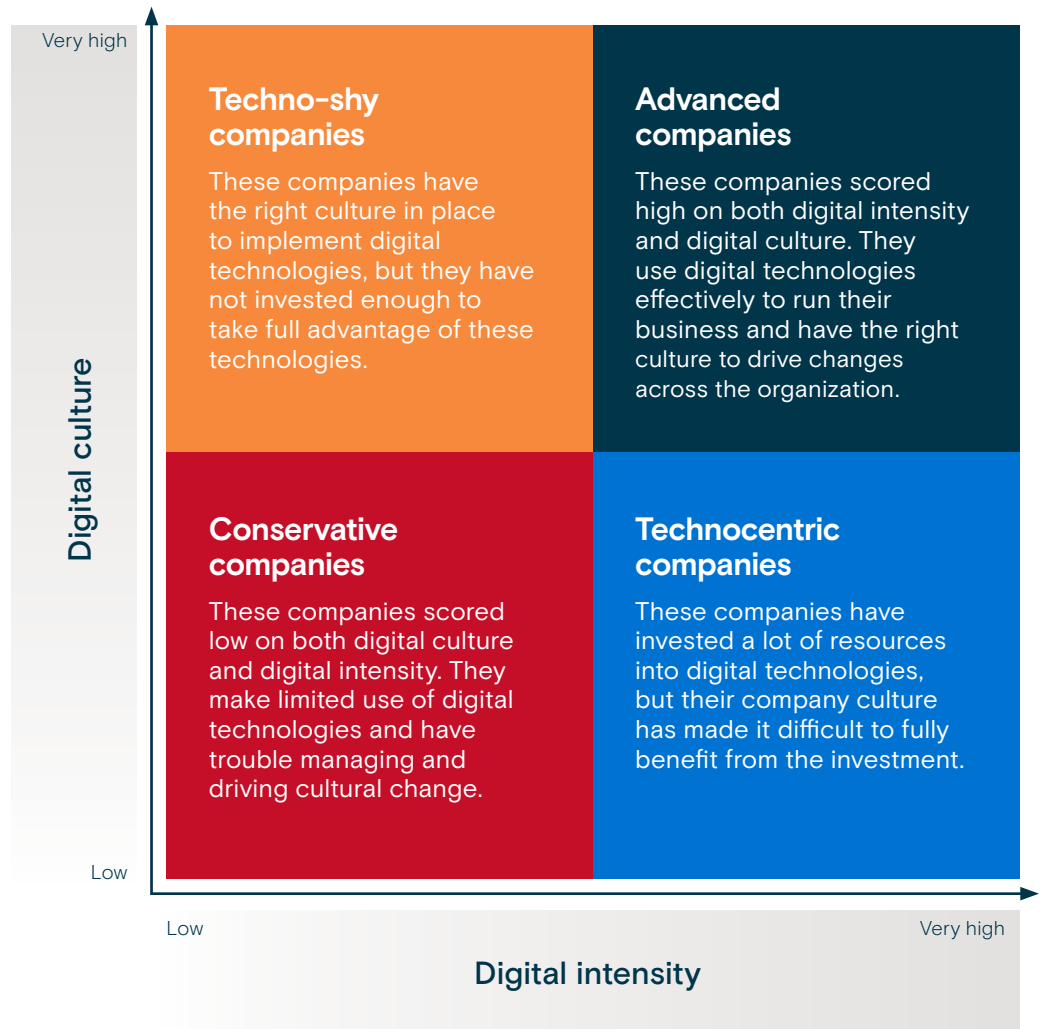
We used a methodology developed by the Massachusetts Institute of Technology (MIT) to investigate the relationship between digital maturity and financial performance (page 6).

**Complete our free Digital maturity assessment to discover your business's digital maturity profile.**

## Four digital maturity profiles

Our analysis combined a company's results for digital intensity and digital culture to determine its position on a 2x2 digital maturity grid (Figure 1). We then classified companies into one of four digital maturity profiles, depending on their position on the grid.

**Figure 1 — BDC's digital maturity model\***



A detailed version of each profile appears in Annex A.

\*Adapted from George Westerman et al., *The Digital Advantage: How Digital Leaders Outperform Their Peers in Every Industry* (n.p.: Capgemini Consulting, MIT Sloan Management, 2016).

# The model behind our analysis

The MIT Center for Digital Business and Capgemini Consulting jointly developed a digital maturity model to investigate the relationship between a company's digital maturity and its revenue generation, profitability and market valuation.

The model evaluates companies on two dimensions:

- digital intensity
- transformation management intensity

They found that investing in digital technologies drives revenue growth, but transformation management capabilities drive profit growth.

After studying 400 large companies over two years, they found that intensive use of digital technologies was not enough for a business to become more profitable; businesses also needed to appropriately manage these assets to gain a real advantage. They concluded that businesses with high digital maturity outperformed less mature firms on multiple financial measurements.

## Adapting the model to the Canadian context

We adapted MIT's model to see whether these conclusions also applied to small and mid-sized businesses in Canada. For example, MIT's study focused on managerial structure, which can be quite complex in multinationals. However, in most small businesses, these functions are often the work of a single person. That is why managerial structure is not part of our model.

We then developed a questionnaire based on a literature review and the expertise of BDC Advisory Services' business advisors. This questionnaire provided us with the data we analyzed in this study.

Source: George Westerman et al. *The Digital Advantage: How Digital Leaders Outperform Their Peers in Every Industry* (n.p.: Capgemini Consulting, MIT Sloan Management, 2016).



# 3

## Digital technologies improve business performance

**Firms with high digital intensity enjoy faster sales growth, while those with a strong digital culture are better at growing profits.**

We surveyed Canadian companies to understand the relationship between digital maturity and business performance. Our results reveal that more mature companies outshine their competitors on each of the four performance indicators we analyzed.

It pays to be digital. Our study found that firms with high digital intensity enjoy faster sales growth, while companies with a strong digital culture are better at growing profits. A significantly greater proportion of advanced and technocentric firms have annual revenue growth of 10% or more (Figure 2a).

However, it's the capacity to manage change that drives profitability. This explains why a significantly larger proportion of techno-shy and advanced businesses have annual profit growth of 10% or more (Figure 2b), since both scored high on digital culture.

Advanced companies are also more likely to export (Figure 2c), and to have developed or introduced at least one type of innovation<sup>2</sup> in the last three years (Figure 2d).

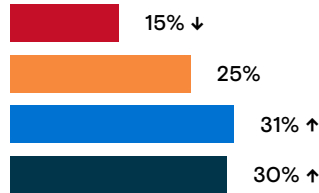
<sup>2</sup> According to the Organisation for Economic Co-operation and Development (OECD), an innovation is the implementation of a new or significantly improved product or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations.

**Figure 2 — Advanced companies have better business results than their peers**

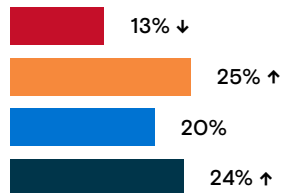
**Business performance by digital maturity profile**

Business performance measure  
Percentage of companies

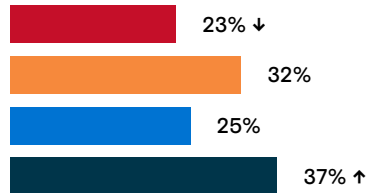
**a. Has had annual sales or revenue growth of 10% or more in the past three years (n=1,760)**



**b. Has had annual profit growth of 10% or more in the past three years (n=1,713)**



**c. Exports goods or services (n=1,949)**



**d. Has innovated in the past three years (n=1,956)**



Conservative    Techno-shy    Technocentric    Advanced

Source: BDC, Digital Assessment Survey (Montreal: BDC, 2018). Results are for Canadian businesses surveyed, excluding respondents who answered, “I don’t know” or “I prefer not to answer.” An arrow up (arrow down) indicates a result that is statistically significantly higher (lower) than numbers for other groups, with a confidence level of 95%.

**A quarter of conservative businesses have seen sales plummet in the last few years, compared to less than a fifth of businesses in other groups.**

## Conservative businesses don't perform as well as their peers

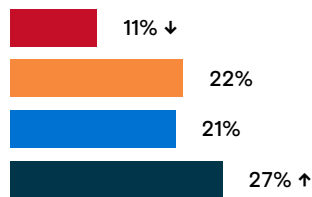
If being digital pays off, being conservative hurts performance. Businesses that combine low digital intensity with a weak digital culture struggle significantly more than other businesses to grow sales. A quarter of conservative businesses have seen sales plummet in the last few years, compared to less than a fifth of businesses in other groups. The sales outlook of conservative companies is no better. A significantly larger proportion of these companies expect sales to fall or stay flat, while many advanced companies expect rapid sales growth (Figure 3).

**Figure 3 — Conservative businesses have a bleaker growth outlook**

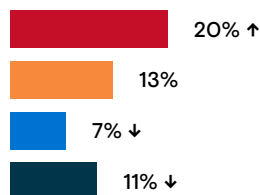
### Sales outlook by digital maturity profile

Annual average growth over the next three years (n=1,956)  
Percentage of companies

#### a. 10% or more per year



#### b. 0% or less per year



■ Conservative    
 ■ Techno-shy    
 ■ Technocentric    
 ■ Advanced

Source: BDC, Digital Assessment Survey, 2018. Results include all Canadian businesses surveyed. An arrow up (arrow down) indicates a result that is statistically significantly higher (lower) than numbers for other groups, with a confidence level of 95%.

## Statistical robustness

Many factors other than digital technology adoption can drive business performance, including the company's size, and the industry or region in which it operates. We conducted advanced statistical analysis to isolate the effect of digital maturity from other factors for each performance metric.

Our results reveal that, compared to all other profiles, advanced companies are:



The difference is greater when we compare advanced companies with conservative ones. It fades when we compare them with techno-shy or technocentric businesses. Our analysis indicates that the advantage advanced businesses have over other businesses is even more pronounced in the United States.

Details of the model we used to analyze the survey results appear in Annex B. All regression results appear in Annex C.



**Sylvie  
Desroches**

“

**Our representatives have had laptops for several years. Today, digital technology is being rolled out on a broader scale.”**

## Case study

# Fabelta

### Developing a digital business culture

When they bought Fabelta in 1988, Sylvie and Michel Desroches transformed the custom-made aluminum window maker. They developed new products, adopted an industrial production model and built their customer base to grow the company, which now has over 90 employees.

Some 30 years later, as they prepare for Fabelta's succession, they want to give the company, located in Terrebonne near Montreal, new momentum by taking it digital.

For Sylvie Desroches, making the company digital was necessary for it to be able to perform even better. “We've been tech focused for a long time,” she says. “We installed the first integrated management systems 20 years ago. Our representatives have had laptops for several years. Today, digital technology is being rolled out on a broader scale.”

### A new organizational model

In the context of a labour shortage, successfully executing a digital transformation often depends on a company's ability to develop its personnel. “The new tools make their tasks more specialized,” Ms. Desroches notes. Employees must be more autonomous and make their own decisions.

This is partly why, as it goes digital, Fabelta is also taking steps to become a liberated company. This new organizational model is gaining ground worldwide.

There is no hierarchy in a liberated company. The organization is built on employee autonomy, rather than on control and supervision of tasks. Decisions are made by the team. They are no longer solely on the shoulders of the executives.

A liberated company radically transforms organizational practices. At Fabelta, management is now handled by committees.

“The company has 21 committees. Each committee has a purpose and objectives to achieve. Employees are on committees that are related to their jobs. They can also volunteer to be on a committee based on interest. However, they have to state what they think they can contribute, and be ready to engage.”

### Developing employee autonomy

The implementation is being handled in stages because it's a radical change to the company's business practices. Production is the first stage, followed by the sales department.

It isn't always easy to develop initiative in employees. It's one thing to encourage them to make decisions, but another to ensure they take them.

“Some employees have more difficulty. They wonder if they're allowed to make certain decisions,” explains Ms. Desroches. “They also want to be sure they're making the right decisions. It's a matter of building their self-confidence. We're working on employees' strengths so they get even better.”

# 4

## How Canadian businesses measure up

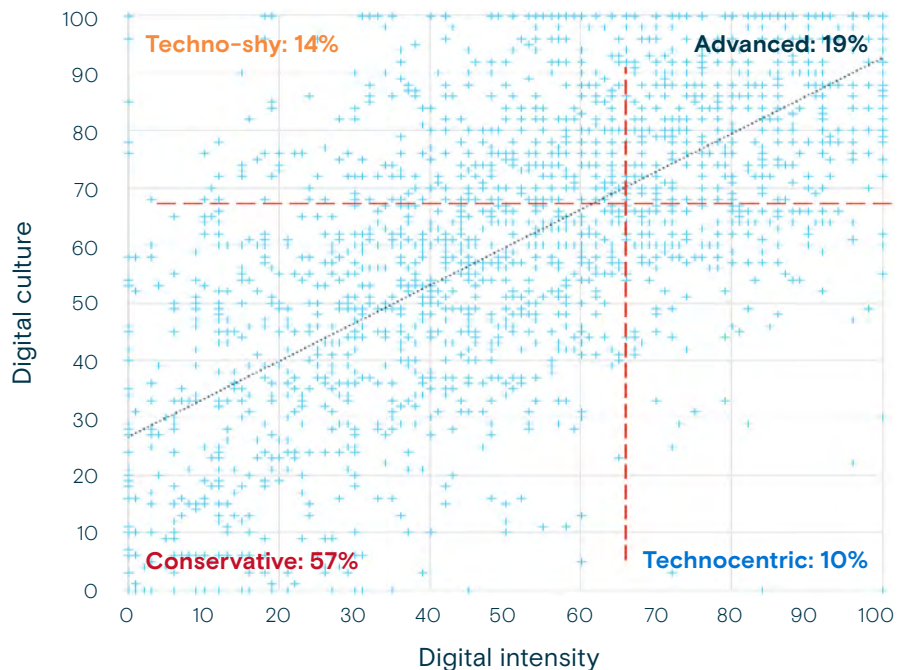
**19%**  
of Canadian small and mid-sized businesses are digitally advanced.

We used our survey data to map Canadian businesses on our digital maturity model. We also used the information collected on U.S. companies to determine whether there is a “digital divide” between the two countries.

Some companies have already taken the digital leap, while others lag behind. Our study indicates that one out of five Canadian companies have reached an advanced stage of digital maturity, while more than half are conservative (Figure 4). The rest of the companies we surveyed—around a quarter of the total—fall into either the techno-shy or technocentric category.

**Figure 4 — One in five Canadian companies have reached an advanced digital stage**

**Distribution of Canadian small and mid-sized businesses, by digital maturity profile**



Source: BDC, Digital Assessment Survey, 2018. Results include all Canadian businesses surveyed (n = 1,956). The correlation between digital culture and digital intensity is 0.69. Note: similar to MIT’s methodology, the cut-offs for each group—represented by vertical and horizontal lines—are set at the mean value plus half a standard deviation along each axis.

# 34%

**of larger firms have reached an advanced level of digital maturity.**

Another look at Figure 4 reveals a positive relationship between digital intensity and digital culture, suggesting that the more a company uses technology, the better it gets at managing change.

However, we don't know whether that's because more innovative businesses tend to adopt more technology, or because adopting technology pushes companies to change their culture. All we can say is that technology adoption and cultural change seem to happen at the same time.

This explains the small number of techno-shy and technocentric companies, with most companies coalescing around a positive slope that relates digital intensity to digital culture.

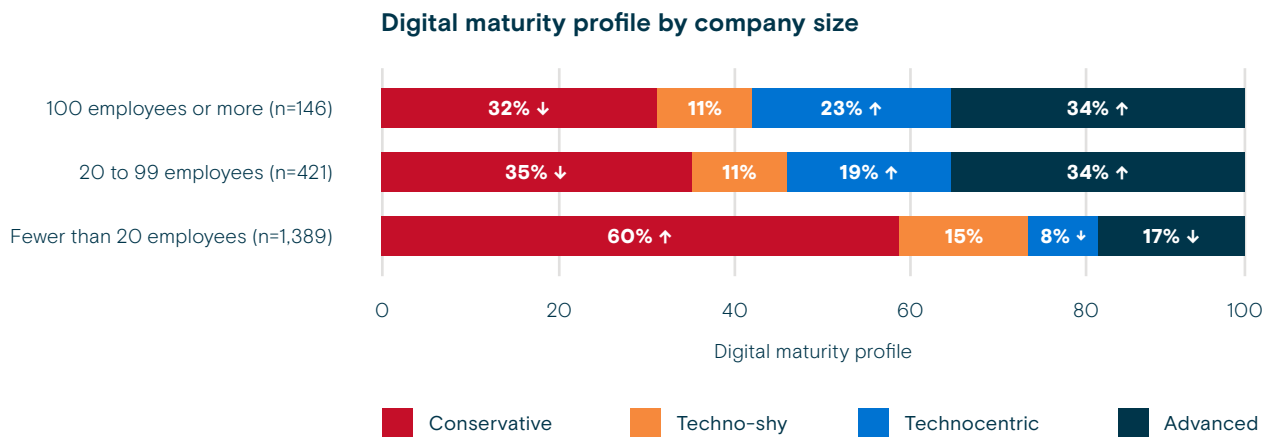
## Business size affects digital maturity

Size matters. Larger companies—those with 20 employees or more—are overrepresented in the advanced categories, while those with fewer than 20 employees are overrepresented among conservative businesses (Figure 5).

Larger businesses tend to have bigger, more complex operations that require more technology to run effectively. They also have more developed governance structures that are better able to manage technological change.

Larger businesses also invest more in digital technologies. We estimate that businesses with one to 19 employees have invested \$12,000, on average, in their digitization in the last 12 months, compared to \$54,000 for businesses with 20 to 99 employees and \$259,000 for businesses with 100 employees or more.

**Figure 5 — Larger companies are more digitally mature**

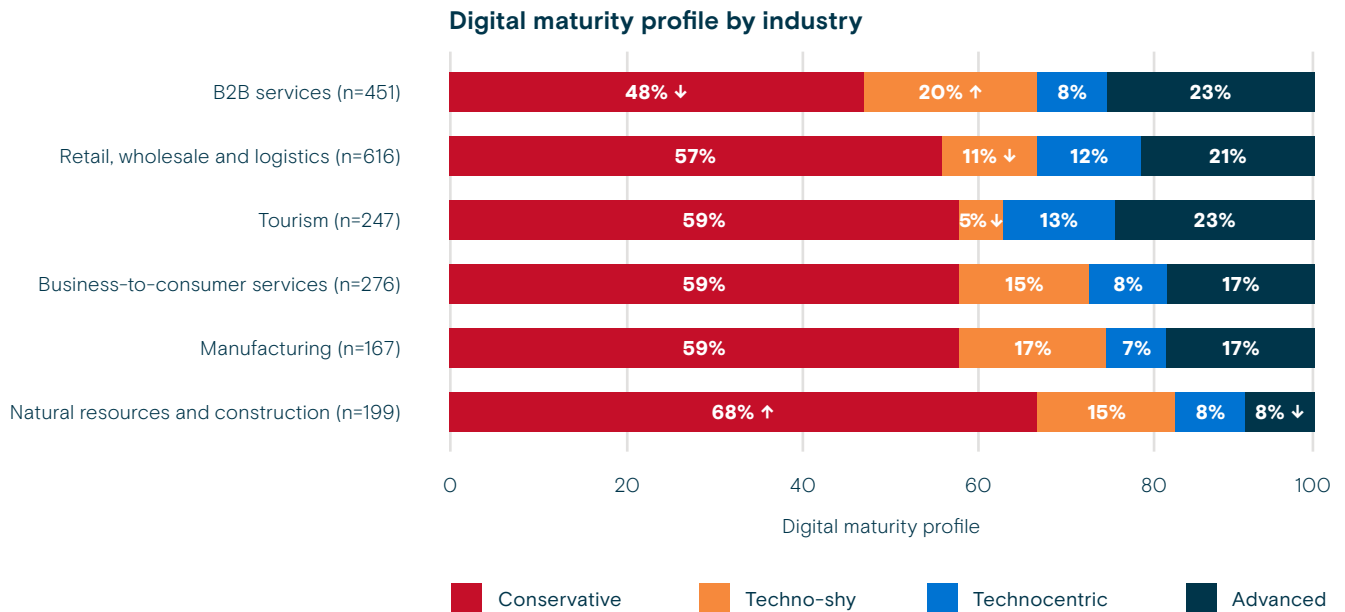


Source: BDC, Digital Assessment Survey, 2018. Results include all Canadian businesses surveyed. An arrow up (arrow down) indicates a result that is statistically significantly higher (lower) than numbers for other groups, with a confidence level of 95%.

# Companies providing business-to-business services have the highest level of digital maturity

While 19% of all Canadian small and mid-sized businesses have reached a high level of digital maturity, this is not the case in all industries. The number of conservative businesses in the goods-producing sector is much higher, especially among construction companies and natural resources companies. In the services sector, companies providing business-to-business (B2B) services have the highest level of digital maturity. More than half of these businesses have moved beyond the conservative profile of digital maturity (Figure 6).

**Figure 6 — Companies in the natural resources and construction industries are the least digitally mature**



Source: BDC, Digital Assessment Survey, 2018. Results include all Canadian businesses surveyed. An arrow up (arrow down) indicates a result that is statistically significantly higher (lower) than numbers for other groups, with a confidence level of 95%.



**There is no evidence of a gap in digital maturity between Canadian and U.S. small and mid-sized businesses.**

## There is no digital gap between Canadian and American small businesses

There has long been a debate surrounding Canada’s ICT investment gap with the United States.<sup>3</sup> We included 600 American companies in our survey to determine whether the macro-level digital maturity gap also existed among small businesses.

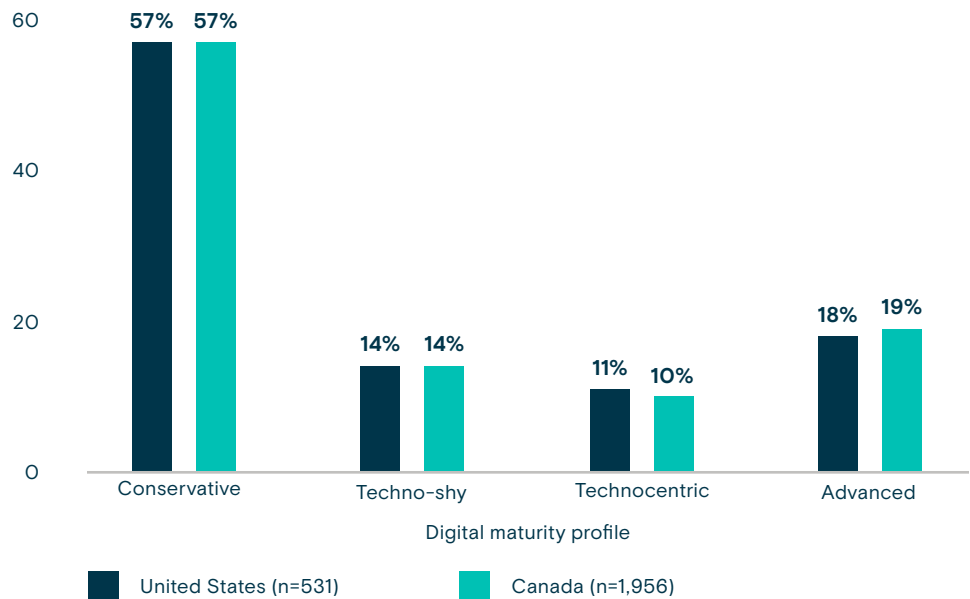
Our survey indicates that the digital maturity level of small U.S. companies is similar to that of small Canadian firms (Figure 7). In fact, we found statistical equality between the small Canadian and American companies we surveyed. In other words, the distribution of digital maturity profiles is the same in both our U.S. and Canadian samples.

In light of these results, we believe there is a real opportunity for Canadian entrepreneurs to improve their competitiveness by investing more in technology and by adopting management practices that will help their business complete the digital shift.

**Figure 7 — The distribution of digital maturity profiles is the same in Canada and the United States**

### Digital maturity in Canada and the United States

Percentage of companies



Source: BDC, Digital Assessment Survey, 2018. Results include all Canadian and U.S. businesses surveyed.

<sup>3</sup> For instance, the Centre for the Study of Living Standards estimates that the ICT investment gap between Canada and the U.S. reached 43.7 percentage points in 2016. Part of this gap can be explained by differences in industry structure: Canada has a higher proportion of smaller firms. Canada also has a greater focus on resources, with fewer businesses in ICT-intensive industries. See Jasmin Thomas, *New Evidence on the Canada–U.S. ICT Investment Gap, 1976–2014* (Ottawa: Centre for the Study of Living Standards, November 2016); and Expert Panel on Business Innovation, *Innovation and Business Strategy: Why Canada Falls Short* (Ottawa: Council of Canadian Academies, 2009).

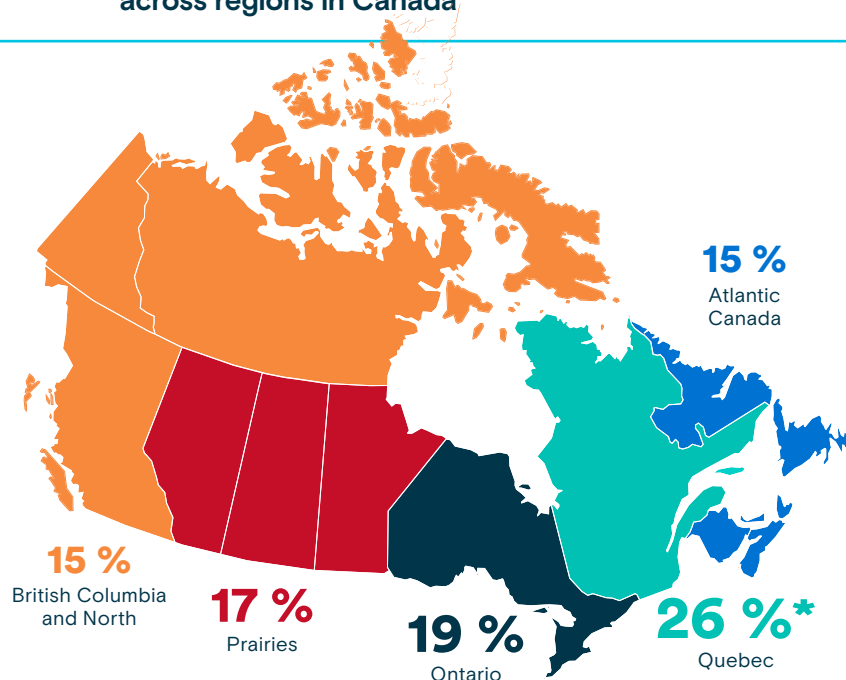
## Quebec leads Canada in the number of digitally advanced small and mid-sized companies.

## Quebec businesses have the highest level of digital maturity in Canada

The province of Quebec has a significantly larger proportion of advanced businesses than any other Canadian region (Figure 8). The strong performance of Quebec companies was also observed in a BDC study on the adoption of digital technologies in the manufacturing sector. Quebec manufacturers are adopting Industry 4.0 technologies in a significantly larger proportion than other Canadian companies.<sup>4</sup>

We observed some variation in the distribution of companies in other regions, but these differences are not statistically significant.

**Figure 8 — The proportion of digitally advanced companies varies across regions in Canada**



Rank	Region	Advanced	Technocentric	Techno-shy	Conservative
1	Quebec (n=461)	26%*	10%	12%	51%
2	Ontario (n=709)	19%	8%	14%	59%
3	Prairies (n=372)	17%	11%	19%	53%
4	B.C. and North (n=294)	15%	11%	13%	61%
5	Atlantic Canada (n=120)	15%	9%	14%	62%
-	<b>Canada (n=1,956)</b>	19%	10%	14%	57%

Source: BDC, Digital Assessment Survey, 2018. Results include all Canadian businesses surveyed. Asterisks indicate statistically significant differences between a sub-group and the rest of the sample, with a confidence level of 95%. Numbers may not add up to 100% due to rounding.

<sup>4</sup> See Pierre-Olivier Bédard-Maltais, *Industry 4.0: The New Industrial Revolution* (Montreal: BDC, May 2017).



**Heather  
Stewart**

“

**Processing a shipment used to take seven or eight steps. It now takes one”**

## Case study

# BBE Expediting

## Logistics company finds tech solution to northern shipping problem

Heather Stewart thinks she has an answer to the high food prices that have long plagued Canada's north.

With milk, fruit and vegetables costing two to three times more in northern communities than in southern ones, Stewart's shipping company BBE Expediting Ltd. has developed pioneering software that promises to make food more affordable for northerners.

“Northern communities, particularly those that are fly-in only, are subjected to limited food variety sold at high cost in the stores,” Stewart says. “They want to pay southern prices and arrange the shipment themselves.”

Her new GoBox software helps solve that problem. Until now, businesses and people who wanted to ship goods to northern Canada had to contact each shipper separately to get their quotes. GoBox provides a centralized online system that lets anyone shop for rates, book cargo and pay with just a few clicks.

## Lets northern shoppers reduce costs

The software was born when the developer of the Edmonton airport's outlet mall approached BBE to develop a way for customers to ship purchases. That led BBE to develop GoBox, which launched at the mall in May 2018.

GoBox has quickly become popular not only with travellers on a layover, but also with local residents, industrial clients and northerners coming south for a big shopping trip.

Stewart also used GoBox's technology as the basis for another business line—Fetchable.ca, a shipping website.

The new site allows northern shoppers to reduce costs by shipping food and other products directly from southern retailers, instead of paying higher northern prices.

## Software boosted productivity threefold

Stewart also realized the software could help streamline shipping at her own 125-employee company, which is one of northern Canada's leading providers of air cargo, freight forwarding and procurement services.

When Stewart implemented GoBox internally, employees saw an impressive threefold increase in the number of shipments they could process in a day.

“Processing a shipment used to take seven or eight steps. It now takes one,” she says.

The technology breakthrough is especially striking because BBE isn't a software company.

## “We know logistics”

“This is definitely outside the box for us,” Stewart says. “But we know logistics, and we harnessed our expertise for this new business line.”

Stewart has started a strategic planning exercise to explore other applications for GoBox. She is already in talks to implement it at more shopping malls and wants to expand Fetchable into an e-commerce site.

“The technology has limitless possibilities,” she says.

# 5

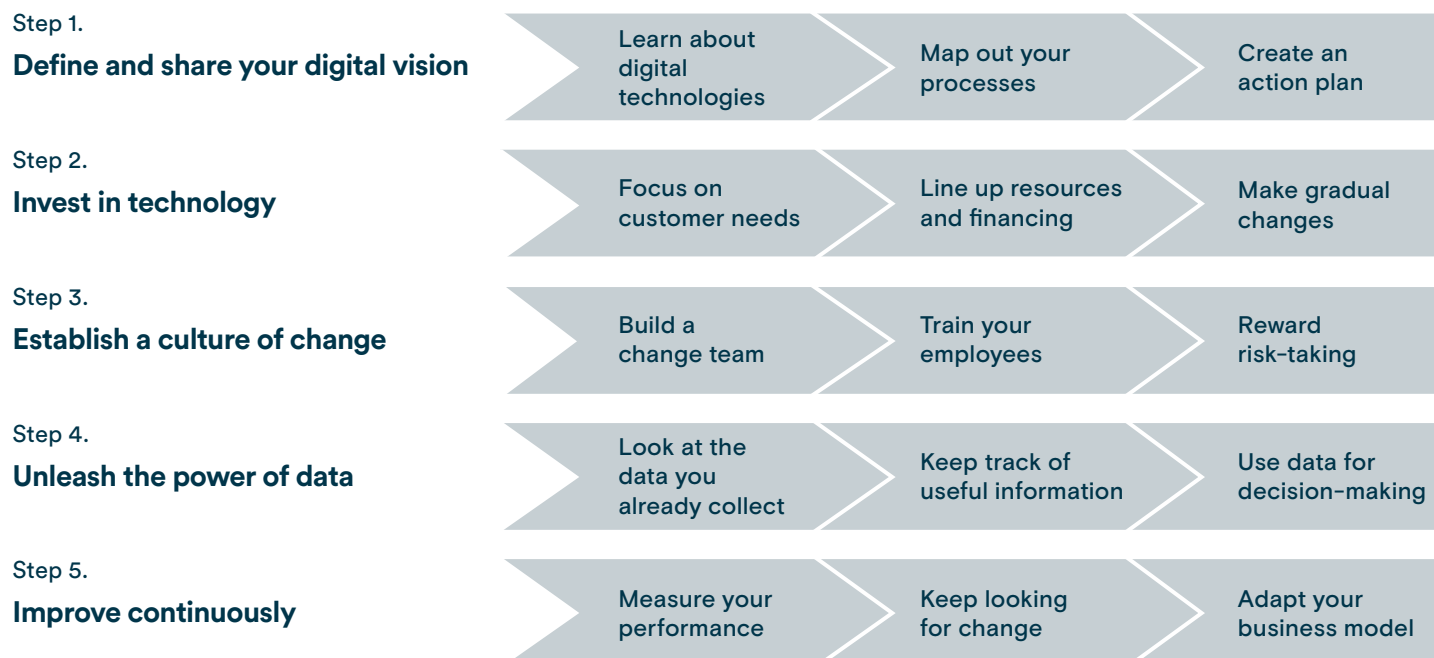
## Lead the change: How to transform your business

**Most successful businesses start with small projects to build skills, iron out problems and prove return on investment.**

Entrepreneurs who want to seize new opportunities must work to establish a digitally oriented culture and raise their digital intensity. BDC experts propose this five-step approach to digitizing your business.

Change can be scary, especially when it comes to digital technologies. Keep in mind that the goal is not to become the next Airbnb or Uber. Instead, try to increase your digital maturity one step at a time. Most successful businesses start with small projects to build skills, iron out problems and prove return on investment. Even the smallest project can create long-lasting benefits.

**Figure 9 — Five steps to digitize your business**



# 1

## Define and share your digital vision

### Learn about digital technologies

As a leader, it's important to realize that change is inevitable. Start by learning how new technologies are redefining your industry. Sit down with key employees and review the ways digital technologies can create value for your customer. Then, define your vision. Where do you need to be to remain successful in five or 10 years from now?

If you don't know where to start or if technology is just not your thing, **don't hesitate to ask for external help**. The digital shift is important to your business's success, so get it right.

### Map out your processes

Map out your business and production processes to identify bottlenecks and production problems that you need to resolve before you can bring in digital technologies. You don't want to digitize inefficient processes! Review each area of your business to see what's working well and what's not. Look at your current technology, the way you use data, and any gaps in competencies or resources. This mapping will also help you identify investment opportunities where technology can be used to improve the right processes.

### Create an action plan

Create a clear action plan for acquiring and implementing digital technologies. The plan should include key milestones for progress, as well as steps your business will need to take to maximize the benefits of the technology or data. You should also build in contingency planning, in case a step doesn't work out.

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# 2

## Invest in technology

### Focus on customer needs

Your customers' motivations and some of your operational weaknesses should motivate your technology investment. For example, a retailer that invests in tracking technologies to provide fast and accurate deliveries to its customers will be more successful than competitors that do not.

### Line up resources and financing

Be sure to surround yourself with talented employees and line up the financial resources that will allow you to adopt new technologies. Many entrepreneurs pay for technology projects out of their everyday cash and then end up squeezed, especially if costs rise unexpectedly. Using a [business loan](#) can help you avoid this risk.

### Make gradual changes

One of the worst mistakes companies can make is to implement too many changes, too quickly. Start with quick wins and technologies that have the greatest upside for your business. Going paperless in your back office, for example, is one of the easiest and cheapest digital technologies to implement.



## Establish a culture of change

### Build a change team

Build a team of influential employees at all levels to champion the transformation. This team will help you lead the way in technology adoption.

### Train your employees

Digital technology will change your organization: tasks will be eliminated, roles and responsibilities will shift, new skills will be needed. Close the gap with training. Start by listing your employees' current skills and then develop a plan to help each employee adapt, based on his or her abilities.

### Reward risk-taking

To change, you have to be willing to try new things and accept failure. It can be useful to provide incentives to take risks. The key is to see failure as a lesson in how to improve processes.



## Unleash the power of data

### Look at the data you already collect

It is useful to start small with data collection, especially if you are just beginning to think about how to use the company's data. In fact, your company is probably already collecting a significant amount of data. For example, you may collect sales and marketing information, such as customer information, and data on Internet traffic and social media interactions.

### Keep track of useful information

Ask yourself what your customers want and how you are losing money to your competitors. For example, if you are a plumber or electrician, you can start tracking service time, travel time to jobs, and time spent at the store to find missing parts or equipment. You should also think about the data that could help increase your margins and reduce your costs. For example, in the retail sector, tracking inventory turnover could reveal that some product lines have not been selling for months, while others are often out of stock.

### Use data for decision-making

Data can help you determine what your next product will be, where to expand operations and how to personalize the customer experience on the web. Ensure that information collected in one part of your company is shared with other parts. As your business grows, you probably want to invest in a CRM or ERP system to collect, store, manage and interpret data from different business activities.



## Improve continuously

### **Measure your performance**

We improve what we measure. Define key performance indicators (KPIs) for each of your business objectives and review them regularly. Ask employees to come up with their own ideas on how to use data to improve processes.

### **Keep looking for change**

Your digital strategy must be part of a culture of continuous improvement. Take action, measure results and make changes to improve the situation. Repeat the operation. This agile framework ensures that changes to your business model, including the addition of more advanced technologies, are based on actual customer needs.

### **Adapt your business model**

Look at what your customers are doing with the products you sell and use this information to develop new services and improvements. For example, a company that makes farm tractors could charge a monthly fee to monitor the tractors and maintain them from a distance. Other companies can find ways to become more profitable. A retailer, for instance, could use real-time queue data to optimize peak-hour checkout staffing, better direct queue traffic, or offer self-service or mobile checkouts.

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Stuart  
Tidd

“

I'm so impressed. I can't believe some of the information I have now that helps us make more informed business decisions.”

## Case study

# PC Parts Now

### Digital transition: E-commerce boosts this retailer's sales by 30%

Stuart Tidd was an early adopter of technology.

“If we were going to survive this onslaught of technology, I knew we had to be at the forefront online,” he says.

His Markham, Ontario-based printer parts retailing company PC Parts Now launched its first website in 2008. In 2013, Tidd started planning to expand into the lucrative market of online sales.

But Tidd's enthusiasm was stymied by the high cost of e-commerce platforms at the time.

### Sales shot up 30%

He eventually hired digital experts from BDC to help him create an e-commerce website and marketing plan. After the final touches were completed in late 2016, the company's sales quickly shot up, increasing by 30% in 2017.

And thanks to the site's streamlined order processing, the company didn't need to hire any new employees to handle the ballooning sales.

Tidd credits the many months of preparation that went into the project and a carefully thought-out transition for his success.

“Planning was key,” he says. “You can't just throw something together, which is what you see many entrepreneurs doing.”

### Communication eased the transition

The biggest challenge was getting his team on board, a task that included teaching employees how to use the e-commerce platform and the updated computers and software needed to run the system.

Tidd eased concerns with plenty of internal communication. “You have to sit down with everyone in the business, not just management, and talk about it,” he says.

He also implemented a gradual transition that included using both the old and new systems at the same time for six months.

### Website is a gold mine of useful data

An unexpected bonus of the project has been the large quantity of useful business data Tidd now gets from the new website.

“The reports I see every day are just amazing,” he says. “I'm so impressed. I can't believe some of the information I have now that helps us make more informed business decisions.”

All the extra planning and technology purchases gobbled up a lot of resources up front, but the investment has paid off quickly, Tidd says. “The cost was a fraction of the returns.”



# Conclusion

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## Know where you stand

The digital revolution has arrived. Several industries have already been disrupted, and the pace of change is accelerating. Digital technologies can affect every part of a business, from how you interact with customers, to how you process their orders, to how employees collaborate with one another. Ultimately, these technologies will transform how you compete and provide value to your customers.

In other words, your business's digital maturity matters. Our results show that businesses with a more advanced digital maturity profile have much better business results than their peers. Furthermore, digital maturity is about more than investing in new technologies; it is also about creating a culture that is favourable to change and risk taking.

According to our survey, companies that have invested in both their digital intensity and digital culture have seen the benefits: Advanced companies generate more revenue and are more profitable. They also export and innovate more.

However, many Canadian businesses lag behind. Only 19% of Canadian companies have reached an advanced level of digital maturity, while 57% are still conservative. Our survey shows that businesses with a conservative profile earn less revenue and have lower profits.

The good news: It is not too late to act. Canadian small and mid-sized businesses are on par with their peers in the United States. This means that entrepreneurs who invest in digital technologies, use data to create value and adopt a culture of continuous improvement can outperform their competitors in Canada and abroad.

The first step in your digital journey is to know where you stand. To help you evaluate your current level of digital maturity, BDC has developed a free [Digital maturity assessment](#) tool for entrepreneurs. Business owners can use this tool to compare their business to other Canadian firms in their industry, discover their potential for improvement, and get a detailed, printable report to help them kick off change.

# Annex A

## Four digital maturity profiles

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1

### Conservative

Conservative businesses score on the lower end of our digital intensity and digital culture measures.

A typical company in this category makes limited use of digital technologies, usually in its sales and marketing departments. Back-office operations are typically completed using paper or basic digital tools, such as Excel or Word. The company's teams tend to work in silos and use independent information technology (IT) systems. Data are not collected systematically and, when they are collected, they aren't shared. Employees tend not to use data to make decisions; they prefer to rely on gut feelings or instinct.

Conservative businesses also have trouble implementing change. Management prefers a top-down approach and is not always responsive to feedback. It could also do more to support innovation and collaboration among employees. Conservative companies do not have the digital tools or investment levels necessary to transform their business model, and digital technologies are not a strategic priority.

Many conservative businesses would like to improve their use of digital technologies, but they will have to change their business culture to get started. Inaction will likely hurt the business in the short term and threaten its survival in the long run.

2

### Techno-shy

Techno-shy businesses score low on digital intensity and high on digital culture.

A typical company in this category has the right culture to transform its business model but makes little use of digital technologies. It is most likely to use technology in its sales and marketing, administration, finance, or human resources departments. Back-office operations are usually completed using paper or basic digital tools, such as Excel or Word. Some level of integration exists among IT systems, but employees seldom make decisions based on data.

Techno-shy businesses have a strong, digital-ready culture that favours collaboration, risk-taking and innovation. Employees are involved in decision-making and training is offered to improve their skills. Management supports change, but investment levels in digital technologies remain low compared with those in more advanced businesses.

Techno-shy businesses have what it takes to reach the next level. What they need is a clear digital vision, a formal digital strategy and investment to achieve them.



## Technocentric

Technocentric businesses score high on digital intensity and low on digital culture.

A typical company in this category invests significantly in digital technologies and uses this technology in its client-facing and back-office operations. Its systems are integrated and it likely collects data on customers and operations.

However, despite sufficient digital capabilities and investment levels, technocentric companies lack the ability to drive change across the business. Management supports digital change but might not have a clear vision or digital plan that is tied to its business strategy. Lack of communication and top-down management styles may also impede innovation and collaboration among employees. Technocentric businesses can find it difficult to coordinate digital investments across departments.

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## Advanced

Advanced businesses get high scores on both digital intensity and digital culture.

A typical company in this category uses digital technologies to run its business. Its innovative business culture makes it easier to manage the changes that come from adopting digital technologies.

Advanced businesses use digital technologies efficiently to interact with customers, partners and suppliers; to deliver a digital customer experience; and to integrate different IT systems. They also use digital technologies to perform core business functions and to collect, transform, share and use data to make decisions.

Advanced businesses also have a strong culture that is ready to adopt digital technologies. A clear vision on the use of technology in the business and an action plan are in place, and they are well communicated to employees. Management supports change and invests in employee training. Employees are involved in the company's decision-making, and a culture of collaboration and innovation exists.

Advanced businesses have everything it takes to succeed in the digital context. Their greatest challenge is to stay relevant in a fast-moving world. To reach the next level, they need to focus on digital business model transformation.

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# Annex B

# Methodology

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The findings in this report are based on the results of a literature review, a telephone survey and regression analyses.

## The survey

The BDC Research and Economic Analysis team developed a questionnaire and asked Elemental DCI to conduct a telephone survey of 2,000 Canadian and 600 U.S. companies with one to 499 employees. The survey was carried out between March 16 and April 23, 2018, in Canada, and between March 16 and May 9, 2018, in the United States. A stratified sampling plan was prepared to ensure sufficient respondents in every region of Canada. The Canadian results were weighted by region and size of business to ensure findings were representative of Canadian small and mid-sized businesses as a whole. The U.S. results were weighted by region only. The maximum sampling error for all respondents is  $\pm 2.2$  percentage points in Canada, and  $\pm 4.0$  percentage points in the U.S, 19 times out of 20.

## The digital maturity model

This study used a series of multinomial logistic regressions to analyze the impact of digital maturity on four different business outcomes for Canadian small and mid-sized businesses. These outcomes include the probability of experiencing high sales growth, the probability of experiencing high profit growth, the probability of exporting, and the probability of having developed or introduced at least one type of innovation over the last three years. We define high sales or profit growth as a 10% or more average annual growth over the last three years.

The regression results isolate the impact on each business outcome, controlling for other factors that may have an incidence of the variable of interest. These factors include the company's size, the industry or region in which it operates, the type of customer it serves (businesses, consumers or both), the number of years in business, and the owner's age and gender. The regression equations show that the variable of interest—digital maturity—is a statistically significant predictor of business outcomes with p-values equal to or below 5%.

# Annex C

## Econometric results

**Table 2 – Business’s sales or revenue growth**

Variable of interest	Multivariate odds ratio (95% CIs) <sup>5</sup>	p-value <sup>6</sup>
<b>Canada</b>		
<b>Digital profile: Binary</b>		
Advanced vs. non-advanced <sup>1</sup>	1.62 (1.23-2.14)	<0.001*
<b>Digital profile: Category</b>		
Conservative to advanced <sup>2</sup>	2.01 (1.47-2.75)	<0.001*
Technocentric to advanced <sup>3</sup>	1.19 (0.80-1.78)	0.3804
Techno-shy to advanced <sup>4</sup>	1.19 (0.81-1.75)	0.3755
<b>United States</b>		
<b>Digital profile: Binary</b>		
Advanced vs. non-advanced <sup>1</sup>	2.04 (1.14-3.66)	0.0171*
<b>Digital profile: Category</b>		
Conservative to advanced <sup>2</sup>	2.79 (1.52-5.10)	<0.001*
Technocentric to advanced <sup>3</sup>	2.16 (0.93-5.03)	0.0740
Techno-shy to advanced <sup>4</sup>	1.82 (0.91-3.63)	0.0911

CI: Confidence interval.

\*Statistically significant at the 5% level.

### Notes

- [1] An odds ratio greater than 1 indicates that the odds of being in a high revenue growth bracket (≥ 10%) increase when moving from any other digital profile to an advanced digital profile.
- [2] An odds ratio greater than 1 indicates that the odds of being in a high revenue growth bracket (≥ 10%) increase when moving from a conservative digital profile to an advanced digital profile.
- [3] An odds ratio greater than 1 indicates that the odds of being in a high revenue growth bracket (≥ 10%) increase when moving from a technocentric digital profile to an advanced digital profile.
- [4] An odds ratio greater than 1 indicates that the odds of being in a high revenue growth bracket (≥ 10%) increase when moving from a techno-shy digital profile to an advanced digital profile.
- [5] Multivariate regression models were adjusted for the following covariates: number of employees, province/territory, industry sector, customer type, time in business, owner’s age and owner’s gender.
- [6] 95% CIs and p-values were estimated using robust standard errors.

**Table 3 – Business’s profit growth**

Variable of interest	Multivariate odds ratio (95% CIs) <sup>5</sup>	p-value <sup>6</sup>
<b>Canada</b>		
<b>Digital profile: Binary</b>		
Advanced vs. non-advanced <sup>1</sup>	1.52 (1.11-2.07)	0.0086*
<b>Digital profile: Category</b>		
Conservative to advanced <sup>2</sup>	1.84 (1.30-2.60)	<0.001*
Technocentric to advanced <sup>3</sup>	1.42 (0.89-2.24)	0.1387
Techno-shy to advanced <sup>4</sup>	0.91 (0.62-1.35)	0.6482
<b>United States</b>		
<b>Digital profile: Binary</b>		
Advanced vs. non-advanced <sup>1</sup>	1.91 (1.04-3.50)	0.0378*
<b>Digital profile: Category</b>		
Conservative to advanced <sup>2</sup>	3.27 (1.70-6.32)	<0.001*
Technocentric to advanced <sup>3</sup>	1.97 (0.83-4.66)	0.1243
Techno-shy to advanced <sup>4</sup>	1.55 (0.72-3.37)	0.2624

CI: Confidence interval.

\*Statistically significant at the 5% level.

**Notes**

- [1] An odds ratio greater than 1 indicates that the odds of being in a high profit growth bracket (≥ 10%) increase when moving from any other digital profile to an advanced digital profile.
- [2] An odds ratio greater than 1 indicates that the odds of being in a high profit growth bracket (≥ 10%) increase when moving from a conservative digital profile to an advanced digital profile.
- [3] An odds ratio greater than 1 indicates that the odds of being in a high profit growth bracket (≥ 10%) increase when moving from a technocentric digital profile to an advanced digital profile.
- [4] An odds ratio greater than 1 indicates that the odds of being in a high profit growth bracket (≥ 10%) increase when moving from a techno-shy digital profile to an advanced digital profile.
- [5] Multivariate regression models were adjusted for the following covariates: number of employees, province/territory, industry sector, customer, time in business, owner’s age and owner’s gender.
- [6] 95% CIs and p-values were estimated using robust standard errors.

**Table 4 – Business’s propensity to export**

Variable of interest	Multivariate odds ratio (95% CIs) <sup>5</sup>	p-value <sup>6</sup>
<b>Canada</b>		
<b>Digital profile: Binary</b>		
Advanced vs. non-advanced <sup>1</sup>	1.70 (1.32-2.20)	<0.001*
<b>Digital profile: Category</b>		
Conservative to advanced <sup>2</sup>	1.80 (1.36-2.38)	<0.001*
Technocentric to advanced <sup>3</sup>	2.04 (1.37-3.04)	<0.001*
Techno-shy to advanced <sup>4</sup>	1.20 (0.83-1.73)	0.3368
<b>United States</b>		
<b>Digital profile: Binary</b>		
Advanced vs. non-advanced <sup>1</sup>	1.80 (1.03-3.13)	0.0381*
<b>Digital profile: Category</b>		
Conservative to advanced <sup>2</sup>	2.01 (1.12-3.62)	0.0198*
Technocentric to advanced <sup>3</sup>	2.00 (1.05-3.80)	0.0345*
Techno-shy to advanced <sup>4</sup>	1.14 (0.63-2.08)	0.6644

CI: Confidence interval.

\*Statistically significant at the 5% level.

**Notes**

- [1] An odds ratio greater than 1 indicates that the odds of exporting increase when moving from any other digital profile to an advanced digital profile.
- [2] An odds ratio greater than 1 indicates that the odds of exporting increase when moving from a conservative digital profile to an advanced digital profile.
- [3] An odds ratio greater than 1 indicates that the odds of exporting increase when moving from a technocentric digital profile to an advanced digital profile.
- [4] An odds ratio greater than 1 indicates that the odds of exporting increase when moving from a techno-shy digital profile to an advanced digital profile.
- [5] Multivariate regression models were adjusted for the following covariates: number of employees, province/territory, industry sector, customer type, time in business, owner’s age and owner’s gender.
- [6] 95% CIs and p-values were estimated using robust standard errors.

**Table 5 – Business’s propensity to innovate**

Variable of interest	Multivariate odds ratio (95% CIs) <sup>5</sup>	p-value <sup>6</sup>
<b>Canada</b>		
<b>Digital profile: Binary</b>		
Advanced vs. non-advanced <sup>1</sup>	4.29 (2.80-6.58)	<0.001*
<b>Digital profile: Category</b>		
Conservative to advanced <sup>2</sup>	6.02 (3.87-9.36)	<0.001*
Technocentric to advanced <sup>3</sup>	1.52 (0.83-2.80)	0.1764
Techno-shy to advanced <sup>4</sup>	2.44 (1.42-4.17)	0.0012*
<b>United States</b>		
<b>Digital profile: Binary</b>		
Advanced vs. non-advanced <sup>1</sup>	5.70 (2.33-13.92)	<0.001*
<b>Digital profile: Category</b>		
Conservative to advanced <sup>2</sup>	7.08 (3.65-13.74)	<0.001*
Technocentric to advanced <sup>3</sup>	1.07 (0.40-2.83)	0.8988
Techno-shy to advanced <sup>4</sup>	3.73 (1.75-7.96)	<0.001*

CI: Confidence interval.

\*Statistically significant at the 5% level

**Notes**

- [1] An odds ratio greater than 1 indicates that the odds of innovating increase when moving from any other digital profile to an advanced digital profile.
- [2] An odds ratio greater than 1 indicates that the odds of innovating increase when moving from a conservative digital profile to an advanced digital profile.
- [3] An odds ratio greater than 1 indicates that the odds of innovating increase when moving from a technocentric digital profile to an advanced digital profile.
- [4] An odds ratio greater than 1 indicates that the odds of innovating increase when moving from a techno-shy digital profile to an advanced digital profile.
- [5] Multivariate regression models were adjusted for the following covariates: number of employees, province/territory, industry sector, customer type, time in business, owner’s age and owner’s gender.
- [6] 95% CIs and p-values were estimated using robust standard errors.



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