

Innovation and Technology to Boost Growth





Raymond Chabot Grant Thornton conducted a Léger survey with 300 business leaders to get a better understanding of the issues the small- and medium-sized Quebec businesses will be facing in the coming years. The results revealed the major innovation challenges and potential risks of adopting new technologies.



Innovate to Win



Pascal Perreault
CPA, CA, DESS Tax
Tax Partner

Today, because of the extent of competitive pressure companies are facing, it's crucial that they stay abreast of technological and scientific advances in their industry and innovate in order to improve their processes, productivity and market offering.

Innovation inevitably entails investing in research and development.

– Pascal Perreault, Tax Partner



Tax Credits to Finance Innovation

Our study revealed that 6 out of 10 managers (65%) consider that they have an advance level of maturity.

However, 40% of businesses have no R&D budget and only 29% allocate 4% or more of their revenues to R&D. The impediments to innovation investments are, in order: the insufficiency of financial resources (31%), the absence of time (13%) and the lack of human resources (12%).

65%

6 out of 10 managers

consider that they have an advance level of innovation maturity.



Main impediments to innovation investments



31%

Insufficient
financial
resources



13%

Lack of time



12%

Lack of human
resources



Innovation Financing Options

However, there are numerous financing options for innovative projects, including a number of tax benefits, such as scientific research and experimental development (SR&ED) tax credits for qualifying businesses.



Every year, over 20,000 Canadian businesses share close to \$3 billion in tax incentives under the **federal SR&ED program**, which is enhanced by **provincial programs, including those in Quebec.**

Half of the managers surveyed (51%) state that they do not know enough about available financial assistance. They need to know that it's possible to get the support of an expert to prepare the application and maximize the potential financing under these programs.

“Anyone investing in research and development should inquire about the possibility of obtaining tax credits, which, in many cases, are refundable. The SR&ED credit program therefore becomes a source of funding for innovation.

– Pascal Perreault, Tax Partner

The Technology Shift

More than half of Quebec business managers (57%) say they have not invested in digital technology in the past year even though it represents the third most important issue. Among those that have invested, 17% did so in cloud computing, 12% in implementing or changing computer programs and 11% in integrating management software.



18%

of respondents stated that the digital shift is their main challenge for the next three years.

Considered to be the fourth industrial revolution, industry 4.0 is characterized by the integration of digital technology and automation of manufacturing and business processes. It provides numerous benefits for organizations.

Benefits of the 4.0 shift



Increased productivity



Overall product quality improvement



Increased sales and market share



Opportunity to sell internationally and undertake innovative activities



Client renewal and loyalty



Reduced operating costs through some measures

Three Misconceptions to Set Straight



Marie Cayer
CPA, CA
Manager,
Management
Consulting

For many organizations, digital transformation is the greatest challenge they are facing. To help you take an informed decision about the transformation, Marie Cayer, Manager in Management Consulting, clarifies a number of preconceived notions and current concerns regarding industry 4.0.



A 4.0 integration is an impossible task

The biggest mistake in a digital transformation is trying to do it all at once, an approach that often ends in failure. The transition must be well thought out and each step progressively planned. Before starting, it is recommended that a 4.0 audit, a diagnostic tool that measures the organization's overall digital maturity, be conducted. With this information on hand, the organization can then define its digital strategy and prepare a preliminary action plan that prioritizes projects to maximize the results of each step and the organizational impact.

It also makes it possible to better allocate and control costs and make the most of the return on the investment in the medium term.



Industry 4.0 only involves technology

The digital transformation has a progressive impact on the organization's entire value chain and major repercussions on a multitude of components. Similar to previous industrial revolutions, the digital shift must be undertaken as part of a well-thought-out, strategic corporate project and a thorough implementation and monitoring process. Industry 4.0 involves technology, but also management, tax and financing.



The 4.0 revolution is THE answer to the workforce shortage issue

Actually, automation will change the nature of jobs. Positions will be created and new competencies developed. Businesses will have several challenges to address. They should anticipate reviewing the organizational structure to meet the organization's new needs and train employees so they can evolve in their roles to ensure their engagement and be kept at the heart of the transformation. They have to take the time to assess the project's repercussions on their staff and manage the changes proactively.

“The digital transformation is, first and foremost, optimizing an organization through the use of data.

– Marie Cayer, Manager, Management Consulting

There's a 4.0 for every organization!

There is no magic recipe to successfully deploy a digital shift in an organization. The targeted technological scope must align with the organization's situation and needs. However, this important growth phase must be part of a carefully thought-out plan and based on strategic pillars that will guide the transformation and the organization through the next process steps.

To find out more about establishing a 4.0 strategy, **watch this webinar!**

*Webinar available in French only.





Shifting to 4.0 Slowly, But Surely

Raymond Chabot Grant Thornton recently assisted one of its clients, a manufacturer specializing in metal and mineral processing, in its strategic planning and 4.0 audit.

Audrey Cadot, Management Consultant, was on the team of experts assigned to support the organization in its transition. She considers that it was a major cultural change, since people were involved in all of the existing processes. As with any 4.0 shift, the transformation was implemented based on their situation.

According to Audrey Cadot, you have to ask three important questions as part of the transformation process:

**What do we
have**

?

“At this phase, we review the strategic planning with clients to understand their context, business objectives

and how they perceive the digital transformation in terms of their growth. We then assess the situation and digital tools currently used to determine the organization's digital maturity. It's also important to go on site to see the tools in use and the problems encountered to get a complete picture of the situation.

In our client's case, there was a productivity and efficiency challenge because procedures were not documented and there was a labour shortage. There was very little information being transmitted and there were few automated processes.

“The organization was very open-minded during the entire process. It was the ideal 4.0 audit situation, because we were able to count on the management's full support.

– Audrey Cadot, Management Consultant

What do we want?



Once the organization's digital maturity is ascertained, we look at the objectives and how we can reduce the gaps between the current situation, the best practices and what the organization wants in terms of business objectives and strategic priorities. This makes it possible to determine the level of maturity sought and develop a detailed plan.

The organization we supported had a long way to go and very few digitized processes.

We recommended that they go to 3.0 before moving up to 4.0 in order to stabilize processes, review roles and responsibilities and standardize internal knowledge sharing.

What do we have to change?



This plan makes it possible to validate the digital solutions proposed to the client and determine the major projects that will be prioritized based on importance, urgency, availability of resources and other constraints.

It was essential to begin by stabilizing the organization's foundations before a digital shift could be considered,

because the investment would not have been profitable. Over time, the transformation will improve existing processes and minimize risks while fostering employee engagement and efficiency. The process plan spans three years, with a gradual transition and appropriately supported change management.



Raymond Chabot Grant Thornton is one of the first private organizations to be accredited by the *Ministère de l'Économie et de l'Innovation* (MEI) to support Quebec businesses from all industries in their digital transformation. The MEI offers a subsidy of up to \$15,000 to support these businesses in their technology upgrade initiatives. Our experts' accreditation makes it possible to follow clients in all the key steps, from strategic planning, through to the 4.0 audit and implementation.

Basic Rules of 4.0



Cybersecurity: A Priority!

The rise in the use of digital and other new technologies, cloud computing and social networks is increasing the risk of cybercrimes.

Current security
challenges facing
SMEs



43%
Client data
security



22%
Fraud



Cybercrime can damage IT equipment or interrupt an organization's business activities to the point of compromising its reputation or profitability.

Whatever the nature of a business's activities, its information could have significant value for cybercriminals. It's therefore crucial that clients' and employees' personal information be safeguarded, but, additionally, employees and senior management must be made aware of the potential repercussions of a data leak or their online behaviour.



Five Tips to Safeguard Data:

1

Draft a clear policy on internet, email and social media utilization and measures to be taken in the event of an attack. Control the use of P2P share software (peer-to-peer software that transfers data between users without a central server) on office devices.

2

Carry out regular cybersecurity checks to review your processes. Remember to make wireless networks secure and update the operating system, security software and firewall.

3

Filter access rights and make the necessary changes.

4

Backup data on a hard drive every day.

5

Encrypt your communications and emails with personal or sensitive information to protect them. Segmentation is a process that transforms sensitive information into random numbers. It renders the data unusable for cybercriminals who might want to sell them and prevents violating confidentiality if the information is passed on to third parties.



What to do in the event of an attack?

Businesses that are the victims of a breach of private information under their responsibility must report the situation to the **Office of the Privacy Commissioner of Canada** if there is a real risk of harm to the persons involved.

Cryptocurrency Safety

While no cybersecurity model is 100% secure, the use of blockchain technology could solve the issues surrounding system data integrity by making transactions immutable, in a log (or general ledger). In fact, it offers a transparent, secure information storage and transmission technology that operates without a central control body. It also proposes to revolutionize online value exchange by not using any intermediaries.

With the prospect of a rapidly evolving digital economy, it's all the more important for businesses to enhance their knowledge of this technology. Yet:

Only 1 in 10 respondents

said they had sufficient or very good knowledge of blockchain and cryptocurrencies.



56%

know nothing about blockchain technology and 32% do not know about cryptocurrencies.

A Chain Reaction



Michel Besner,
General Manager
of Catallaxy,
explains how
blockchain works
and how it can make
a tangible contribution
to Quebec SMEs.

Blockchain is a computer system composed of blocks containing all past transactions that are placed in a perpetually growing chain.

Here's how this technology works at a high level:



Before any transaction, the system validates the ownership of the property that is the subject of the transaction by the person who claims to own it.



Since the system is decentralized, each computer on the network must have a copy of the registry to be updated as transactions occur. But how can a malicious individual be prevented from taking advantage of the system by introducing false transactions? This is where a very important aspect of the blockchain comes into play: the use of the same mathematical theories and concepts as those in the science of cryptography, like those used to secure your banking transactions and online purchases.



Lastly, traceability, another important feature of blockchain technology, makes it possible to develop tracking tools capable of reliably tracking any operation in the system—an interesting feature when analyzing financial transactions or even traceability in a supply chain. In addition, the blockchain is mainly used as a means of payment. For SMEs, cryptocurrencies are therefore becoming a practical and secure tool that they can use for any type of transaction.



Three Examples of Blockchain Technology for SMEs:



Smart Contract

The terms and conditions of a commercial contract can be coded into a “smart contract” for automatic performance without any party being involved. This means that when the contract is signed, these conditions are translated into a program that will be executed automatically.



Supply Chain

It can be quite difficult and costly for medium-sized businesses to track goods in the supply chain. By leveraging blockchain technologies, suppliers and buyers can have access to accurate and unchangeable information that can be verified by all parties. This process can lead to more effective supply chain management.



Trade Financing


For SMEs wishing to expand internationally, especially in emerging countries, cryptocurrencies can be an excellent tool for accepting payments and entering new markets.

Technology That Makes Data Talk

Data is at the heart of organizational decisions and transformations. According to our study, 51% of respondents consider accelerating data processing as an issue for their SME.



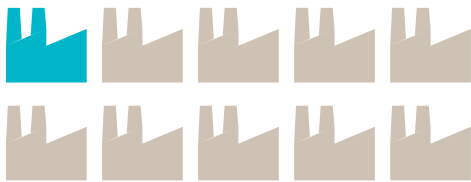
Advanced analytics help interpret data for business purposes and support the analysis of possibilities and decision-making. Investing in advanced analytics can make it possible to move well ahead of the competition. Only 12% of managers say that the level at which they exploit their business's data sources in terms of advanced analytics is high. While the majority of them (79%) consider they currently have sufficient software and resources available to profit from this information, insufficient knowledge (25%) and time (19%) hamper exploiting their data.



Going Beyond the Limits of Analytics

Artificial intelligence (AI) is used to develop algorithms to perform tasks previously handled by humans. This technology accelerates productivity, demystifies complexities and frees up valuable human resources performing repetitive, low added-value, time-consuming tasks or those with a high risk of error.

In Quebec, 1 in 10 businesses
has already implemented AI or plans
to do so in the near future.



68%

of them implemented AI
to increase operational
efficiency.

“Most businesses want to optimize operations first, whereas, in most cases, it's other functions that can be automated more easily (marketing, finance, logistics, human resources). Generally, these functions are similar from one organization to the next, meaning there is less custom development required.

– Éric Marcotte, Lead, Advanced Analytics and Artificial Intelligence



Artificial Intelligence, A Profitable Solution

Although still in its infancy, AI already promises to deliver a range of benefits for SMEs of all sizes, including:



Improved productivity

Including algorithms in the decision-making process increases the productivity of existing resources. For example, in the manufacturing sector, resources are able to predict production chain failures or automatically sort compliant products. In the financial and professional services sector, clients use algorithms to automate low added-value process steps.

An algorithm analysis of financial market prices, news and annual reports makes it possible to prioritize portfolio management teams' research efforts. In the logistics and distribution sector, analyzing merchandise characteristics in tandem with changes in client demand helps to avoid inventory shortages and maintain a high level of service.



Income growth

Data can be used to develop solutions that guide and assist activity sectors in strategic and tactical decisions, which help generating new revenues. For example, predictive models can be created for product and service cross sales to target those clients that are more likely to opt for additional goods and services and thereby increase revenues.



Improved Customer Experience

With advances in machine language understanding, AI can also improve the customer experience. For example, by analyzing the different facets of language, such as the words used or topics mentioned during a conversation with a call centre agent, metrics can be extracted, indexed and trends can be detected. As a result, the reasons for customer calls can be determined and ways to improve products or services can be identified.

AI goes further. For example, algorithms allow a virtual agent to answer simple questions, conduct specific conversations and produce multi-page texts with remarkable realism. It is therefore possible, for example, to deploy virtual agents to automatically answer a human resource department's FAQs, manage certain communications as part of a sales cycle or replace customer service agents.



A transformation integrating AI must be well thought out and needs to be included in the strategic planning. While AI has a wide range of applications, it's important to use it, first and foremost, to support the organization's mission and finances. The following case is a prime success story.

Automating Data Collection as a Competitive Tool



Éric Marcotte,
Lead, Advanced
Analytics and Artificial
Intelligence explains
how his team helped
a client become more
competitive by using AI.

Our client, an important Quebec financial institution, wanted to collect a considerable quantity of details on all of the transactions in a specific sector.

It therefore needed a tool to collect and structure the information to enhance its knowledge in order to monitor the competition. Developing the tools was a monumental task, that would have been almost impossible using traditional procedures, because it required analyzing hundreds of thousands of articles published by various sources to extract the relevant information.

The objective was therefore to create a custom solution for the client's needs, in collaboration with its innovation team.



A personalized solution

Our experts developed a tailored natural language comprehension tool that the client used to automate data collection and develop a high-value database. In this type of assignment, modules can be added to meet additional client needs. Thanks to our solution, the client will always know about trends in its market.

A Business That Eclipses the Market!

Innovation provides our local businesses with an opportunity to stand out locally and internationally.



Connect&Go is a prime example. This Montréal company, co-founded by Dominic Gagnon in 2012, specializes in the connected bracelet market and provides access, payment and frictionless customer experience solutions for the leisure, sports and entertainment sectors.

In 2018, Connect&Go diversified its service offering to expand into the permanent installations segment, such as amusement parks, ski hills and hotel complexes. The company recently completed two strategic acquisitions that allow it to offer customers a fully integrated solution, GOTIX, an event ticketing system and Dator, an amusement park ticketing and management system. The company has also developed the first smart silicone bracelet vending machine.

“We often forget that innovation is doing something that’s never been done before. That’s how you win and stand out in the market.”

– Dominic Gagnon, Co-Founder

CONNECT&GO



Winner 2019 Person of the Year Awards

ECLIPSE Category

In the 2019 edition of the Person of the Year Awards, **Dominic Gagnon** won in the ECLIPSE category, a recognition for the leader of a growing business that uses innovation to transform its market or create a new one.



The Person of the Year Awards, presented by Raymond Chabot Grant Thornton and Concordia University's John Molson School of Business, celebrate local business people who play an active role in the development of local leading-edge enterprises and the emergence of tomorrow's talent.

Who will be the headliners of the 2020 Person of the Year Awards?

Follow what's happening with the latest edition of the contest by visiting rcgt.com/awards.