

Digital technology and Internet use, 2021

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The COVID-19 pandemic has highlighted the utility of digital technology use among Canadian businesses. Since the onset of the pandemic, work and business transactions have increasingly been conducted virtually rather than in-person. This has continued through 2021 for many businesses, as the pandemic has emphasized the need to use digital technologies to adapt to new realities.

The Survey of Digital Technology and Internet Use (SDTIU) 2021 measures these new realities, including increased web presences of Canadian businesses (e.g., websites), increased e-commerce sales, increased teleworking and increased adoption of information and communication technologies (e.g., cloud computing, Customer Relationship Management software).

In addition, shifts during the pandemic towards increasing use of digital technologies may represent permanent changes for some businesses. According to the Canadian Survey on Business Conditions (CSBC) conducted in the second quarter of 2021, almost one in five (19%) businesses reported they were likely going to permanently increase their online sales capacity once the pandemic ends.

Canadian businesses gross \$398 billion in e-commerce sales in 2021

In 2021, Canadian businesses with five or more employees grossed \$398 billion in e-commerce sales, roughly 30% higher than in 2019 (\$305 billion), the year preceding the start of the pandemic. This also marked a nearly four-fold increase in e-commerce sales over the past decade, when sales reached \$106 billion in 2012.

Industries with a greater amount of business-to-business transactions dominated e-commerce sales. The manufacturing sector accounted for nearly one-quarter of all e-commerce sales (\$105 billion), followed by wholesale trade (\$77 billion) and transportation and warehousing (\$51 billion). In addition, the retail trade sector grossed \$35 billion in e-commerce sales over the same period, an increase of nearly 60% since 2019 (\$22 billion).

One-third of Canadian businesses have e-commerce sales in 2021

One-third (33%) of Canadian businesses had at least some e-commerce sales in 2021, marking an increase from 2019, when one-quarter (25%) received or made sales of goods or services over the Internet.

Large businesses (38%) were the most likely to report e-commerce sales, while medium (36%) and small (32%) businesses did not lag far behind. This compares favourably to other small businesses internationally; the Organisation for Economic Co-operation and Development (OECD) reported that 25% of small businesses from reporting member countries had online sales in 2020.

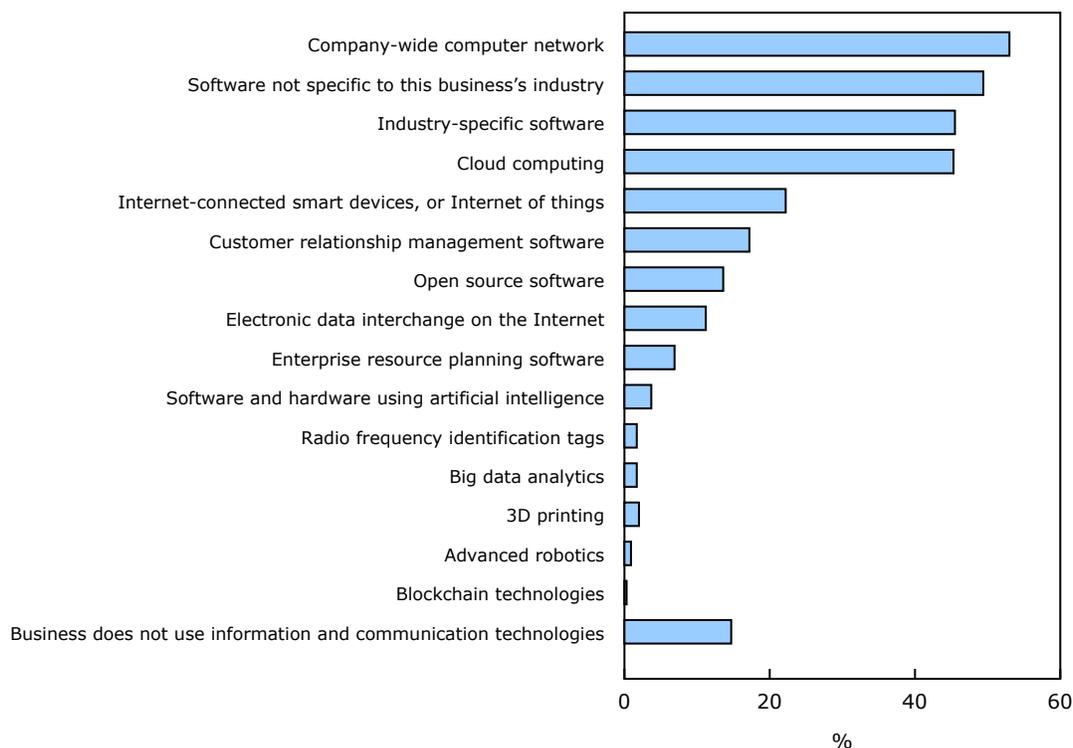
Canadian businesses with e-commerce sales grossed, on average, \$3.7 million in sales over the Internet in 2021, however this varied greatly by size of business. Large businesses reported, on average, \$79 million in gross e-commerce sales, while medium-sized businesses reported \$4.2 million and small businesses reported \$580,000.

Nonetheless, Canadian businesses of all sizes saw an increase in e-commerce in 2021, both in terms of the percentage of businesses that had e-commerce sales, as well as the average e-commerce sales grossed. Most notably, this growth was greatest for small businesses, where 41% more small businesses sold online in 2021, and had an average increase of roughly 65% in e-commerce sales compared with 2019.



Use of various information and communication technologies grows in 2021

Chart 1
Information and communication technologies used by businesses, Canada, 2021



Source(s): Table 22-10-0117-01.

Beyond the growth in e-commerce, the pandemic has emphasized the need to use digital technologies. As such, in 2021, more Canadian businesses used information and communication technologies (ICT) (85%) compared with 2019 (80%). Some of the most used technologies were company-wide computer networks (53%), industry specific software (46%) and Internet-connected smart devices (22%). Conversely, some more advanced types of ICT were less common, such as software and hardware using artificial intelligence (4%), 3D printing (2%), advanced robotics (1%) or blockchain technologies (less than 1%).

One of the most used ICTs in 2021 was cloud computing, with 45% of Canadian businesses using the technology, marking an increase of six percentage points from 2019. In addition, businesses using cloud computing technologies reported spending, on average, \$43,000 in 2021, an increase of roughly \$15,000 from 2019. On average, large businesses spent \$558,000, medium-sized businesses spent \$44,000 and small businesses spent \$8,800 on cloud computing in 2021. Businesses in the information and cultural industries sector (77%) were the most likely to use cloud computing technologies, followed by those in the utilities sector (72%) and the professional, scientific, and technical services sector (70%).

Although adoption of software and hardware using artificial intelligence (AI) was uncommon within the overall business population, the rate of adoption in 2021 was the greatest among large businesses (20%), and businesses in the utilities sector (17%) and in the information and cultural industries sector (13%). Among businesses that used AI technologies, machine learning (37%) and technologies that automate workflows or assist in decision making (37%) were used most frequently.

One-third of Canadian businesses offer their employees the option to telework in 2021

The impact of the COVID-19 pandemic is evident in the increase in the number of workplaces offering remote working. One-third (33%) of Canadian businesses offered some or all their employees the option to telework in 2021, an increase of 14 percentage points compared with 2019 (19%). Nearly three-quarters (74%) of large businesses allowed teleworking in 2021, compared with 53% of medium-sized and 27% of small businesses.

While businesses are allowing employees to telework, there is an anticipation that some employees will be asked to return to the office as pandemic restrictions are lifted. According to the CSBC in the third quarter of 2021, the percentage of the workforce anticipated to continue to primarily telework once the pandemic is over was 28%.

One-tenth of Canadian businesses employ information and communications technology specialists; roughly the same proportion as in 2019

One-tenth (10%) of Canadian businesses employed one or more ICT specialists in 2021, similar to the proportion in 2019 (9%). Among these businesses, ICT specialists represented, on average, 7% of their workforce.

The information and cultural industries sector (37%) and utilities sector (30%) were most likely to have businesses with ICT specialists in 2021. Just over half of large businesses (51%) and just over one-fifth of medium-sized businesses (21%) had ICT specialists, compared with 7% of small businesses; all remain roughly unchanged from 2019.

In 2021, a small proportion of Canadian businesses (4%) had job vacancies for an ICT specialist. Among the businesses that attempted to hire an ICT specialist, several challenges were faced in doing so, including applicants lacking skills (67%), salary requests were too high (51%) and a lack of candidate interest in the position (37%).

Two-fifths (40%) of businesses with ICT specialists provided training to develop or upgrade the ICT-related skills of those staff. Nearly two-thirds (64%) of large businesses provided such training, compared with just over four-tenths (41%) of medium-sized businesses and around one-third (32%) of small businesses.

Web presence rises slightly in 2021 for Canadian businesses; businesses spend roughly \$6.5 billion for online advertisements

A large majority of Canadian businesses (89%) had at least one type of web presence in 2021, marking a slight increase from 2019 (85%). These web presences include company websites (78%), social media accounts (61%) or email marketing (19%). Among businesses with a company website, around three in five (59%) had a website optimized for use on a mobile device.

Being measured for the first time by SDTIU, Canadian businesses spent roughly \$6.5 billion for online advertisements in 2021. While no comparisons to 2019 can be done directly on total spending on advertising, slightly more Canadian businesses indicated they used paid online advertising in 2021 (24%) compared with 2019 (23%).

On average, businesses in the utilities sector (\$784,000), the information and cultural industries sector (\$408,000) and the manufacturing sector (\$297,000) had the highest spending for online advertisements. The most widely used types of paid online advertisements were social media ads (82%), search engine optimization (46%) and pay per click (44%).

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Note to readers

Data for this survey were collected from November 2021 to March 2022.

The questions on this survey asked respondents to report for reference year 2021 exclusively.

The target population of the 2021 iteration of this survey included enterprises with Canadian operations, from most economic sectors, with five or more full or part-time employees based on Statistics Canada's Business Register. The final sample size was approximately 14,000 enterprises and the response rate was 73%.

The business size categories presented in this article are based on the number of full-time employees that enterprises reported having on this survey. Small businesses have 19 or fewer full-time employees. Medium-sized businesses have 20 to 99 full-time employees, except for medium-sized manufacturing businesses which have 20 to 499 full-time employees. Large businesses have 100 or more full-time employees, except for large manufacturing businesses which have 500 or more full-time employees.

Percentages published in this article represent a percentage of businesses.

Definitions

Electronic commerce (e-commerce) sales refer to all sales of a business's goods or services where orders were received, and the commitment to purchase was made, over the Internet. Payment can be made by other means. This includes business to consumer transactions as well as business to business transactions.

Information and communication technologies (ICT) specialists are employees for whom ICT-related activities are central to their job.

E-commerce sales refer to sales where orders were received, and the commitment to purchase was made, over the Internet. This includes business to consumer transactions as well as business to business transactions.

Available tables: [22-10-0116-01](#) to [22-10-0127-01](#) .

Definitions, data sources and methods: survey number [4225](#).

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