Institut
de la statistique
Québec

Survey of Digital Technology
Use by Businesses

About the Survey

The *Survey of Digital Technology Use by Businesses* is conducted at the request of the Ministère de l'Économie, de l'Innovation et de l'Énergie. This survey builds and expands on the *Survey of Internet Integration Into Business Processes* conducted in 2012, 2016, 2018, and 2020. Its objective is to gather information on the digital transformation of businesses located in Québec. The survey includes about 50 questions divided into nine major themes: Internet access, Internet presence, e-commerce, use of information technology, use of cloud computing, customer information, automatic information sharing, computer security, and investment in information technology.

The government will use the aggregated results from this survey to develop and adapt its policies and programs targeted at Québec businesses. These results will also be used by the private sector and researchers for analysis purposes.

Mandatory participation

Your business has been selected to participate in this survey. Given the importance of the survey results, your business's participation is mandatory in accordance with the *Act respecting the Institut de la statistique du Québec* (CQLR, chapter I-13.011).

Confidentiality

You must provide your business data to the Institut de la statistique du Québec, as indicated in the questionnaire. The Institut de la statistique du Québec guarantees the confidentiality of the data provided as part of this survey.

These data may be matched by the Institut de la statistique du Québec with data from other surveys or with administrative data in order to derive maximum statistical benefit from this survey. All matched data will be kept strictly confidential by the Institut de la statistique du Québec and will be used solely for statistical purposes.

For quality and training purposes, telephone conversations with the Institut de la statistique du Québec agents are recorded. Any person who does not want their conversation to be recorded can notify the agent at the beginning of the call.

Assistance

If you should require assistance, contact the Direction de la gestion de la collecte by phone at 1-800-561-0213 or by e-mail at collecte_internet@stat.gouv.qc.ca.

Instructions

- ▶ **Do not return the questionnaire to us, either by mail or fax.**

- ▶ **Please fill out the questionnaire within the next two weeks.**

- ▶ As this survey deals with Internet and ICT use in Québec, please be sure your responses reflect only the portion of your business located in Québec.

- ▶ Answer to the best of your knowledge. If you do not have the exact information pertaining to certain sections of the questionnaire, please provide the best possible estimate.

- ▶ To answer all the questions, you may have to consult others working at your business.

Definitions

The definitions below refer to the items in the questionnaire marked with an asterisk (*).

Smartphone

Cell phone with additional features, such as Web access, e-mail, planner, calendar, GPS, etc. Additional applications developed by the manufacturer or another software publisher may be installed on this device.

Tablet

Portable device with neither keyboard nor mouse and whose only interface is a touch screen. Its functions are similar to those of a computer. It permits Internet access through a Wi-Fi connection or mobile phone network.

Open-source software

Software whose source code is readily accessible and can be legally copied, modified and redistributed.

Enterprise resource planning (ERP) software

Software allowing the integrated management of at least two business functions (e.g. production, sales, accounting, human resources) into a centralized data system (e.g. SAP software).

Logistics or traceability software

Software that analyzes data transmitted via identifiers attached to products, such as bar codes or radiofrequency identification (RFID) tags.

Customer relationship management (CRM) software

Software for compiling or analyzing the data of current and potential customers for marketing purposes.

3D printing

Additive manufacturing process used to produce real objects using computer-aided design (CAD) software. A three-dimensional model is sliced by a software and is then printed layer by layer until the final object has been created. 3D printing is used in rapid prototyping and in parts manufacturing.

Robotics

Use of automatic machines or robots to carry out certain tasks, for example as part of a manufacturing process or in challenging environments (dangerous, polluted, etc.).

Analytical applications

Applications that use descriptive statistics, predictive analytics and prescriptive analytics to analyze business data (particularly customer, supplier and partner data) to guide business decisions.

Big data

Big data are generated by electronic and/or machine to-machine activity (e.g. data from social media or production processes). Big data analytics uses techniques, technology, algorithms and software to exploit vast amounts of data from the business or other sources.

Machine learning

Machine learning is part of the field of artificial intelligence. It comprises the design, analysis, development and implementation of methods that enable a machine or software application to evolve on its own in order to carry out complicated tasks.

Internet of things

The Internet of things consists in connecting realworld objects and places to the Internet. Information and data are exchanged between devices in the real world and the Internet network to simplify operations and decision making (e.g. smart meters, remote monitoring).

Cloud computing services

Cloud computing services provide access over the Internet to software, storage, computing power, or other services available on the servers of external providers. Cloud computing services are **paid services**. They can be pay-per-user or pay-per-use, can be adjusted on demand (type of services offered or capacity), and can be used as needed.

Data mining

Data mining consists in extracting knowledge from a large amount of data (e.g. big data*). Data mining can be used to infer information that will help make business decisions.

Employees or managers specializing in ICT

Employees or managers specializing in information and communication technology (ICT) are responsible for the design, development, installation, operation, support, maintenance, management and evaluation of ICT systems. Their primary professional focus is on ICT activities.

Section 1   Internet access

1   **Does your business use a:**

This includes the owner's or an employee's computer if it has been paid for by the business or is used for the needs of the business.

		Yes	No
a)	computer (e.g. desktop or laptop computer)?	☐	☐
b)	smartphone*, tablet*, or any other type of portable device?	☐	☐

▶ **If you answered "No" to questions 1a and 1b, skip to question 52. Otherwise, continue to question 2.**

2   **Does your business have an Internet connection?**

The personal connection of the owner, an employee, or anyone else must be included if it is paid for in part by the business or if it is used for the needs of the business.

☐ Yes → Continue to question 3

☐ No, but planning to get one within 12 months → Skip to question 5

☐ No, and not planning to get one within 12 months → Skip to question 5

3   **According to your service contract, what is the maximum download speed (in Mbps) of your business's fastest Internet connection?**

You can find this information on your service contract or obtain it from your Internet provider. If you can do neither, answer to the best of your knowledge.

Do not use a download speed test found online, as the results only indicate your current download speed.

☐ Under 1.5 Mbps

☐ From 1.5 to less than 5 Mbps

☐ From 5 to less than 30 Mbps

☐ From 30 to less than 100 Mbps

☐ 100 Mbps or more → Skip to question 6

4   **Why doesn't your business use a faster Internet connection?**

Check off (✔) all that apply.

☐ No faster connection speed available in our region

☐ Unsatisfactory faster Internet connection

☐ Cost too high

☐ No need or limited need for a faster Internet connection

☐ Other reason. Specify: |_____|

▶ **Skip to question 6.**

5 **Why doesn't your business have an Internet connection?**

Check off (✔) all that apply.

☐ No Internet service in our region

☐ Unsatisfactory Internet service quality

☐ Cost too high

☐ Not familiar enough with the Internet to use it

☐ No need or limited need to use the Internet

☐ Other reason. Specify: |_____|

▶ **Skip to question 38.**

6 **Does your business provide certain employees, including managers, with portable devices that allow a mobile connection to the Internet for business purpose?**

This includes connections via mobile telephone networks, but not fixed wireless connections (Wi-Fi).

☐ Yes

☐ No

Section 2   Internet presence

7 **Does your business have an online presence through any of the following?**

		Yes	No
a)	Its own website	☐	☐
b)	The website of another organization (e.g. banner, industrial or regional association, marketplace)	☐	☐
c)	Social media, via its own page or its own account (e.g. Facebook, Twitter, LinkedIn or Instagram)	☐	☐

▶ **If you answered "Yes" to question 7a, skip to question 10.**
Otherwise, continue to question 8.

8 **Does your business intend to set up its own website over the next 12 months?**

☐ Yes   ➜   Skip to question 12

☐ No   ➜   Continue to question 9

9   Why doesn't your business have its own website?

Check off (✔) all that apply.

☐   Lack of financial resources to develop or maintain a website

☐   Lack of personnel qualified to develop or maintain a website

☐   The presence of the business on the sites of other organizations or social media is sufficient

☐   No need for a website

☐   Other reason. Specify: |_____|

▶   **Skip to question 12.**

10   Which of the following are available on your business's website?

		Yes	No
a)	Information on the business's goods or services	☐	☐
b)	Online ordering or reservations without delivery	☐	☐
c)	Online ordering with delivery	☐	☐
d)	Secure online payment (via an HTTPS page)	☐	☐
e)	Personalized content for regular customers	☐	☐
f)	Job postings	☐	☐
g)	Interactive tools (e. g. discussion forums or blogs)	☐	☐
h)	Chatting (e.g. real-time customer service or technical support, provided by a person or a virtual agent)	☐	☐

11   Does your business have a mobile website adapted to mobile devices?

A mobile website is an optimized version of a regular website for smartphones and tablets.

☐   Yes

☐   No, but planning to get one within 12 months

☐   No, and not planning to get one within 12 months

12   Does your business use social media (e.g. Facebook, Twitter, LinkedIn or Instagram) for the following?

		Yes	No
a)	Become known via its own page or account	☐	☐
b)	Interact with customers	☐	☐
c)	Place ads	☐	☐
d)	Search for information (e.g. about a potential hire or competitor)	☐	☐
e)	Sell its goods and services	☐	☐
f)	Disseminate information (e.g. on the business's activities, events, promotions or news)	☐	☐
g)	Communicate with its employees (within the business)	☐	☐
h)	Recruit personnel (e.g. advertise available jobs)	☐	☐
i)	Other. Specify: |_____|	☐	☐

Section 3 E-commerce

▶ REMINDER: This survey deals with businesses in Québec, so you must only provide data for the portion of your business located in Québec. If your business has establishments in provinces other than Québec and you are not able to provide a breakdown of the data for the portion of your business located in Québec, please report the percentages for Canada as a whole.

ONLINE SALES

For the purpose of this question, it is not necessary for such orders to have been paid online.

Quote requests must be included only if the commitment to purchase was made online.

13 **Does your business <u>receive</u> orders for goods or services via the Internet, excluding orders received via conventional e-mail?**

Please include orders received via your business's website, the websites of other businesses or organizations, social media, or other platforms.

☐ Yes ➜ Continue to question 14

☐ No, but planning to do so within 12 months ➜ Skip to question 24

☐ No, and not planning to do so within 12 months ➜ Skip to question 23

14 **In 2022, what percentage of your business's total sales came from orders received via the Internet?**

|_____| %

15 **In 2022, what percentage of the value of the orders received by your business via the Internet came from the following platforms?**

a)	Your business's website	|_____| %
b)	The website of another organization (e.g. Booking, Amazon, Bonjour Québec, Tuango or Panier bleu)	|_____| %
c)	Social media	|_____| %
d)	Other platforms (e.g. mobile applications)	|_____| %
	▼	▼
	TOTAL	|__100__| %

16 **In 2022, what percentage of the value of the orders received by your business via the Internet came from the following geographic markets?**

a)	Québec	|_____| %
b)	Elsewhere in Canada	|_____| %
c)	United States	|_____| %
d)	Other countries	|_____| %
	▼	▼
	TOTAL	|__100__| %

17 **In 2022, what percentage of the value of the orders received by your business via the Internet came from the following types of consumers?**

a) Individuals _____ %

b) Businesses _____ %

c) Governments and other organizations _____ %

▼ ▼

TOTAL | 100 | %

18 **Does your business sell digital products that are either downloadable or accessible online (e.g., downloadable or streamable documents, music or videos; software; subscriptions)?**

☐ Yes ➜ If yes, identify these types of digital products sold by your business.

☐ Documents (e.g. PDF, XLSX, DOCX, EPUB, MOBI, DWG)

☐ Audio files (e.g. MP3, AAC, WMA, WAV, AIFF, DSD, FLAC, ALAC)

☐ Videos and images (e.g. JPEG, PNG, MPEG, AVI, MOV, MP4, WMV)

☐ Music or video streaming

☐ Software or applications, excluding video games

☐ Video games

☐ Online subscriptions

☐ Other type of digital product. Specify: _____

☐ No

19 **In 2022, what percentage of the value of the orders received by your business via the Internet were for the following types of products?**

a) Goods (e.g. merchandise) _____ %

b) Services (e.g. accommodations, transportation or professional services) _____ %

c) Digital products that are downloadable or accessible online _____ %

▼ ▼

TOTAL | 100 | %

20 **What are the benefits of selling online for your business?**

Check off (✔) all that apply.

☐ Lower costs

☐ Increase in the number of customers

☐ Geographic expansion of customer base

☐ Reduced marketing time

☐ Increased sales

☐ Better co-ordination with suppliers, customers or partners

☐ Increased visibility

☐ Other. Specify: _____

or

☐ No benefit

21   In 2022, did your business face any challenges related to selling on the Internet?

☐   Yes   ➜   Continue to question 22

☐   No   ➜   Skip to question 24

22   In 2022, what challenges related to selling on the Internet did your business face?

Check off (✔) all that apply.

☐   Goods or services that cannot be sold on the Internet

☐   High development or maintenance costs

☐   High shipping or delivery costs

☐   Computer security challenges

☐   Lack of skills, training or experience among staff

☐   Legal challenges

☐   Cost of external transaction services

☐   Cost of services offered by marketplaces *(for example, subscription fees, transaction fees, return management fees, storage fees, etc.)*

☐   Other challenge, specify: |_____|

▶   **Please skip to question 24.**

23   Why doesn't your business sell its goods or services over the Internet?

Check off (✔) all that apply.

☐   Nature of your business's goods or services means they cannot be sold over the Internet

☐   Few of your business's customers interested in placing orders over the Internet

☐   Security concerns

☐   Lack of expertise or financial resources to develop or maintain a technological solution

☐   Little or no interest in online sales

☐   Another business or organization is in charge of selling your goods and services

☐   Other reason. Specify: |_____|

ONLINE PURCHASES

24 **Does your business order goods or services over the Internet, excluding orders placed by conventional e-mail?**

Payment for these orders does not have to be made online.

☐   Yes   →   Continue to question 25

☐   No   →   Skip to question 26

25 **In 2022, what percentage of the value of all goods and services purchased by your business were made through orders placed over the Internet?**

☐   Less than 1%

☐   1% to less than 10%

☐   10% to less than 25%

☐   25% to less than 50%

☐   50% to less than 75%

☐   75% or more

Section 4   Use of technology

26 **Does your business use the following communication and collaboration tools?**

If necessary, refer to the definitions at the beginning of the questionnaire.

		Yes	No
a)	Intranet (website only accessible to employees)	☐	☐
b)	Extranet (website or part of a website only accessible to partners)	☐	☐
c)	Web conferencing/videoconferencing	☐	☐

27 **Does your business use the following software and software packages?**

		Yes	No
a)	Open-source software* (e.g. Linux or Open Office)	☐	☐
b)	Enterprise resource planning software* (e.g. ERP, DMS or project management software)	☐	☐
c)	Design software (e.g. PLM, CAD, 2D/3D or BIM)	☐	☐
d)	Production software (e.g. MRP, MES, robotics* or 3D printing*)	☐	☐
e)	Logistics or traceability software* (e.g. RFID or NFC)	☐	☐
f)	Customer relationship management software* (CRM)	☐	☐

28   **Does your business use the following applications and advanced technology?**

		Yes	No
a)	3D printing*	☐	☐
b)	Robotics*	☐	☐
c)	Analytical applications* (e.g. to analyze big data*)	☐	☐
d)	Machine learning*	☐	☐
e)	Internet of things* (e.g. smart meters, remote monitoring)	☐	☐

Section 5   Use of cloud computing

29   **In 2022, did your business use any cloud computing services* from one or more external providers?**

☐   Yes   ➜   Continue to question 30

☐   No, but planning to do so within 12 months   ➜   Skip to question 33

☐   No, and not planning to do so within 12 months   ➜   Skip to question 33

30   **Did your business use:**

Check off (✔) all that apply.

☐   Private cloud computing services* (designed for exclusive use)?

☐   Public cloud computing services* (designed for non-exclusive use)?

31   **In 2022, what type of cloud computing services* did your business use?**

☐   Web based e-mail

☐   Office software

☐   Finance or accounting software applications

☐   Customer relationship management software* (CRM)

☐   Data storage

☐   Infrastructure (e.g. networks or servers)

☐   Other cloud computing services. Specify: _____

32   **Does your business store any data via cloud computing services*?**

☐   Yes   ➜   If yes, Please identify the type of data stored.
                Check off (✔) all that apply.

      ☐   Personal employee information

      ☐   Confidential information on customers, suppliers or partners

      ☐   Non-confidential information

☐   No

Section 6 Customer information

33 **In 2022, did your business obtain or collect information on its customers?**

Please include instances where this information was obtained or collected by another business or organization.

☐ Yes ➜ Continue to question 34

☐ No ➜ Skip to question 37

34 **From what sources did your business obtain or collect customer information?**

Check off (✔) all that apply.

☐ Directly from its customers

☐ Data mining*

☐ Other business or organization under contract

☐ Loyalty or reward program

☐ Other source. Specify: _____

35 **Does your business store customer information electronically?**

☐ Yes

☐ No

36 **What methods did your business use to protect the customer information it collected or stored electronically in 2022?**

Check off (✔) all that apply.

☐ Offline data storage

☐ Data access restricted to certain employees

☐ Data encryption

☐ Protection by another business or organization

☐ Other method. Specify: _____

or

☐ No method used

Section 7   Automatic sharing of information

37 **Does your business share information <u>electronically</u> in a standardized format with the following partners?**

The information may be transmitted via a website or another electronic data transfer method, excluding messages transmitted via conventional e-mail.

		Yes	No
a)	Customers (e.g. billing or inventory)	☐	☐
b)	Suppliers (e.g. billing or inventory)	☐	☐
c)	Financial institutions (e.g. payment operations)	☐	☐
d)	Federal and provincial governments (e.g. tax return)	☐	☐

38 **When your business <u>receives</u> an order (whether electronically or not), is related information automatically shared electronically with the following areas of your business?**

		Yes	No
a)	Inventory management	☐	☐
b)	Accounting	☐	☐
c)	Production management	☐	☐
d)	Distribution management	☐	☐

39 **When your business <u>places</u> an order for goods or services (whether electronically or not), is related information automatically shared electronically with the following areas of your business?**

		Yes	No
a)	Inventory management	☐	☐
b)	Accounting	☐	☐

▶ **If you answered «No» to question 2 (your business doesn't have an Internet connection), skip to question 52.**
Otherwise, continue to question 40.

Section 8 Computer security

40 Does your business currently have any of the following ICT security measures in place?

Check off (✔) all that apply.

☐ Automatic software updates

☐ Antivirus or antispyware software

☐ Firewall

☐ SPAM filter (to prevent unwanted e-mails that may contain security threats)

☐ Web-filtering software (e.g. Websense)

☐ Identity and access management (via administrator accounts)

☐ Authentication of internal and/or external users (e.g., multi-factor authentication or MFA)

☐ Secure Web servers (e.g. SSL or HTTPS protocol)

☐ Regular back-up of essential business data

☐ Continuity plan for computer activities in case of disaster

☐ Instructions for using mobile devices

☐ Other. Specify: _____

or

☐ No ICT security measures in place

41 In 2022, was your business targeted by cybersecurity incidents?

☐ Yes ➜ If yes, please specify the type of incidents.
Check off (✔) all that apply.

    ☐ Incidents aimed at disrupting its web presence

    ☐ Incidents aimed at stealing personal or financial information

    ☐ Incidents aimed at stealing money or obtaining a ransom

    ☐ Incidents aimed at accessing unauthorized areas

    ☐ Other incidents or incidents without a knows motive

☐ No

☐ Don't know

Please include computer hardware, software (licenses; purchased, customized or internally developed software; etc.) and other ICT equipment used to collect, store, process, transmit and present information (voice, data, text, images). Exclude current expenditures such as repair and maintenance costs and wages.

42 **In 2022, did your business incur expenditures to acquire or develop information and communication technology (ICT)?**

☐ Yes ➜ Continue to question 43

☐ No ➜ Skip to question 44

43 **In 2022, what percentage of your business's total expenditures was allocated for the acquisition or development of information and communication technology (ICT)?**

|_____| % of total expenditures

44 **Does your business use the following human resources to develop or manage its information and communication technology (e.g. technological infrastructure, servers, website, computer security, software applications, etc.)?**

		Yes	No
a)	Employees or managers specializing in ICT* (including those working at another establishment in your business)	☐	☐
b)	Other categories of employees or managers	☐	☐
c)	External resources, for business consulting	☐	☐
d)	External resources, for ICT development	☐	☐
e)	External resources, for the outsourcing of specific ICT services (e.g. Web hosting, etc.)	☐	☐
f)	Other resource. Specify: |_____|	☐	☐

45 **In 2022, did your business hire or seek to hire information and communication technology (ICT) employees?**

☐ Yes ➜ Continue to question 46

☐ No ➜ Skip to question 47

46 **In 2022, did your business have trouble hiring information and communication technology (ICT) employees?**

☐ Yes

☐ No

47 **In 2022, did your business provide training to the following categories of employees to develop or improve their information and communication technology (ICT) skills?**

		Yes	No
a)	Employees or managers specializing in ICT* (check "No" if your business has no employees or managers specializing in ICT)	☐	☐
b)	Other categories of employees or managers	☐	☐

▶ **If you answered "No" to questions 47a and 47b, skip to question 49. Otherwise, continue to question 48.**

48 **In 2022, what percentage of your business's employees, including managers, were given training to develop or improve their information and communication technology (ICT) skills?**

Please include all occupational categories.

|_____| %

49 **Does your business intend to provide training to develop or improve the information and communication technology (ICT) skills of the following categories of employees over the next 12 months?**

		Yes	No
a)	Employees or managers specializing in ICT* (check "No" if your business has no employees or managers specializing in ICT)	☐	☐
b)	Other categories of employees or managers	☐	☐

50 **Which means does your business use to help employees adopt new information and communication technology (ICT)?**

Check off (✔) all that apply.

☐ Communication plan for notifying employees

☐ Employee training (Please include peer training, self-training, etc.)

☐ Redefining roles and tasks

☐ Other. Specify: |_____|

or

☐ None used

51 **a) Over the past few years, has your business adopted an information and communication technology (ICT) that transformed its business processes?**

☐ Yes ➜ Continue to question 51b

☐ No ➜ Skip to question 52

b) Which technology?

|_____|

Section 10 General information about the business

▶ REMINDER: Provide an estimate for the data below for the portion of your business located in Québec. All data gathered will be kept strictly confidential and will be used solely for statistical purposes.

52   What was your business's sales revenue for the most recent full fiscal year?

- [ ] Less than $1 million
- [ ] $1 million to less than $10 million
- [ ] $10 million or more

53   What percentage of the sales reported at question 52 from the following geographic markets?

If your business is near a border and you cannot provide a breakdown of your sales by customer origin, please write 100% from Québec.

a)	Québec	____ %
b)	Elsewhere in Canada	____ %
c)	United States	____ %
d)	Other countries	____ %
	TOTAL	100 %

54   Is your business one of the following?

		Yes	No
a)	Subsidiary of another business	[ ]	[ ]
b)	Franchise, banner or member of a brand network	[ ]	[ ]
c)	Primarily a subcontractor to other businesses or organizations	[ ]	[ ]

55   Please <u>estimate</u> the percentage of your business's employees with the following types of diplomas.

A diploma does not have to be related to an employee's position.

a)	University degree	____ %
b)	College (CEGEP) diploma or Attestation of college studies (AEC) (no university degree)	____ %

Section 11 **Québec enterprise number (NEQ)**

▶ The Québec enterprise number allows the Institut de la statistique du Québec to match the data provided in this survey with administrative data or data from other surveys. All matched data will be kept strictly confidential and will only be used for statistical purposes.

This is the 10-digit number (starting with 1, 2 or 3) assigned to your business by the Registraire des entreprises du Québec. It is used, among other things, to identify you to Revenu Québec.

56 **What is your Québec enterprise number (NEQ) ?**

| | | | | | | | | | | |

Comments

The section below is provided for your comments. Rest assured that we review all comments received with a view to improving the survey.

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The Institut de la statistique du Québec would like to thank you for taking part in this survey.