



Ville de Montréal

The impact of the pandemic on the downtown areas of Canada's six major cities

Final Report
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Table of Contents

Summary	1
Introduction	7
Pre-pandemic portrait of the six downtowns	11
Residential function	11
Economic function	13
Commercial function	14
Tourism, culture and entertainment function	15
Education function	16
Transport and transit function	16
Main sources of revenue for cities	17
Accelerated trends due to COVID-19 and implications for downtown areas	18
Teleworking: Toward greater adoption of hybrid models	19
Tourism: Leisure travel should rebound, but business travel will be slower to recover	26
Retail trade: The rise of e-commerce and other vulnerability factors	29
Paradigm shifts in the way people consume cultural goods and entertainment	32
Online education	36
Review of international initiatives	38
Stabilize the situation to avoid a structural crisis	38
Financial support for cities	40
Build more resilient cities to withstand the COVID-19 crisis and future disruptions	41
Reflection to reinforce the role of downtowns	43
Appendix A: Pre-pandemic portrait of the six downtowns	54
Appendix B: Proportion of GDP by sector	101
Appendix C: Federal Proposals	104
Appendix D: Major Events Related to COVID-19	106
Appendix E: Limitations of use	108

Note : The original document produced by PwC was written in French. The english translation was carried out by the City of Montreal. PwC is therefore not responsible for any inaccuracies in this translation.

Summary

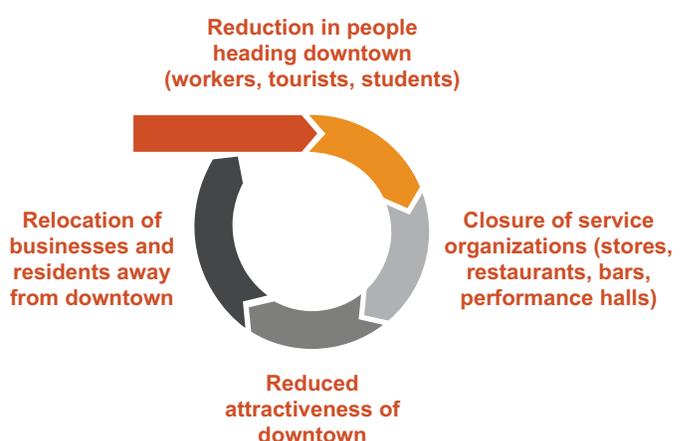
	Objective	Why
<p>Measuring the impact of COVID-19 on large Canadian city centres, and aiding their recovery</p>	<ul style="list-style-type: none"> To paint a portrait of the six major Canadian city centres and diagnose their pandemic situation. To identify and recommend measures to support city centres immediately and sustainably. 	<ul style="list-style-type: none"> Downtown areas are at the heart of Canada's economic activity owing to their power of attraction and centrality. City centres are the areas hardest hit by the effects of the COVID-19 crisis. Cities need a strategy to avert a cycle of decay in their downtown areas.

Major trends accelerated by the COVID-19 crisis, which affect the functions of city centres

- Technologies supporting telework will transform the geography of work. Although some office workers will return to their workplaces once vaccines are widely available, the shift to telework means that a significant number of employees will return to the workplace only part-time, if at all.
- Tourism is one of the industries most affected by the pandemic due to travel restrictions. Tourism is expected to return to levels similar to those prevailing in 2019 over a two-year horizon, boosted in particular by local tourism and the outdoor tourism segment. Business travel will not recover as easily, especially because short-term business meetings have been replaced by virtual meetings.
- The use of e-commerce has surged at a very rapid pace during the year, and street-front businesses will feel the impact. Retail outlets will need to emphasize the physical factors that set them apart, including the customer experience.
- The current crisis is accelerating and accentuating transformations in the way cultural goods and services are consumed. Some trends will outlast the crisis, notably the proliferation of online broadcasting platforms, which are already having an impact on the music and film industry. However, arts, culture and entertainment enthusiasts do not view the technology currently available as an adequate substitute for the face-to-face experience.
- Several educational institutions had to turn to online platforms during confinement. Yet this model has shortcomings, particularly regarding the quality of teaching, continuity of research activities and students' mental health. When the crisis winds down, students should return to campuses. Nonetheless, universities will face greater competition on the global scale when it comes to attracting international students.

Challenges facing Canada's six major city centres

The main challenge lies in the devitalization, or decay, of the city centres. Taken together, the adaptation measures adopted to limit the spread of the virus have affected the dynamism and vitality of city centres. In the immediate term, the reduction in trips downtown caused by the closure of offices and campuses, the interruption of major events and fears about the use of public transit have triggered a drastic drop in volume of people heading downtown. In the longer term, there is a risk of a downward spiral of urban decay at the city centre: a sustained decline in visitor traffic could lead to the closure of businesses, restaurants, bars and theatres that depend on the daily influx of workers, tourists and students. The disappearance of these establishments, which are instrumental to the vitality of downtown areas, would reduce the attractiveness of downtown areas for residents and employers, who might choose to leave the city centres or not to consider them in their choice of location, and so on.



Impacts on each of the city centres observed

1. Workplaces

The massive shift to telework and the development of technologies that support it are likely to endure beyond the crisis. Regarding the growing use of hybrid models in the organization of work, one possible scenario would be a roughly 10 to 20 percent decrease in the number of people who go downtown, which would entail an equivalent reduction in the space used for offices. Indirect impacts would be felt in the retail and restaurant sectors, and municipal revenues would also decline. In addition, households may migrate away from the city centres.

In the short term, all downtown areas will have to deal with the loss of commuters due to the imposition of telework for services deemed non-essential.

In the long term, the vulnerability of city centres to telework will depend on multiple factors, two of which seem particularly crucial in predicting permanent impacts:

- The proportion of industries with the capacity to pivot to telework within the industrial fabric of city centres
 - Toronto, Montréal, Vancouver and Calgary are particularly at risk.
 - Ottawa and Edmonton, where the public sector is more prevalent, are potentially less at risk because this sector is less likely to adopt structural changes.
- Commuting time could deter workers from returning to the downtown core
 - Toronto and Montréal are particularly at risk.

The indirect consequences of telework could be felt differently by each city centre:

- A loss of customer volume for businesses that depend on a daily influx of workers
 - Vancouver may be more affected because it has the highest ratios of stores and restaurants per 1,000 workers.
- Reduced demand for commercial and office space and a loss of tax revenues for cities
 - Toronto, Vancouver, Calgary and Montréal could be more adversely affected by a downward valuation of the retail and office space stock due to the size of these markets in their downtown areas.
 - Given the low affordability of office space in the Toronto and Vancouver markets, these cities may see more businesses reduce their space or move out of the downtown core entirely.
- An exodus of households to outlying districts and suburbs
 - Toronto and Vancouver are the city centres most at risk because of their affordability issues. In fact, this phenomenon has already started to be observed in Montréal and Ottawa. Downtown Edmonton is also grappling with competitiveness issues with the suburbs.

2. Tourist activities

In the short term, downtown areas will have to contend with public health and travel restrictions, low occupancy rates in hotels, and the inevitable closure of stores, restaurants and other businesses depending on the tourism sector. In the long term, the loss of flagships, talents and a reduction of employment could have consequences on visitor experience. The pandemic has affected tourism sectors, including leisure travel, meetings and conventions, major events and business trips. While leisure tourism is somewhat protected by local tourism and is expected to recover more quickly, the decline in short-term business travel should persist. In general, all city centers will have to deal with new public health practices, technological developments, and the integration of digital technology platforms in corporate events offer, meetings, conventions, but also for festivals and major events.

In the short term, the level of vulnerability of city centres to tourism will therefore depend on the following factors:

- The importance of the sector in the economic fabric of the downtown area
 - Given the importance of the tourism sector for Montréal, Toronto and Vancouver, economic activity based on tourism will be affected by the temporary or even permanent closure of some businesses.
 - In Ottawa, tourism is neck and neck with the high-tech sector, just behind the public sector, for its importance in the economy. As the nation's capital, the city has several national attractions and historic sites, most of which are in the city center or within a kilometer from the central business district.

- The importance of business and event tourism
 - As important business locations, Toronto, Montréal and Calgary are particularly at risk, especially given the frequency of short-term business trips. Further, because they also host many internationally renowned festivals, Toronto and Montréal face an even higher risk. Calgary was already experiencing an oversupply of hotel rooms prior to the pandemic, and there is no indication that the situation will improve in the years 2021-2022.
 - Vancouver could also be affected until economic activity fully recovers, given the prevalence of large conventions and business meetings. Although this segment is expected to rebound within the next two years, after the crisis ends, some technological adjustments and a shift to hybrid models will be required.
 - Edmonton's tourism and hospitality sector is heavily based on business conventions, making the city vulnerable to sharp declines in these events in the short term.
 - Business tourism in Ottawa is notably driven by political and diplomatic events. Given the city's status as the capital of a G7 country, the sector is relatively protected. Even if some of these events were to shift to digital platforms, there will still be a need for face-to-face meetings after the crisis subsides.
- The ability to reposition rapidly when reopening begins will be key to mitigating the impact of the pandemic and revitalizing the industry. The recovery will hinge on cities' ability to engage the public nationally and internationally, and build on synergy with outdoor tourism.
 - Vancouver, Calgary and Edmonton might see a faster recovery in leisure tourism propelled by the local tourism segment. These cities are gateways to various national parks, and the outdoor tourism segment is the most promising for the years 2021-2022. These attributes would accelerate their recovery.
 - Ottawa could also be well positioned for the recovery of leisure tourism, given the abundance of green spaces, outdoor recreation opportunities, national attractions, the canal Rideau (UNESCO World Heritage Site) etc.
 - Toronto has the advantage of having one of the most diverse populations in the world and could benefit from the arrival of international travelers for leisure trips out of the crisis.
 - Nevertheless, even if, in the short term, some city centers will succeed in benefiting from local and pan-Canadian tourism, this prospect will not succeed in offsetting the losses linked to international tourism and business.

In the long term, the quality of tourism ecosystems that prevailed before the pandemic could contribute to the cities' recovery if measures are implemented to support businesses. With business tourism expected to decline, cities should focus more on leisure tourism. However, there will still be a need for major business events beyond 2022. Downtowns that can offer a high quality experience for business events through a state-of-the-art technological infrastructure could return to pre-pandemic levels of activity:

- Toronto, Montréal and Vancouver have well-developed tourism infrastructures and a significant supply of entertainment and cultural activities that would allow them to position themselves favourably in the leisure tourism segment. In addition, these downtowns are well positioned in business segments such as life sciences, technology and finance, which are conducive to a rapid recovery in terms of business events. Montréal also has the advantage of its European character and positioning within the French-speaking community.
- For Edmonton and Calgary, leisure tourism is less likely to offset losses related to business tourism because this activity was less developed before the pandemic.

3. Online business

Downtowns face some common challenges to the vitality of their commercial sector: The rise of e-commerce and its attractiveness to consumers, as well as competition with suburbs and their large, diverse and more accessible shopping malls. The extent of the impact will depend on the composition of the downtown areas and their usage, along with retailers' resilience of to these challenges:

- Projected visitor volume in the downtown areas: Measured by the number of workers and their vulnerability to the shift to telework, the number of students, the tourist attraction capacity and the portion of residents.
 - Montréal, Toronto and Vancouver are particularly at risk because they are the downtown areas where the greatest decline in visitor traffic is expected compared with the pre-COVID-19 situation, due to the shift to telework, their dependence on the tourism sector and the size of their student population (slightly smaller for Vancouver because UBC is mainly located outside the downtown core).

- Toronto and Vancouver are also facing a potential loss of traffic from local residents due to affordability issues.
- Downtown Ottawa retail businesses are concentrated around the Rideau Center and the Byward Market, at a walking distance from the concentration of office towers. The absence of public and private sector workers, tourists and students has had a negative impact on retail, food service and services, and many uncertainties remain as to their return to the city center.
- Downtown Edmonton can rely on the resilience of the public sector to mitigate the migration of workers away from the downtown core. In addition, relatively high and stable wages may fuel strong consumption.
- Calgary's downtown retail sector is at risk because the offer has been designed based on the strong presence of a business clientele and business meetings. A significant decrease in these elements, particularly due to difficulties in the oil sector, could hinder recovery in this sector considerably.
- **Downtown accessibility:** Measured by the quality of the offer of public transit, active transport and accessibility by car.
 - Montréal is well served by public transit, yet there are several obstacles that keep residents of the suburbs and outlying areas from going downtown, including lack of parking spaces, road congestion and major construction work. The arrival of the REM (electric rail network) could make the downtown area more accessible in the coming years.
 - For Ottawa, the completion and expansion of the light rail system should alleviate this factor and potentially encourage suburban residents to go downtown.
 - For Vancouver and Toronto, the quality and supply of public transport could draw residents of outlying areas to the downtown core, but a lack of parking and traffic congestion may discourage visitors from outside the city.
 - Downtowns in Calgary and Edmonton are relatively more accessible by car, a factor that could help the area by attracting people from outside the downtown core. However, a less efficient public transit system could hamper pedestrian and bicycle traffic. Nevertheless, in recent years these cities have developed its alternative transportation offer, notably through the introduction of e-scooters and their cycle track infrastructures which connect to the city center. In addition, Edmonton inaugurated a new light rail train (LRT) in 2021, which should improve transit options.

4. Culture and entertainment

In the short term, all the downtown areas are facing the same issues related to the disruption of face-to-face activities in the culture and entertainment sector. They are thus experiencing the collapse of the ecosystem and the loss of creative talent. In addition, changes in long-term consumer habits could result in a permanent loss of audiences.

In the short term, the impact of COVID-19 on the cultural and entertainment sectors for each of the city centres will depend on:

- **The relative importance of the sector**
 - Montréal, Toronto and Vancouver have the downtown areas with the highest concentration of cultural institutions among those under study. Thus, the impact of the disruption of activities will be greater there. The strength of the ecosystem could be compromised, which could dampen the vitality of the sector if no measures are implemented to support culture and entertainment over a fairly long period.
 - The cultural sector in Ottawa, Calgary and Edmonton is also affected by the COVID crisis. For example, Edmonton's arts district (in the heart of downtown), composed of a large concert hall, a theater, art gallery, museum and library, has greatly suffered from the pandemic. Normally, this district attracts visitors downtown, which also supplies local shops: cafés, restaurants, pubs, bars. A good number of them were affected and had to close their door. On the other hand, the relative importance of the culture sector in these three cities is not as strong as those of Toronto, Vancouver and Montreal. Nevertheless, the importance that culture will play in the recovery and revitalization city centers are no less.

In the long term, the quality of the cultural ecosystem that prevailed prior to COVID and the political will to support the sector could facilitate the recovery:

- Once again, Montréal, Toronto and Vancouver have cultural sectors that are well integrated into their identity and brand image. The importance of this sector is generally recognized and there is every indication that cities will benefit from the presence of major institutions to ensure their recovery and their attractiveness. However, uncertainty remains as to whether they will be able to preserve the smaller-scale cultural players that contribute diversity and richness to the cultural ecosystem of these city centres. Ottawa will also benefit from its brand image, which is closely linked to the federal institutions as for example.
- Calgary and Edmonton were, prior to the crisis, in the process of developing a strategy to revitalize their downtown areas, including significant investments in the cultural sector. Moving forward with these projects could prove to be an important factor in the recovery.

5. Online education

Higher education institutions are an integral part of the dynamism of city centres not only because of the population they attract, but also because they cultivate the downtown area's brand image internationally.

In the short term, the challenge for city centres lies in the absence of the student population, which contributes to the vitality of local businesses. The cities of Toronto and Montréal are particularly affected, in that many institutions are located directly downtown. Downtown Ottawa also hosts a university campus and the absence of students affects its economic health. For Vancouver and Edmonton, the impact is also important, but it should be noted that their university campuses are not directly located in the city center.

In the longer term, it is estimated that students will return to campuses, but competition between universities may intensify, particularly when it comes to attracting international students. International students may opt for online education or look to countries that have opened their economies more quickly (admittedly, a short-term consideration). Thus, universities that are more dependent on international students may be vulnerable to some extent.

The universities located in Montréal, Toronto and Vancouver attract the largest numbers of international students to the country. If they are unable to maintain their international positioning and outreach, they may have difficulty attracting international students to their campuses. An indirect effect would be a decrease in revenue from the higher tuition fees charged to international students. Ultimately, this could also affect universities' ability to invest in research, which is particularly important for cultivating their outreach and forging links with the private sector.

Reflection to strengthen the role of city centres

Short- and long-term objectives

- Foster a social continuum by focusing on residents' well-being and the integration of marginalized populations in the downtown area.
- Focus on development that is in line with the ambitions of ecological transition.
- Ensure and diversify the revenues of cities, to enable them to deliver all their services and contribute to economic recovery.
- Protect and improve the economic fabric of city centres by supporting private companies, which are the driving force behind the economy, vitality and profile of city centres.
- Provide support for the digital transition required to make process management more efficient, for the benefit of residents and businesses alike.
- Increase city centres' resilience to the environmental, social and economic challenges they may face.

The seven proposals to reinforce the role of city centres

Reinvent downtown areas

- Make city centres more attractive by reducing reliance on mechanized transportation and promoting the pedestrianization of existing corridors and the offer of bicycle lanes. Focus on the construction of public spaces for winter use and rethink the positioning of downtowns as commercial destinations.
- Promote the greening of city centres.
- Bring more subway lines into service or light rail lines heading downtown from other parts of the city.
- Introduce programs to convert office and residential buildings in line with new market needs without changing their role.
- Increase the supply of social housing.
- Create industrial zones based on the “15-minute city” model.

Build on resilience

- Establish diagnostics and build a strategy to achieve proactive adjustments.
- Promote actions to ensure the continuity of economic activities.
- Preserve an environment that meets essential needs.
- Include resilience criteria in the acceptance process for new projects.

Accelerate the implementation of the smart city

- Build a clear legislative framework to ensure data security.
- Earmark a budget to support technology transformation, including 5G.
- Deploy an information campaign surrounding the concept of smart cities.

Strengthen the role of higher education institutions

- Enhance the budgets of research centres working in strategic sectors.
- Rebuild the relationship between companies and applied research centres.
- Mandate colleges and universities to develop training programs for reskilling of the workforce.
- Involve universities in the development of smart cities.

Offer more budgetary autonomy

- Ask higher levels of government for additional financial resources.
- Focus more on eco-taxation based on the user-pay principle.
- Reduce restrictions on deficits.
- Establish a standing committee of the six major Canadian cities, together with provincial and federal representatives.
- Recognize city centres as “superclusters.”

Provide support for sustainable sectors that need help to weather the crisis

- Recognize the key elements that will ensure the recovery and revitalization of city centres and provide adequate support to ensure their long-term sustainability and competitiveness.
- Adapt support programs to take into account the reality of downtown areas.
- Provide financial support and promote initiatives to stimulate local and national tourism.
- Financially support projects and initiatives that contribute to strengthening the image of city centres internationally.
- Encourage the development of an exemplary tourist destination.
- Support the innovation and creation ecosystem in downtown areas.

Encourage visitors to return downtown via public transit and active transport

- Establish a clear, robust and scientifically proven health protocol for public transit.
- Improve transit service delivery, while recognizing the temporary physical distancing requirements.
- Establish a communications strategy that will demonstrate to civil society that government, business and transit operators are working together to eliminate silos and facilitate a safe return to the office.
- Ensure an adequate supply of means of transport perceived as safer from a health standpoint: bicycles, e-scooters, etc.

Introduction

Downtown areas: A mix of functions and uses

Usually a focal point of business, the retail trade, tourism, restaurants and culture, downtowns exert a strong force of attraction on workers, students and tourists every day, in addition to the residents who make the areas their home. Thus, the economic health of a city centre hinges as much on its attractiveness and centrality as on its local qualities as a residential neighbourhood.

City centres are urban hubs visited on a massive scale because they support the following functions:

- **Residential:** Downtowns are places to live that attract a diverse, often young and educated population.
- **Economic:** Many companies set up business in city centres, which offer a high density of jobs and dedicate large areas to office space.
- **Commercial:** City centres typically feature commercial arteries, often accessible on foot, that grant these areas vibrancy. With their cultural offer and diverse restaurants and bars, city centres are lively areas that contribute to a city's "nightlife."
- **Educational:** Several city centres host institutions of higher education on their territory that attract thousands of students.
- **Tourism, culture and entertainment:** City centres are visited by many tourists, both for pleasure and business. They also offer cultural attractions and entertainment activities such as museums and theatres. Festivals and professional sports matches can often be enjoyed in the city centres.
- **Transportation and Transit:** Downtowns are hubs of mobility and are connected with adjacent suburbs by train, subway, bus and other forms of public transit.

Thus, an entire ecosystem feeds on the power of attraction of city centres, largely based on their ability to bring together a critical mass of consumers, workers, talent, companies, etc. in a single location.

Figure 1: Downtown Ecosystem



Dense places affected by the health crisis

Without a doubt, city centres are the territories that have been hit hardest by the effects of the COVID-19 crisis. Many of the key elements that contribute to their vigour, reach and appeal have been hindered or are at a standstill: Leisure and business tourism, major cultural and sporting events, fine dining, hotels and so on. The very essence of city centres, which depends on their ability to gather and densify, is incompatible with the social distancing measures imposed by governments across the country. The loss of workers, tourists and students have decreased the customer volume for merchants, who depend on the daily influx of visitors. Downtown areas could also lose their attractiveness as places to live.

Until the mass administration of an effective vaccine, all downtown functions will be affected by declining traffic due to public health considerations, people's desire to avoid crowds, and provincial and federal regulations. However, the magnitude of the impact will depend on the composition of the economic fabric and the importance of functions within each of the downtown cores.

In the longer term, the dynamics that characterize the city centres will be transformed by the acceleration of some trends that were already observed before the pandemic. These include the adoption of telecommuting, videoconferencing and distance learning, the use of e-commerce and urban sprawl. Thus, if no action is taken to preserve the uniqueness of city centres, a cycle of urban decay could begin, with economic consequences for cities, provinces and the country. Indeed, deprived of workers, students, tourists and even residents, several companies depending on this daily influx could close their door and relocate. However, the effervescence of city centers is closely linked to the presence of restaurants, bars, cultural venues and other poles of innovation and attraction. The loss of this activity would contribute to a major loss of attractiveness and would strengthen the devitalization cycle. Thus, if in the short term the situation is worrying, the medium term is just as much at risk, considering the real danger of devitalization.

Objective of the project

This project stems from Montréal's desire to foster discussion on the impact of the COVID-19 crisis on Canada's major downtown areas at a round table that brings together the city managers of Canada's six large cities: Montréal, Ottawa, Toronto, Calgary, Edmonton and Vancouver.

The project consists of:

- Conducting a study that paints a portrait of the different functions of each of the city centres in the pre-COVID period using a series of available indicators;
- Making a diagnosis, both generally and specifically, of the short-term vulnerabilities and long-term challenges the cities will have to face;
- Documenting practices implemented in other countries;
- Proposing general principles that will help cities develop policies to address the challenges posed by COVID-19, as identified in this report.

Methodological approach

The proposed analysis examines the functions of city centres. First, a “pre-COVID” portrait of the state of these functions was produced. The objective is to build a base of facts that will make it possible to subsequently identify vulnerabilities and sectors affected in the short and long term. Table 1 presents all of the functions analyzed, the indicators and the main data sources used.

Table 1: Functions and indicators analyze

Functions	Indicators	Sources
Residential	<ul style="list-style-type: none"> Population and density Number and composition of households Age of residents Proportion of owning households Median gross household income Average gross household income Unemployment rate Level of education Proportion of immigrants New residential construction Unsold new homes Average rents and their variation Vacancy rate 	<ul style="list-style-type: none"> Statistics Canada, 2016 Census Canada Mortgage and Housing Corporation (CMHC)
Economic	<ul style="list-style-type: none"> Jobs and breakdown by sector Number of companies and breakdown by sector Gross Domestic Product (GDP) by sector Area of office space Rents per square foot of office space Office space vacancy rates Absorption rate of office space New construction of office space Presence of economic hubs 	<ul style="list-style-type: none"> Statistics Canada, 2016 Census, Labour Force Survey, Business Register, June 2020 CoStar CBRE Web sites of cities or their neighbourhoods Other
Commercial	<ul style="list-style-type: none"> Number of retail stores Number of restaurants and bars Qualitative assessment of major commercial streets 	<ul style="list-style-type: none"> Statistics Canada, Business Register City Web sites Web sites of city and town trade associations
Educational	<ul style="list-style-type: none"> Number of higher education institutions Student population (local and international) 	<ul style="list-style-type: none"> Institutions' official websites Universities in Canada
Tourism, culture and entertainment	<ul style="list-style-type: none"> Number of visitors Number of hotels and capacity Hotel occupancy rate Business tourism overview Overview of the cultural offer (museums, art galleries, etc.) Overview of the entertainment offer (festivals, sports, etc.) 	<ul style="list-style-type: none"> Tourist associations Public tourism agencies of cities and provinces Tripadvisor, interactive geographic tool
Transport and transit	<ul style="list-style-type: none"> Description of public transit networks Usage of each transport mode Commuting time to work 	<ul style="list-style-type: none"> Official Web sites of cities' transportation companies Statistics Canada, 2016 Census

The approach is also based on a consultation and validation process with representatives from each of the cities examined. Representatives of sectoral organizations were also consulted, including the Retail Council of Canada, the various tourism promotion agencies and Universities Canada. The process was also supported by sector specialists from PwC. These interviews, as well as the various working sessions with Montréal, made it possible to supplement the analysis ensuing from the literature and document review.

Geographic breakdown

Statistics Canada recently initiated a project to standardize the definition of Canada's city centres to facilitate statistical analysis based on these geographies. Indeed, several definitions of downtown areas have been proposed by different public and private organizations. Statistics Canada has therefore consulted these organizations as part of this project to take into account the particularities of each city. The geographic definitions are based on the density of economic activity, i.e. employment and the number of locations of businesses and other organizations. This study primarily uses Statistics Canada's definition of city centres. However, some data collected outside of the Statistics Canada database, such as real estate and tourism data, rely on sources whose delineation of downtown boundaries may differ.

Limitations

In conducting this work, PwC contended with three major challenges that must be emphasized at the outset, namely the multidimensionality of the problem, data limitations and time constraints:

- The question of the expected impacts of the COVID-19 crisis on Canada's major city centres is **a multi-dimensional issue with a high level of complexity and uncertainty**. Given that the impact will ultimately be the sum of a very wide variety of individual, business and government choices, stemming from specific motivations, it would be misguided to assume that a quantitative or qualitative measure can accurately assess the impact of such an event. In fact, we are in the midst of the crisis, and, although we can propose certain long-term scenarios, our ability to envision their scope at this stage is limited.
- The proposed approach is limited by data availability. For example, the demographic portraits are based on the last census produced in 2016 and do not take into account any changes that may have occurred since then. Where more recent information about downtowns was available, it was given precedence. In addition, more recent data generally come from sources other than Statistics Canada, which may affect the homogeneity of the data for the downtowns and therefore their comparison. This limitation is also present in data on real estate, tourism, culture and entertainment, in that sources sometimes differ by year or by city centre.
- The timeframe for this study did not allow for large-scale interviews with the actors involved in the various functions of the city centres, a source that would have provided a more complete picture of the impact of the crisis.

This report should be read in its entirety, in conjunction with the limitations on use described in Appendix D.

Content of the report

To meet the objectives of the mandate, this report comprises four main chapters:

- Chapter 1 paints a detailed portrait of each of the downtown areas regarding various functions during the pre-COVID-19 period.
- Chapter 2 details the trends that have accelerated as a result of the COVID-19 crisis, along with their general and more specific impacts on downtowns.
- Chapter 3 presents some examples of practices implemented by various jurisdictions for different purposes.
- Chapter 4 concludes the report by proposing a framework for reflection in order to implement actions to support downtowns through the crisis and as they rethink their role in the long term, a necessary process.

Pre-pandemic portrait of the six city centres

This section presents comparative findings between downtown areas according to their different functions. Emphasis is placed on the quantitative indicators common to each of the regions studied. Comprehensive and detailed portraits are presented in Appendix A. They provide a thorough analysis required by the scope of this study.

Residential function

Demographics

- Significant variations in population and density
 - On average, Canada's six major city centres had a population of more than 95,000 residents in 2016.
 - There is great disparity between territories. Downtown Toronto has the largest population by far, with almost 230,000 residents. With 36,565 residents, Calgary has the smallest number of people living downtown, equal to 3 per cent of the city as a whole.
 - Vancouver has the most densely populated downtown core, with 17,464 residents per km². It is also the city with the highest proportion of residents relative to the city as a whole, at 17.2 per cent. Downtown Edmonton has the lowest density.
- Similarities and differences in socio-demographic characteristics
 - Overall, city centres are home to a high proportion (between 79 per cent and 85 per cent) of residents who are either in school or of working age (15 to 64 years).
 - In general, the proportion of one-person households is also around 55 per cent.
 - There is a slight variance in the rate of home ownership from one downtown to another, with Toronto in the lead (34 per cent), whereas downtown Ottawa has the lowest rate (24 per cent).
 - The downtown population is generally well educated and has higher rates of completion of post-secondary studies than the Canadian average. This is particularly true in Montréal, where 83 per cent of the downtown population has a university degree, compared with only 48 per cent in Edmonton.
 - Montréal, Toronto, Calgary, and Vancouver have a high proportion of immigrants, at over 35 per cent. Ottawa has the smallest proportion, at only 24 per cent.
- A wide disparity in income
 - There appears to be a significant disparity in income in the downtown areas under study, particularly in Montréal, Toronto, Calgary, and Vancouver, as reflected by the difference between average and median incomes. A high proportion of lower-income households significantly lowers the median, but the presence of a few very high-income households raises the average. This phenomenon is typical of the major business centres where the executives of large multinational companies live. For example, the difference between the average and the median is about \$33,000 in Montréal, \$36,000 in Toronto, \$46,000 in Calgary, and \$25,000 in Vancouver.
 - Conversely, downtowns with a high proportion of public sector employment have a more similar median and average: the difference is about \$18,000 for Ottawa and \$20,000 for Edmonton.
 - Two downtowns stand out as having particularly high average incomes: Toronto (\$97,156) and Calgary (\$116,171).

Table 2: Demographic profile of downtown residents

Demography	Montréal	Ottawa	Toronto	Calgary	Edmonton	Vancouver
Number of residents (% of the total city population)	84,645 (5.0%)	59,395 (6.4%)	229,900 (8.4%)	36,565 (3.0%)	52,085 (5.6%)	108,560 (17.2%)
Population density per km ²	6,436.4	6,125.8	13,855.2	6,140.5	4,540.6	17,464.6
Proportion of the population between ages 15 and 64	79.0%	79.0%	82.5%	84.5%	81.7%	81.5%
Proportion of one-person households	56.8%	56.6%	52.8%	55.5%	54.5%	55.3%
Proportion of owner households	27.7%	24.3%	33.8%	30.5%	27.5%	31.4%
Median annual gross household income*	\$39,678	\$54,944	\$60,763	\$70,282	\$57,484	\$56,229
Average annual gross household income*	\$72,929	\$73,212	\$97,156	\$116,171	\$77,681	\$71,241
Unemployment rate	11.3%	8.6%	7.4%	8.1%	8.5%	5.5%
Proportion holding a university certificate or degree (ages 25-65)	82.9%	76.1%	78.4%	65.9%	48.4%	62.9%
Proportion of immigrants	35.3%	23.7%	38.2%	35.6%	30.7%	37.7%

Source: Statistics Canada, 2016 Census

* In 2015 dollars.

Residential real estate

- Dynamic residential markets

- Toronto and Vancouver are the Canadian markets where the cost of living is the highest, notably due to the high cost of housing. Although steps have been taken to limit the overheating of the real estate market, it remains difficult to find affordable housing in these downtown areas. Average rents for a two-bedroom apartment are \$1,815 in Toronto and \$1,738 in Vancouver.
- Although the situation is more under control in Montréal and Ottawa, these two city centres have experienced considerable price growth in recent years. Nevertheless, an analysis by the CMHC found that these markets show a moderate level of overheating in real estate.
- For Calgary and Edmonton, the oil crisis is exerting downward pressure on demand for real estate in the downtown areas. Rents in Calgary have declined significantly between 2015 and 2018, while those in Edmonton appear to be struggling to maintain a positive growth rate.
- In the rental market, almost all city centres have vacancy rates below 3 per cent. The availability of rental housing is particularly low in Ottawa and Vancouver. Edmonton has the highest availability, with a vacancy rate of 5.7 per cent.

Table 3: Downtown residential real estate portrait

	Montréal	Ottawa	Toronto	Calgary	Edmonton	Vancouver
New buildings (in 2019)	1,930	186	5,392	752	409	932
Inventory of unsold new buildings (in 2019)	40	42	135	83	87	167
Average monthly rent (in 2019)	\$1,228	\$1,397	\$1,815	\$1,166	\$1,181	\$1,738
Growth in average monthly rents (between 2018 and 2019)	8.6%	7.8%	10.1%	1.9%	-0.3%	5.3%
Vacancy rate (in 2019)	2.5%	1.5%	2.9%	3.4%	5.7%	1.4%

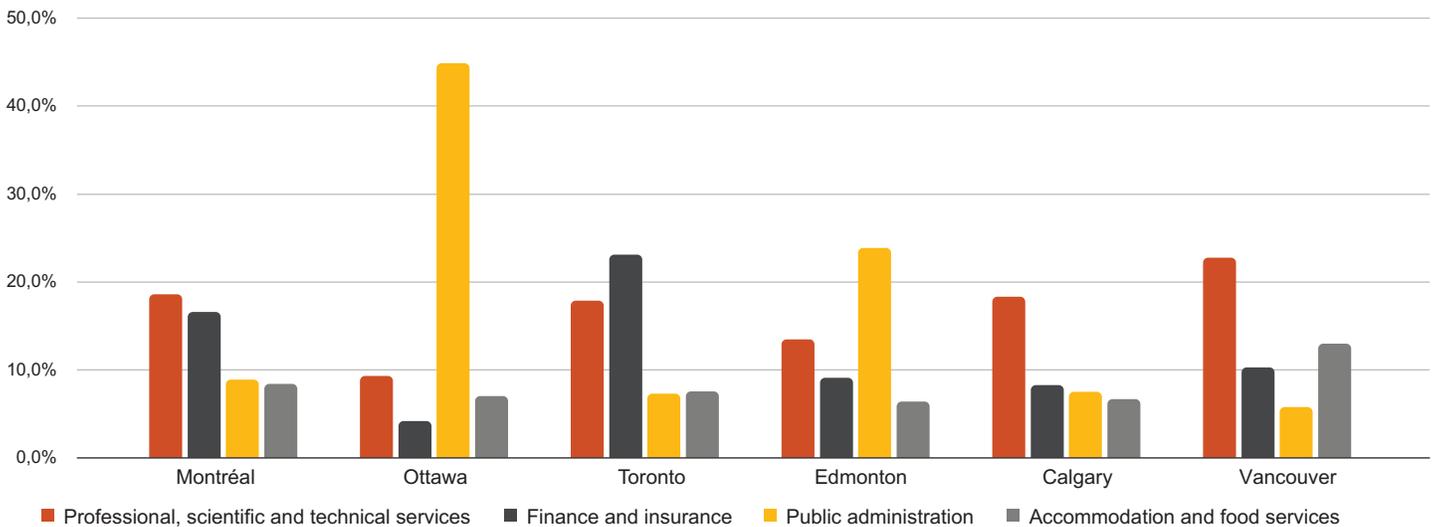
Source: SCHL

Economic function

- Varied job profiles

- The downtown areas studied all show a high concentration of professional services. This phenomenon is most prevalent in Vancouver and least prevalent in Ottawa.
- Ottawa and Edmonton are characterized by the highest proportion of public sector employment downtown, along with the most single-sector downtown economies.
- The financial sector predominates in Toronto and, to a lesser extent, Montréal. Other downtown areas also have a large number of jobs in this sector, although fewer than in Toronto and Montréal.
- It is also interesting to note that almost one-quarter of Calgary’s jobs are in the resource extraction sector, reflecting the strong presence of the petroleum sector.

Figure 2: Distribution of jobs downtown by major economic sector



Source: Statistics Canada, Business Register

Real estate - offices

- Large supply of office towers to accommodate large numbers of workers
 - Downtown Toronto has the largest stock of office space, at more than 100 million square feet, while Edmonton's is the smallest in this category, at slightly over 21 million square feet.
 - The higher vacancy rates in Calgary and Edmonton partly reflect the economic difficulties Alberta is facing in the petroleum sector.
 - Vancouver and Toronto have the highest prices per square foot, at \$48.24 and \$54.24 respectively, and the lowest vacancy rates. The rate of new construction in progress is also the highest for these two downtowns.

Table 4: Portrait of downtown office real estate

	Montréal	Ottawa	Toronto	Calgary	Edmonton	Vancouver
Stock (square feet)	54,571,239	28,573,864	101,889,980	61,408,389	21,410,742	33,365,736
Vacancy rate	9.8%	4.6%	2.70%	19.50%	10.50%	2.60%
Under construction (square feet)	998,139	34,245	8,054,823	0	10,560	3,869,694
Asking net rental rate (per square foot)	\$19.15	\$39.09	\$54.24	\$30.21	\$36.63	\$48.24

Sources: CBRE; Avison Young; Colliers Canada.

Commercial function

- The commercial offer in terms of the number of residents and workers varies from one city centre to another.
 - Downtowns in Montréal and Vancouver had the highest ratios of retail stores per 1,000 downtown residents, at 8.7 and 8.6 respectively. In contrast, the ratio is lowest for Edmonton, although the largest shopping centre in North America is located only a few kilometres from the downtown core, which may partly explain the lower concentration of shops downtown.
 - For restaurants and bars, Montréal and Calgary had the highest ratios per 1,000 residents, at 13.6 and 11.1 respectively. Edmonton had the lowest concentration of restaurants and bars by this measure, with a ratio of 6.5.
 - When these results are analyzed by number of workers, the findings differ: Downtown Vancouver has the highest ratio of number of workers (5.7), while downtown Montréal has the lowest ratio (2.5).
 - Vancouver has the highest ratio of restaurants and bars per 1,000 workers (4.9), while Calgary has the lowest ratio (3.0).

Table 5: Number of establishments (retail stores, restaurants and bars) and ratio per 1,000 residents and workers

	Montréal	Ottawa	Toronto	Calgary	Edmonton	Vancouver
Number of retail stores	732	424	1676	360	322	933
Ratio per 1,000 residents	8.7	7.1	7.3	9.9	6.2	8.6
Ratio per 1,000 workers	2.5	3.4	3.3	2.6	3.5	5.7
Number of restaurants and bars	1 153	461	1 565	410	339	807
Ratio per 1,000 residents	13.6	7.8	6.8	11.1	6.5	7.4
Ratio per 1,000 workers	3.9	3.7	3.1	3.0	3.7	4.9

Source: Statistics Canada; PwC analysis.

Commercial real estate

- Commercial real estate market conditions vary between downtown areas
 - Downtown Toronto has the largest stock of commercial space, with nearly 25 million square feet. Edmonton, in contrast, has the smallest stock, at just over 2 million square feet¹.
 - Vacancy rates in the downtown areas of Calgary and Edmonton are the highest, at 4.8 per cent and 6.8 per cent, due in part to difficulties in Alberta's oil sector.
 - Rents are highest for Toronto and Vancouver (\$56.83 and \$65.48 per square foot). The difference is particularly pronounced when compared with other city centres. For example, in downtown Edmonton, a commercial space rents at \$11.14 per square foot.

Table 6: Portrait of downtown commercial real estate

	Montréal	Ottawa	Toronto	Calgary	Edmonton	Vancouver
Inventory (square feet)	n. a.	6 071 738	24 738 531	5 281 838	2 143 670	7 765 542
Vacancy rate	n. a.	3.5%	2.0%	4.8%	6.8%	3.2%
Under construction (square feet)	n. a.	10 516	801 740	194 508	88 000	80 038
Asking net rent (per square foot)	n. a.	\$32.54	\$56.83	\$20.11	\$11.14	\$65.48

Source: CoStar

Tourism, culture and entertainment function

Tourism

- In general, tourism is an important activity for downtown areas, yet some cities stand out
 - Although all city centres welcome a large number of visitors each year, Vancouver is the city that receives the most tourists as a proportion of its total population. Montréal, Ottawa and Toronto also stand out.
 - Edmonton and Calgary have a sizable number of hotel rooms relative to annual visitors. However, demand has not been at the same level as that of the other city centres in recent years, as illustrated by their much lower occupancy rates (61 per cent and 64 per cent, respectively).

Table 7: Portrait of the tourism industry

	Montréal	Ottawa	Toronto	Calgary	Edmonton	Vancouver
Number of tourists (city)	11 million	11 million	28 million	7 million	7 million (in 2014)	11 million
Hotel supply in the city centre	64 hotels / 16000 rooms	12 300 rooms (ville)	16 800 rooms	16 066 rooms	17 500 rooms	12 600 rooms
Hotel occupancy rate (2019 average)	73%	74%	78%	64%	61%	81%

Sources: Regional Tourism Agencies; Ontario Ministry of Tourism, Culture and Sport.

1. Note that Edmonton is home to the largest shopping centre in North America, just west of the downtown core. See Appendix A for more information.

Culture, arts and entertainment

- Variations in the importance of the culture and entertainment sector
 - Downtowns in Montréal, Toronto and Vancouver support the largest number of jobs in the cultural sector. They are also those whose sector makes the most important contribution to GDP, both in absolute terms and as a relative share.
 - As detailed in Appendix A, these downtowns are home to a large number of institutions and businesses in the sector, which contributes to their vitality.

Table 8: Portrait of the culture, arts and entertainment sector

	Montréal	Ottawa	Toronto	Calgary	Edmonton	Vancouver
Number of downtown business locations	690	188	1,221	198	115	708
Number of jobs in the sector (% of total employment)	25,520 (8.5 %)	7,050 (5.6%)	41,600 (8.2%)	6,240 (4.6%)	3,650 (4.0%)	14,620 (9.0%)
GDP (% of total GDP)	\$2.7B (9.3%)	\$0.9B (6.5%)	\$5.5B (10.3%)	\$0.9B (3.6%)	\$0.6B (5.5%)	\$1.6B (9.1%)

Source: Statistics Canada; PwC analysis.

Note: This sector includes NAICS codes 51 and 71.

Educational function

- The size of the student population differs for each city centre
 - Downtown Montréal has the highest concentration of students among the downtowns studied, with close to 125,000 students.
 - The downtown areas of Calgary and Vancouver host the fewest students, because their major universities are located outside the downtown core.
 - Ottawa and Montréal have the only institutions that offer studies in both English and French.

Table 9: Portrait of higher education institutions downtown

	Montréal	Ottawa	Toronto	Calgary	Edmonton	Vancouver
Number of academic institutions with a downtown campus	4	1	4	1	2	6
Student population	123,000	43,000	110,000	600	52,000	N/A ²

Sources: Various. See Appendix A. Includes high school campuses or campuses of international or private universities.

Transport and transit Function

- The supply, quality and use of public transit varies across downtown areas.
 - In general, the six downtowns have high public transit use, together with fairly long commuting times.
 - Montréal and Toronto stand out in their use of public transit, but have the longest commuting times.
 - Workers in the downtown areas of Calgary and Edmonton city centres use automobiles the most.
 - The cities of Vancouver and Toronto stand out for the quality of their public transit offer according to the independent firm WalkScore, with ratings of 74.8 per cent and 78.2 per cent respectively, which is considered excellent.

2. University campuses in downtown Vancouver are generally small private international campuses or a few buildings of larger universities whose main campuses are located outside the downtown core. The number of students on these campuses is negligible.

Table 10: Transportation and commuting patterns of downtown workers

	Montréal	Ottawa	Toronto	Calgary	Edmonton	Vancouver
Main mode of commuting to work	Public Transit (68.0%)	Public Transit (40.3%)	Public Transit (62.0%)	Automobiles (49.6%)	Automobiles (63.6%)	Public Transit (47.8%)
% of commuting time over 30 minutes	74.0%	61.7%	73.9%	57.1%	54.0%	59.3%
WalkScore	67.0% (good to excellent)	49.5% (low)	78.2% (excellent)	49.5% (low)	48.6% (low)	74.8% (excellent)

Sources: Statistics Canada; WalkScore.

Main sources of revenue for cities

- Budgets and sources of revenue differ for each city.
 - Montréal generates the most revenue from property taxes, at 62.9 per cent of its total revenues. Conversely, Toronto ranks the lowest in this category (32.7 per cent). In fact, Toronto receives a larger transfer from the provincial and federal governments, representing \$2.5 billion or 21.3 per cent of its total budget, compared with \$540 million or 8.6 per cent for Montréal.
 - Residential taxes are higher in Ottawa and Montréal at 10.8 per cent and 9.7 per cent respectively.
 - Montréal also has the highest commercial tax rate, at 38.0 per cent. According to the Altus³ report, taxes for businesses on Rue Sainte-Catherine have increased by about 10 per cent per year over the last three years.
 - Calgary and Edmonton have the lowest commercial tax rate. Note that in Calgary, this ratio has increased by 13.4 per cent over its 2019 level. The report notes that the tax rate has increased by 50 per cent since 2015.

Table 11: Portraits of downtown budgets

	Montréal	Ottawa	Toronto	Calgary*	Edmonton	Vancouver
Property taxes (\$B)	3.9 (62.9%)	1.7 (44.7%)	4.4 (32.7%)	2.6 (33.9%)	1.5 (51.0%)	0.9 (55.0%)
Fee-based services (\$B)	1.0 (16.1%)	0.9 (23.7%)	2.2 (16.3%)	1.4 (24.5%)	0.5 (17.2%)	0.4 (25.0%)
Other (\$B)	1.3 (21.0%)	1.2 (31.6%)	7.2 (51.0%)	2.2 (41.6%)	1.0 (31.8%)	0.3 (20.0%)
Total revenues (\$B)	6.2	3.8	13.5	4.2	3.0	1.6
Residential taxes per 1,000 valuation ³	9.7%	10.8%	6.2%	6.7%	9.1%	2.6%
Commercial taxes per 1,000 in valuation ³	38.0%	27.0%	22.8%	22.0%	21.9%	9.3%

Source: City budget data⁴

* Data presented for Calgary are for the 2019 fiscal year.

3. Altus, 2019. Canadian Property Tax Rate Benchmark Report 2019. Link: <https://www.altusgroup.com/services/reports/canadian-property-tax-rate-benchmark-report-2019/>

4. Montréal: http://ville.Montreal.qc.ca/pls/portal/docs/PAGE/SERVICE_FIN_FR/MEDIA/DOCUMENTS/BUDGET_2020_PTI_2020_2022_FR.PDF

Toronto: <https://www.toronto.ca/wp-content/uploads/2020/08/8de8-2020-city-of-toronto-budget-public-book.pdf> Ottawa: https://documents.ottawa.ca/sites/documents/files/2020budget_en.pdf

Calgary: <https://www.calgary.ca/cfod/finance/plans-budgets-and-financial-reports/plans-and-budget-2019-2022/financial-reports/Annual-reports.html> Edmonton: https://www.edmonton.ca/city_government/budget_taxes/2019-22-operating-budget.aspx

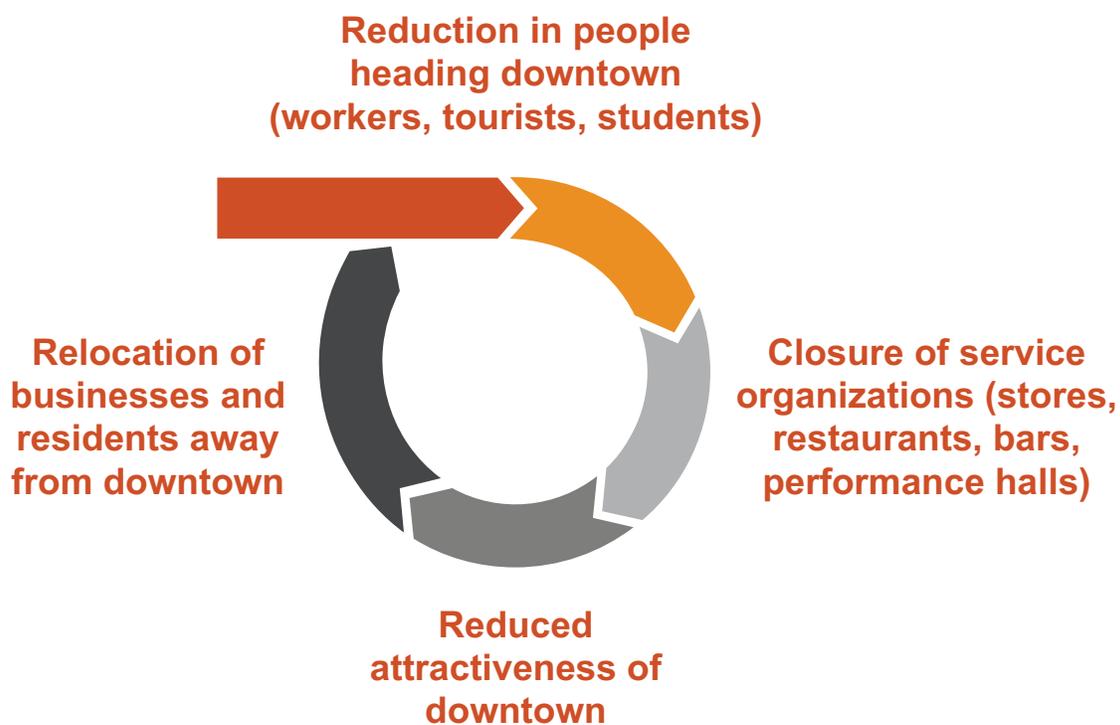
Vancouver: <https://vancouver.ca/files/cov/2020-budget-highlights.PDF>

Accelerated trends due to COVID-19 and implications for downtown areas

The COVID-19 pandemic and the physical distancing measures put in place led all economic actors to change their habits. Businesses and individuals have spent much of the last few months adapting to extraordinary circumstances: Companies have switched to teleworking, stores and cultural venues have developed their online offerings, universities have also turned to digital tools, and tourism activities have temporarily stopped. In the long term, certain trends that accelerated throughout the crisis, particularly linked to the adoption of new technologies, will persist to some extent.

All these adaptation measures impact the dynamism and vitality of city centres. In the immediate term, the reduction in trips downtown caused by the closure of offices and campuses, the interruption of major events and fears about the use of public transit have triggered a drastic drop in volume of people heading downtown. In the longer term, there is a risk of a downward spiral of decay at the city centre: a sustained decline in visitor traffic could lead to the closure of businesses, restaurants, bars and theatres that depend on the daily influx of workers, tourists and students. The disappearance of these establishments, which are instrumental to the vitality of downtown areas, would reduce the attractiveness of downtown areas for residents and employers, who might choose to leave the city centres or not to consider them in their choice of location, and so on.

Figure 3: Spiral of downtown decay



In this section, we note some of the trends that have accelerated as a result of the crisis. For each trend, we have made observations based on a review of the literature and on our consultation activities in order to shed light on their potential impacts on downtown areas. Finally, for each of the city centres, we evaluated the expected short- and long-term impacts based on the conditions that prevailed before the crisis.

Overview of measures taken to limit the spread of COVID-19

Health measures imposed by provincial and municipal governments have not been implemented uniformly across the country. Although all cities declared a state of emergency and required the cancellation of events and the closure of most non-essential services, some imposed tighter restrictions more rapidly, which amplified the economic impacts of the pandemic.

- On March 13, 2020, Canada announced the closure of its borders to non-Canadians.
- Calgary was the first city to announce a state of emergency, on March 15, 2020, while Montréal was the last city to announce it, on March 27.
- In May, Ontario, British Columbia and Alberta announced the reopening of several types of businesses and daycare centres.
- In June, airports in Calgary, Montréal, Toronto and Vancouver set up stations to take travellers' temperature, and banned people with fever from travelling.
- In July, all cities agreed to reopen non-essential businesses, including restaurants, bars, retail stores, and gyms, while keeping some health measures in place (distancing and capacity limits).
- In October and November, Toronto, Ottawa and Montréal have again closed non-essential services, while Calgary and Edmonton have declared a second state of emergency involving the closure of gyms, casinos, restaurants and bars.
- More recently, the province of Québec implemented a curfew from 8 p.m. to 5 a.m., and Toronto declared a second state of emergency that included a stay-at-home order.
- Vancouver is the only city that did not completely close restaurant dining rooms during the pandemic, but other restrictions followed a similar pattern to other provinces and cities.

Appendix C provides a complete chronology of measures put in place for each of the cities studied.

Teleworking: Toward greater adoption of hybrid models

The physical distancing measures introduced to curb the spread of COVID-19 have led many Canadians to turn to telework. Prior to the pandemic, the use of telework was already a noticeable trend. A 2010 study estimated that approximately 10 per cent of people worked from home at least once between 2000 and 2008, and Statistics Canada estimated that 13 per cent would work from home in 2018.⁵ In 2018, 62 per cent of job postings in the Canadian market on Indeed offered the opportunity to work remotely.⁶

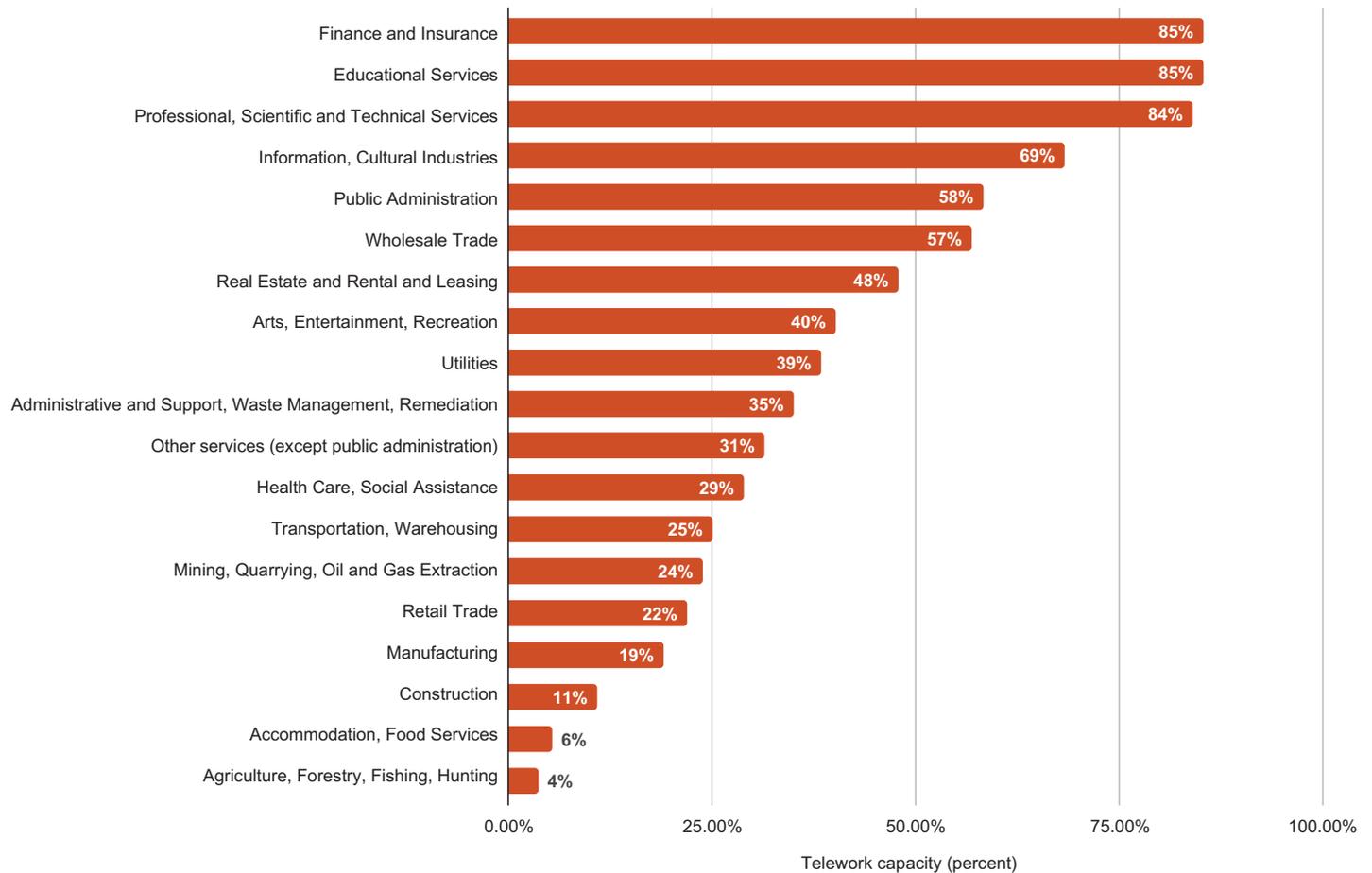
Nonetheless, the accelerated transition to telework since the beginning of the pandemic raises questions about how many jobs can reasonably be done remotely over the long term. In fact, the ability to telework varies greatly from one industry to another (see Figure 4). The potential for telework depends on the profile of activities specific to each occupation, along with their physical, spatial and interpersonal context. Work that is more physical or manual or that requires the use of fixed equipment cannot be done remotely (e.g., providing care, operating machinery, using laboratory equipment and processing customer transactions in stores). In contrast, activities such as collecting and processing information, communicating with others, teaching, counselling and data processing can theoretically be done remotely.

5. <https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00026-eng.htm>.

6. The Globe and Mail, 2019. Remote work is here to stay, but companies must balance the pros and cons. Link: <https://www.theglobeandmail.com/business/commentary/article-remote-work-is-here-to-stay-but-companies-must-balance-the-pros-and/>.

According to an analysis produced by Statistics Canada, most jobs in the finance and insurance (85 per cent), educational services (85 per cent) and professional, scientific and technical services (84 per cent) sectors can be carried out from home. In contrast, there is virtually no telework option for jobs in accommodation and food services (6 per cent) and agriculture, forestry, fishing and hunting (4 per cent).⁷ For retail trade and health, there is also a relatively low capacity for switching to telework.

Figure 4: Telework capacity by industry, 2019



Sources: Statistics Canada, Labour Force Survey, 2019 and O*Net

The inability to turn to telework exposes the vulnerability of certain sectors. For example, in Canada, the food and accommodation sector lost 26.7 per cent of its jobs between December 2019 and December 2020, while the construction sector and the transportation and warehousing sector lost 5.4 per cent and 5.5 per cent respectively.⁸ However, other industries made employment gains, such as finance, insurance, real estate and rental services, at 2.6 per cent, educational services, at 2.7 per cent, and professional, scientific and technical services, at 4.0 per cent.

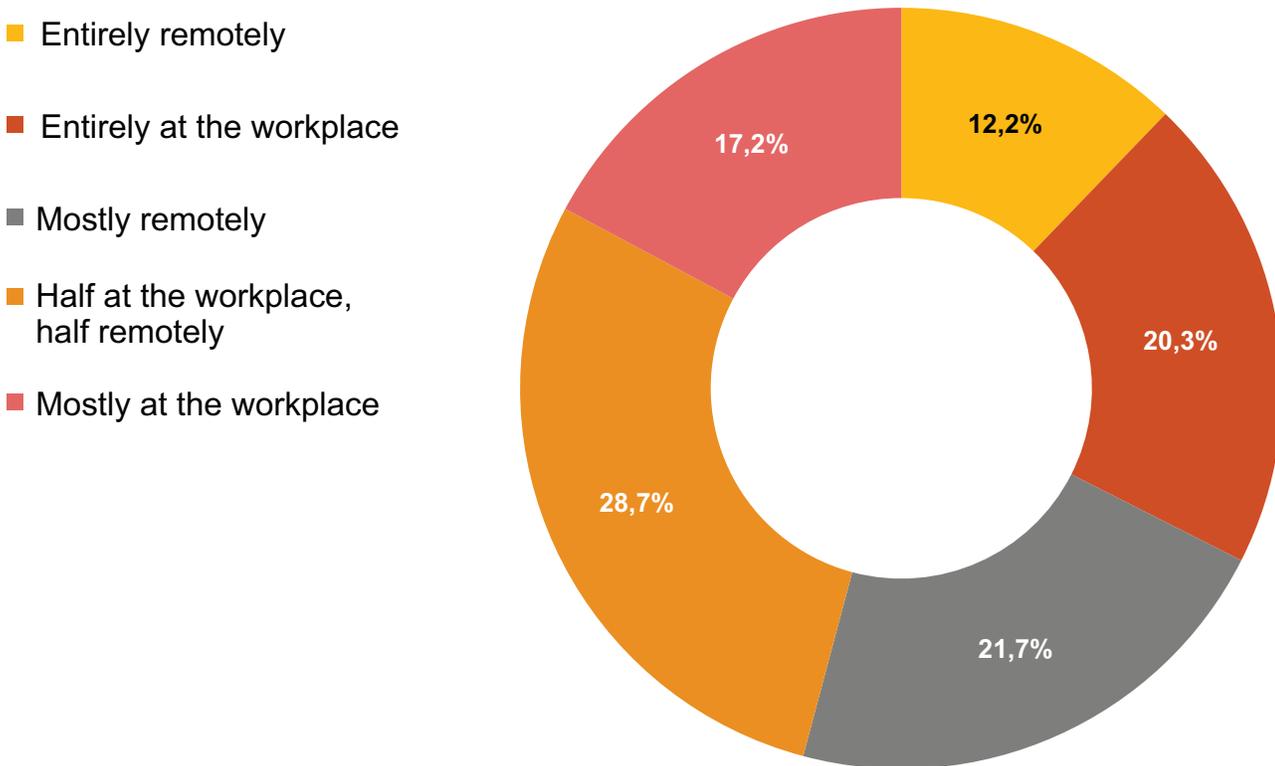
7. Statistics Canada, 2020. *Running the economy remotely: Potential for working from home during and after COVID-19*. Link: <https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00026-eng.htm>.

8. Statistics Canada, 2020. Employment by industry, monthly seasonally adjusted (x 1,000). Link: https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410035502&pickMembers%5B0%5D=1.1&cubeTimeFrame.startMonth=02&cubeTimeFrame.startYear=2020&referencePeriods=20200201%2C20200201&request_locale=en

The interviews conducted for the present study report similar findings. Finance and professional services jobs are thus more likely to use telework. However, there is uncertainty related to the technology sectors: Some companies are planning to reduce their office space, while others have taken advantage of the pandemic to acquire new space at a good price. For example, Shopify announced at the beginning of the pandemic that it would allow permanent telework and would sublease its large space in downtown Ottawa. Shortly thereafter, however, the organization announced an expansion of its space in Toronto, and the giant Amazon quickly followed suit. Moreover, in some cases, there was a perception that the public sector would eventually return to a face-to-face mode of working. However, the City of Edmonton recently announced that it would allow telework on a permanent basis. This reality demonstrates the uncertainty as to the direction employers will take.

Working from home is a temporary response to the pandemic for many people, yet for others this transition could serve as a trigger to move to a new way of working for years to come. A survey conducted by PwC found that 64 per cent of Canadians say they are not completely comfortable with the idea of returning to their workplace on a full-time basis within the next three months.⁹ More than two-thirds of Canadians want to switch to a mixed form of remote work and work at the workplace after the crisis. More recently, a Léger survey found that 43 per cent of respondents across Canada will continue to work from home post-pandemic.¹⁰

Figure 5: Ideal scenario for work environment among Canadian employees



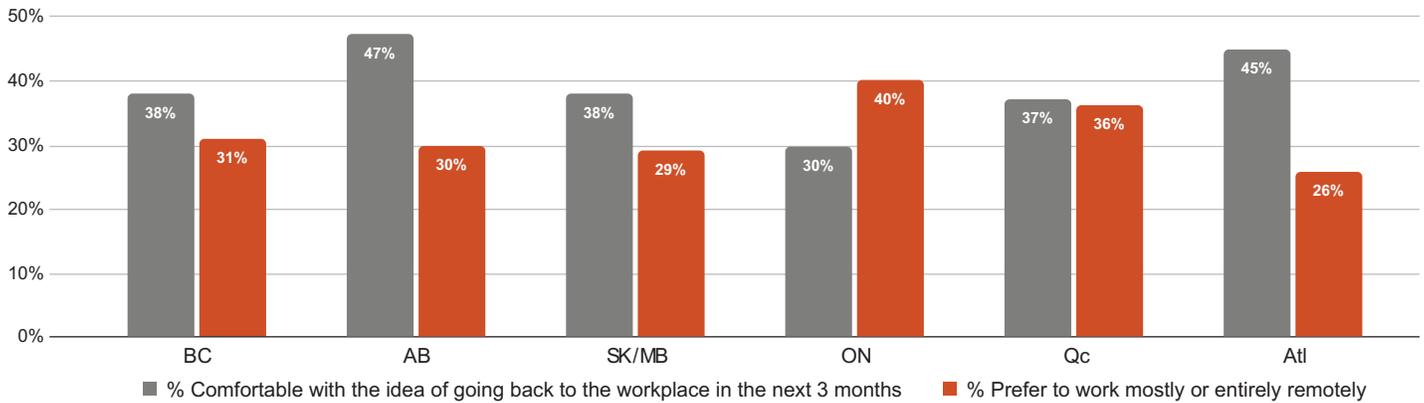
Source: Workforce of the future survey (September 2020).

The results of the PwC survey indicate that workers in Alberta and the Atlantic provinces are the most willing to return to their workplace, while Ontarians rank last. In light of this finding, and as the survey results show, Ontarians are the most likely to prefer to work mostly remotely, while workers in the Atlantic provinces are the least likely to prefer telework.

9. PwC Canada, 2020. Employees and employers adjust to a new world of work in the COVID-19 era. (Link: <https://www.pwc.com/ca/en/today-s-issues/upskilling/canadian-pulse-survey.html>). Survey conducted between July 23 and 27, 2020, involving a sample of 1,528 employees and 505 Canadian employers.

10. National Post, January 2021. *Nearly 9 in 10 say they will take COVID-19 vaccine, poll finds.*

Figure 6: Canadian employees' level of comfort with returning to the workplace and ideal work environment by province

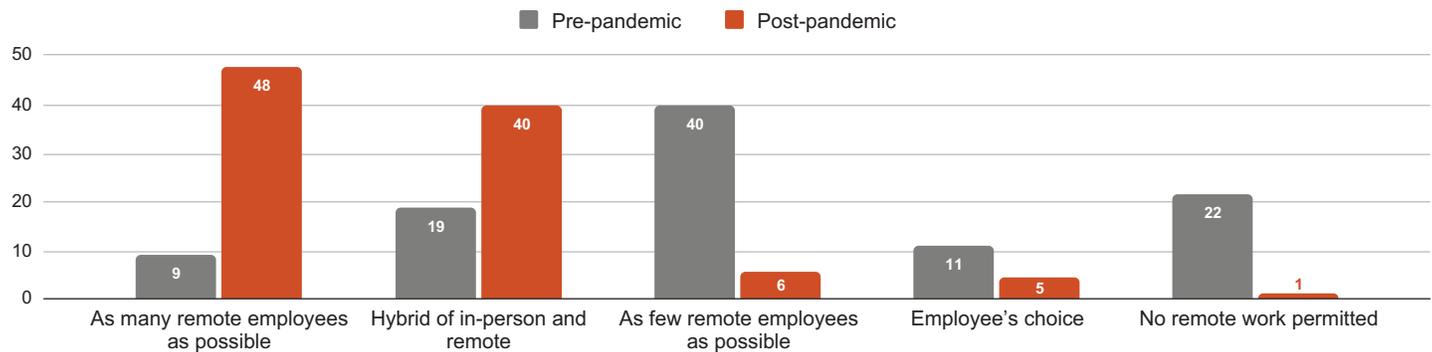


Source: Workforce of the future survey (September 2020).

Among employers, a similar trend is emerging. A survey of approximately 300 organizations done by the Conference Board of Canada in May 2020 found that 48 per cent of employers would choose to keep employees working remotely, and 40 per cent would opt for a hybrid model¹¹ (see figure 7).

Figure 7: Organizations' remote work approach pre- and post-pandemic

(n = 288; percentage of organizations)



Source: Working Through COVID-19: Return to Work Survey (May 2020)

11. The Conference Board of Canada, 2020. Working Through COVID-19: Return to Work Survey. Link: <https://www.conferenceboard.ca/focus-areas/human-resources/2020/working-through-covid-19/return-to-work-survey?AspxAutoDetectCookieSupport=1>.

These results are also confirmed a McKinsey study that found that in advanced economies, between 18 per cent and 27 per cent of workers could work between three and five days a week without any loss in productivity. Across all sectors, 38 per cent of survey respondents expect their employees to work two or more days per week outside the office after the pandemic, compared with 22 per cent of those surveyed before the pandemic. However, only 19 per cent of respondents in the most recent survey said they expected employees to work three or more days remotely.¹²

In general, the widespread use of telework prompted by the pandemic has demonstrated that this model is viable and has many advantages. Nevertheless, there are some drawbacks that may limit its full adoption. Problems of isolation and mental health consequences have been a major concern throughout the confinement period.

Benefits	Disadvantages
<ul style="list-style-type: none"> • The average real estate savings for full-time teleworkers is \$10,000 per employee per year. Employees can save between \$2,500 and \$4,000 per year (by working remotely half the time) and even more if they can move to a less expensive location and work remotely full time. • By avoiding travel, employees can devote more time to productive tasks and contribute to the performance of companies while improving work-family balance.¹³ • Employers can broaden their recruitment pool because borders are no longer a limiting factor. • In the pre-pandemic labour shortage context, providing the opportunity to work remotely was a strategic advantage for employers in recruiting and retaining workers.¹⁴ 	<p>However, telework raises several issues to consider, which reflect some of the limitations of this work mode¹⁵:</p> <ul style="list-style-type: none"> • Communication difficulties for complex information • Slow, cumbersome and inefficient exchanges, in some cases • Difficulties in training new employees • Erosion of soft-skills knowledge • Loneliness • Ergonomic and workspace problems at home • Problem of noise and cohabitation with other workers in the same home • Child care problem • Problems with Internet, wireless Internet access, and slow connections

Toward hybrid models and their consequences on downtown areas

The literature indicates that hybrid models of telework will persist beyond the pandemic, mainly for a highly skilled and well-paid workforce. Most of the downtown office towers are occupied by companies in sectors with a high capacity to switch to telework. A more sustained use of telework would reduce the demand for office space. In fact, the use of smaller workspaces has already been observed in a few large Canadian urban centres since about 2010. As a result of technological advances, more and more companies have begun to opt for flexible work environments in which employees do not have a dedicated workspace, but can set up at any workstation when they come into the office. These new arrangements assume that all employees will never be in the office at the same time. Organizations can thus reduce their real estate footprint, together with their rent and real estate costs. This mode of operation could accelerate after the crisis is over.

12. McKinsey, 2020. What's next for remote work: An analysis of 2,000 tasks, 800 jobs and nine countries. Link: <https://www.mckinsey.com/featured-insights/future-of-work/whats-next-for-remote-work-an-analysis-of-2000-tasks-800-jobs-and-nine-countries>.

13. Idem.

14. CCMM.

15. Shearmur, Richard, 2020. The Future of Downtown Montréal: Immediate Impact of COVID and Post-COVID Perspectives.

The accelerated long-term shift to a world where workers spend more time at home and less time in the office could have a profound impact on downtowns. Higher rates of telework mean that fewer people will commute to and from work each day. There would be significant economic consequences for various sectors, including transportation, food service and retail trade, as well as demand for office space.

While a decline in the use of downtown offices is very likely, it will not imply a complete abandonment of the city centres. According to some forecasters, a reasonable estimate of the decrease in time spent at the office is 10 per cent to 20 per cent, which potentially corresponds to an equivalent reduction in demand for office space.¹⁶

Table 12: Canada’s downtown office vacancy rates, Q4 2019 to Q4 2020

City centres	Q4 2019	Q4 2020
Montréal	7.6%	10.2%
Ottawa	6.5%	9.5%
Toronto	2.2%	7.2%
Edmonton	20.1%	20.1%
Calgary	27.2%	29.5%
Vancouver	2.2%	5.8%

Source: CRBE, Canada Office Q4 2020.

The adoption of telework could stimulate household out-migration

The choice of living downtown is generally motivated by the proximity of services, the quality and diversity of the cultural offer, the quality of infrastructure, employment prospects, the presence of educational institutions, an efficient transportation network, etc. In fact, all of these advantages have been called into question in recent months: COVID-19 has accelerated the shift to telework, and physical distancing measures mean that people can no longer take advantage of the cultural offerings of large urban centres. In parallel, the fact that more time is being spent at home has motivated households to seek larger living spaces.

According to a market outlook survey released in September by RE/MAX, one-third (32 per cent) of Canadians no longer want to live in large urban centres, and would prefer to live in a rural or suburban community. The survey also found that 44 per cent of Canadians would like to have a home with more space for personal amenities, such as a pool, balcony or large yard, and 48 per cent would like to live closer to green spaces. Buyer interest has shifted from condominium apartments to single-family homes such as bungalows, semi-detached homes, and townhouses. In addition, due to the increasing prevalence of working from home during the pandemic, the commute to work has become less of a determining factor in the choice of where to buy a residential property. This has amplified buyers’ interest in less expensive suburban homes and in cities within a reasonable distance of major urban centres, in case they need to commute to work.¹⁷

In addition, household out-migration and the ability to telework can nurture each other, creating a cycle where companies that offer teleworking will find it easier to recruit top talent globally, which would prompt more people to leave the downtown core.

Housing affordability issues in some cities will be important factors contributing to household out-migration, particularly in Vancouver and Toronto, where households spend 58 per cent and 40 per cent, respectively, of their income on mortgage payments.

16. McKinsey, Shearmur.

17. RE/MAX, 2021. Canadian Housing Market Outlook 2021.
Link: <https://blog.remax.ca/canadian-housing-market-outlook/>

Table 13: Average sale price and affordability of cities

	Montréal	Ottawa	Toronto	Edmonton	Calgary	Vancouver
Average sale price (\$ of 2020)	631,385	468,195	933,670	350,120	484,600	1,267,680
% of monthly income for mortgage	N/A	17%	40%	13%	19%	58%

Source: RE/MAX Housing Affordability Index, 2020 for all downtown areas except Montréal. Link: <https://blog.remax.ca/housing-affordability-in-canada/>. The average price presented for Montréal comes from the CMHC.

Many experts are increasingly apprehensive about the “doughnut hole” effect: An empty city centre surrounded by scattered suburbs, which leads to urban sprawl. This phenomenon is linked to many of the major challenges facing cities, such as greenhouse gas emissions, air pollution, road congestion and a shortage of affordable housing. In general, urban sprawl increases dependence on automobiles and lengthens commuting distances, which in turn worsens traffic congestion, greenhouse gas emissions and air pollution. Urban sprawl also increases the per-user costs of delivering public services that are essential to well-being, such as water distribution, energy supply, sanitation and public transportation. As a result, either the quality of services will decline or greater subsidies will be needed to finance their provision. Eventually, the property values of inner city buildings may erode, creating pressure on cities to seek out additional revenues. Moreover, in the United States in the 1960s, this phenomenon went hand in hand with an increase in crime and racial tensions.

In the long term, only marginalized populations remain in the city centre, which often occurs in parallel with an increase in crime. This accentuates city centres’ loss of attractiveness.

Impacts observed in each of the city centres and workplaces

The massive shift to telework and the development of technologies that support it are likely to endure beyond the crisis. Regarding the growing use of hybrid models in the organization of work, one possible scenario would be a roughly 10 to 20 percent decrease in the number of people who go downtown, which would entail an equivalent reduction in office space. A sharp decline in workers who head downtown could have a significant impact on the sectors that depend on this traffic, such as retail stores and restaurants. The value of office and commercial buildings would be adversely affected, as would the collection of municipal property taxes, thereby undermining cities’ fiscal health. Another challenge would be the migration of households away from the city centres, as people see city life as less worthwhile, especially given the often prohibitive prices.

In the short term, all downtown areas will have to deal with the loss of commuter traffic due to the imposition of telework for services deemed non-essential.

In the long term, the vulnerability of city centres to telework will depend on multiple factors, two of which seem particularly crucial in predicting permanent impacts:

- The proportion of industries with the capacity to pivot to telework within the industrial fabric of city centres
 - Toronto, Montréal, Vancouver and Calgary are particularly at risk.
 - Ottawa and Edmonton, where the public sector is more prevalent, are potentially less at risk because this sector is less likely to adopt structural changes.
 - Commuting time could deter workers from returning to the downtown core
 - Toronto and Montréal are particularly at risk.

The indirect consequences of telework could be felt differently by each city centre:

- A loss of customer volume for businesses that depend on a daily influx of workers
 - Vancouver may be more affected because it has the highest ratios of stores and restaurants per 1,000 workers.

- Reduced demand for commercial and office space and a loss of tax revenues for cities
 - Toronto, Vancouver, Calgary and Montréal could be more adversely affected by a downward valuation of the commercial and office space stock due to the size of these markets in their downtown areas.
 - Given the low affordability of office space in the Montréal and Vancouver markets, these cities may see more businesses reduce their space or move out of the downtown core entirely.
- An exodus of households to outlying districts and suburbs
 - Toronto and Vancouver are the city centres most at risk because of their affordability issues. Further, this phenomenon is already being noted in Montréal and Ottawa.

Tourism: Leisure travel should rebound, but business travel will be slower to recover

Major impacts in the short term

Tourism is one of the industries most affected by the measures implemented to control the spread of COVID-19. This industry comprises several economic sectors such as transportation, accommodation and food services, travel preparation and reservation services, and leisure and entertainment. In 2019, tourism activities accounted for approximately 2 per cent of Canada's GDP, and created approximately 750,000 jobs.¹⁸ In March 2020, the number of international arrivals in Canada from other countries decreased by 54.2 per cent from February 2020, the largest monthly decline since 1972. Most hotels were empty: In the first week of April 2020, hotel occupancy was less than 20 per cent across Canada. As a result of this downturn, many businesses in the tourism industry were forced to lay off workers or to close temporarily or permanently. Data from the *Labour Force Survey* show that total paid employment in the tourism industry for April and May 2020 decreased by almost 60 per cent from the level observed in 2019.

Table 14: Hotel occupancy rates by downtown area¹⁹

	Montréal	Ottawa	Toronto	Edmonton	Calgary	Vancouver
2019	73%	74%	78%	60%	64%	81%
2020	22%	33%	24%	29%	-	30%

Note 1: Data for 2019 are from different sources (see the section on portraits of each downtown area).

Note 2: Data for 2020 are the average.

In the longer term, recovery scenarios are emerging according to market segments, particularly for leisure and business travel.

The revival of leisure travel

After the crisis, it is expected that people who travel for pleasure will want to do it again. The recovery in tourism will initially be driven by local tourism as confidence in the country's health and safety conditions is restored. According to a report by the Tourism Industry Association of Canada, the key segment for 2021 will be interprovincial travel, particularly for younger demographic groups, and especially for outdoor destinations. According to a survey, despite the increase in COVID-19 cases, most Canadians feel reasonably safe to travel close to home and within their own province, with the exception of those in British Columbia and Ontario²⁰, as table 15 illustrates.

18. Statistics Canada, 2020. The Economic Impact of Travel Restrictions on the Canadian Economy due to the COVID Pandemic-19. Link: <https://www150.statcan.gc.ca/n1/pub/11-626-x/11-626-x2020023-eng.htm>

19. Ontario Ministry of Tourism, Culture and Sport, 2021. Link: <http://www.mtc-currentperformance.com/Hotel.aspx>.

20. TIAC, 2020. The State of Tourism in Canada during COVID-19 Dashboard 2.0 Link: https://tiac-aitc.ca/COVID-19_Reports.html

Table 15: Canadians' sentiment toward travelling, by province

	AB	Provinces Atl.	BC	ON	QC	SK and MB
Canadians feeling safe to travel to communities near them	76%	80%	65%	69%	70%	61%
Canadians feeling safe to travel within their province	67%	66%	47%	48%	61%	53%
Canadians feeling safe to travel to other provinces in Canada	51%	12%	29%	53%	46%	39%
Canadians feeling safe to travel to the United States	17%	12%	7%	10%	18%	12%
Canadians feeling safe to travel internationally	18%	5%	10%	11%	21%	11%

Source: TIAC, The State of Tourism in Canada during COVID-19 Dashboard

Note: An orange box indicates a majority negative feeling; a grey box indicates a majority positive feeling.

Business travel

The study of past recessions indicates that business travel is more likely to be affected by economic disruptions, and that this activity will take longer to rebound than leisure travel. For example, in 2008-2009, as a result of the global recession, international business travel from the United States fell more than 13 per cent, compared with a decline of only 7 per cent for international leisure travel from the United States. While international leisure travel recovered fully in just two years, it was only after five years that business travel reached pre-crisis volumes.²¹

Reservations for major events are made several years in advance. Destination Canada forecasts that the number of delegates travelling in 2022 will still be lower than expected, and events may be smaller. The effects of event postponement will be felt in the industry for years to come.²²

In 2020, companies have had to quickly move from face-to-face meetings and events to virtual platforms. The success of the method is leading companies to assess their current and future travel needs. In fact, these events incur significant costs for these companies (airfare, accommodation and productive hours lost to travel). The increased use of different technological platforms augurs a possible future trend toward videoconferencing and collaboration tools that are conducive to remote work, which may well replace some on-site meetings and conferences in the future. A similar scenario is expected for events and conferences: We could see a growth in hybrid models, bringing together a small number of face-to-face and virtual participants.

Nevertheless, there will always be a need for face-to-face business meetings and business travel. As with leisure tourism, regional and local business travel will recover first, because some companies will want to resume face-to-face negotiations and meetings with clients as soon as a vaccine is widely distributed. Peer pressure may also play a role: Once one company resumes face-to-face meetings, competitors may follow. However, a survey of business travel managers finds that business travel spending in 2021 is expected to be only half of what it will be in 2019.²³ Nevertheless, certain sectors could be particularly active in this tourism segment, notably life sciences, technology, finance and insurance.²⁴

21. McKinsey & Company, 2020. For corporate travel, a long recovery ahead. Link: <https://www.mckinsey.com/industries/travel-logistics-and-infrastructure/our-insights/for-corporate-travel-a-long-recovery-ahead>.

22. Destination Canada, 2020. Destination Canada's Visitor demand forecast update. Link: <https://www.destinationcanada.com/en/coronavirus-updates/covid-19-research>

23. Seth Borko, Wouter Geerts, and Haixia Wang, 2020. The travel industry turned upside down: Insights, analysis, and actions for travel executives. Link: <https://www.mckinsey.com/industries/travel-logistics-and-transport-infrastructure/our-insights/the-travel-industry-turned-upside-down-insights-analysis-and-actions-for-travel-executives>.

24. Destination Canada, 2020. Destination Canada's Visitor demand forecast update. Link: <https://www.destinationcanada.com/en/coronavirus-updates/covid-19-research>

Estimated impacts of the decrease in tourist activities on each of the downtowns

In the short term, downtown areas will have to contend with public health restrictions and the inevitable closure of stores, leading to the loss of flagships and talent in the industry. In the long term, the decline in short-term business travel is expected to continue. In general, all city centres will have to deal with technological changes and integrate digital technology in the offer of business events and even festivals. The tourism sector is of strategic importance for city centres as a showcase for international business and an engine of vitality and dynamism. Thus, the ability to capitalize on this sector in the years to come will be a determining factor in fostering dynamic and lively city centres.

In the short term, inner cities' level of vulnerability related to tourism will therefore depend on the following factors:

- The importance of the sector in the economic fabric of the downtown area:
 - Given the importance of the tourism sector for Montréal, Toronto and Vancouver, economic activity based on tourism will be affected by the temporary or even permanent closure of some businesses.
 - In Ottawa, tourism is neck and neck with the high-tech sector, just behind the public sector, for its importance in the economy. As the nation's capital, the city has several national attractions and historic sites, most of which are in the city center or within a kilometer from the central business district.
- The importance of business and event tourism:
 - As important business locations, Toronto, Montréal and Calgary are particularly at risk, especially given the frequency of short-term business trips. Further, because they also host many internationally renowned festivals, Toronto and Montréal face an even higher risk. Calgary was already experiencing an oversupply of hotel rooms prior to the pandemic, and there is no indication that the situation will improve in the years 2021-2022.
 - Vancouver could also be affected until economic activity fully recovers, given the prevalence of large conventions and business meetings. All the same, this segment may return to pre-pandemic levels within the next two years.
 - Edmonton's tourism and hospitality sector is heavily based on business conventions, making the city vulnerable to sharp declines in these events in the short term.
 - Business and event tourism in Ottawa has the same foundations as other downtown areas and it is exposed to the same risks. On the other hand, with its status as the capital of a G7 member country, a certain portion of the sector is relatively protected: even if part of these events were to switch to digital platforms, needs concerning face-to-face meetings will remain anchored beyond the crisis.
- The ability to reposition rapidly when reopening begins will be key to mitigating the impact of the pandemic and revitalizing the industry. The recovery will hinge on cities' ability to engage the public nationally and internationally, and build on synergy with "nature" tourism.
 - Vancouver, Calgary and Edmonton might see a faster recovery in leisure tourism propelled by the local tourism segment. These cities are gateways to various national parks, and the outdoor tourism segment is the most promising for the years 2021-2022. These attributes would accelerate their recovery.
 - Nevertheless, for Calgary or Edmonton, the favourable outlook for local tourism will not offset the losses related to business tourism.

In the long term, the quality of tourism and cultural ecosystems that prevailed before the pandemic could contribute to the cities' recovery if measures are implemented to support businesses. With business tourism expected to decline, cities should focus more on leisure tourism. However, there will still be a need for major business events beyond 2022. Downtowns that can offer a high quality experience for business events through a state-of-the-art technological infrastructure could return to pre-pandemic levels of activity.

- Toronto, Montréal and Vancouver have well-developed tourism infrastructures and a significant supply of entertainment and cultural activities that would allow them to position themselves favourably in the leisure tourism segment. In addition, these downtowns are well positioned in business segments such as life sciences, technology and finance, which are conducive to a rapid recovery in terms of business events. Montréal, and to some extent Ottawa, also have the advantage of their European character and a positioning within the French-speaking community.
- As for Toronto, the city has the advantage of having one of the most diverse populations in the world and could benefit from the arrival of international travelers for pleasure trips out of the crisis.
- For Edmonton and Calgary, leisure tourism is less likely to offset losses related to business tourism because this activity was less developed before the pandemic.

Retail trade: The rise of e-commerce and other vulnerability factors

Accelerated use of e-commerce

Prior to COVID-19, inner-city businesses were already weakened, particularly by the rise of e-commerce. In Canada, the proportion of online sales rose from 2.4 per cent in 2016 to 4.0 per cent in 2019. The closure of non-essential businesses raised this proportion to 10.0 per cent. It reached \$39.3 billion in May 2020, an increase of 2.3 per cent from April 2020 and 99.3 per cent from February 2020. Year over year, e-commerce sales in Canada have more than doubled, with a 110.8 per cent increase over May 2019.²⁵ Figure 8 illustrates the trend in online retail sales growth relative to in-store sales.

Figure 8: Online retail sales versus in-store sales (January 2016 = 100)



Source: Statistics Canada, Monthly Retail Trade Survey

Since the beginning of the pandemic, the growth of online transactions has been particularly strong for certain retail segments.

Table 16: Change in proportion of purchasing method (in-store or e-commerce) by type of goods

Sector (by NAICS code)	Method	2016	2017	2018	2019	2020 (Jan. to May)
Retail Trade	In-store	97.6	97.1	96.7	96.0	93.4
	E-commerce	2.4	1.9	3.3	4.0	6.6
Furniture and home furnishings stores	In Store	97.8	96.9	95.3	93.4	83.6
	E-commerce	2.2	3.1	4.7	6.6	16.4
Electronics and appliance stores	In Store	83.0	81.7	79.2	71.0	56.5
	E-commerce	17.0	18.3	20.8	29.0	43.5
Clothing and clothing accessories stores	In Store	91.6	92.0	91.1	89.4	76.4
	E-commerce	8.4	8.0	8.9	10.6	23.6
Sporting goods, hobby, book and music stores	In Store	93.5	91.1	90.5	87.7	73.0
	E-commerce	6.5	8.9	10.5	12.3	27.0

Source: Statistics Canada, 2020. Retail e-commerce and COVID-19: How online shopping opened doors while many were closing

25. Statistics Canada, 2020. Retail e-commerce and COVID-19: How online shopping opened doors while many were closing. Link: <https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00064-eng.htm>.

According to a recent survey conducted by the firm Léger, 29 per cent of Canadians said they are ready to go back to a restaurant or bar as soon as the health situation is under control, and 40 per cent would continue to buy groceries online.²⁶

As online sales reach historic levels, retailers' margins are undergoing considerable pressure. Note that rent for space to support store operations is the most significant operating cost for retailers. A decline in customer traffic in their stores, combined with the rising logistics costs of e-commerce, is causing a difficult financial situation for many chains. Retailers will consequently need to take drastic measures, ranging from closing stores to reconfiguring their point of sale networks. The stakes for merchants are high, and those that fail to adapt may be forced to withdraw from the market. In Canada, major retailers have filed for creditor protection, including Aldo, Le Château, Mountain Equipment Co-operative and apparel store Reitmans. With online shopping trends expected to remain strong over the next few years,²⁷ retailers will need to find a balance to alleviate this pressure on their margins.

Further, the increase in applications under the Companies' Creditors Arrangement Act is driven by the closure of certain segments of the economy as required by the government. Apparel retailers have been greatly affected by their commercial lease obligations; some large retailers have hundreds or thousands of commercial leases. Retailers' e-commerce capacity will not be able to compensate for the loss of customers in-store. The recovery strategy for these retailers will have to involve optimizing their real estate assets or obligations and developing an e-commerce strategy. In addition, the surge in online sales during the pandemic was largely attributable to essential goods such as groceries and pharmaceutical products. Many of these retailers believe there will be a sharp drop in this activity as the pandemic subsides.

E-commerce is not only reducing the demand for commercial real estate; it is also changing the functions of physical space. Stores are more likely to become showcases and places that provide customer experiences: They are no longer places for storage or even transactions (which are done online). Physical spaces are being transformed into places that offer an extra level of information and the opportunity to interact with products and immerse oneself in the brand.

Table 17 presents the evolution of the commercial space occupancy rate in the city centres examined. Vacancy rates increased slightly for all downtowns by about 1 percentage point between the third quarter of 2019 and the same quarter of 2020. Toronto experienced the smallest increase, at a rate below 2 per cent. The low impact on commercial space is partly due to the fact that merchants cannot exit their leases without significant financial consequences. In addition, merchants perceive the loss of customer traffic as temporary, which is prompting them to retain locations that they consider strategic. In addition, the support measures related to commercial leases and the federal government's wage subsidies have allowed many merchants to survive during the period under review. In the longer term, however, when the leases expire, the picture may be different.

Table 17: Commercial vacancy rates in Canadian downtowns, Q3 2019 to Q3 2020

Downtowns	Q3 2019	Q3 2020
Montréal	7.3%	8.7%
Ottawa	2.3%	3.3%
Toronto	1.7%	1.9%
Edmonton	6.0%	6.8%
Calgary	5.1%	6.3%
Vancouver	2.5%	3.4%

Sources: CoStar; CBRE.

26. National Post, 2020. Nearly 9 in 10 say they will take COVID-19 vaccine, poll finds.

27. GroupM, 2020. This Year Next Year: E-commerce forecast. Link: <https://www.groupm.com/this-year-next-year-e-commerce-forecast/#:~:text=By%202024%20retail%20focused%20e,retail%20sales%20at%20that%20time.&text=Significantly%20faster%20rates%20of%20growth,in%20both%20Canada%20and%20Australia.>

Other factors that influence the commercial vitality of downtown areas

In addition to competition from e-commerce, downtown businesses had been contending with a loss of attractiveness of the city centre as a shopping destination in favour of suburban shopping centres. With strong population growth in the suburbs (a phenomenon observed in all Canadian CMAs), the commercial offer in suburban areas is becoming more sophisticated, and is increasingly replacing shopping in the city centres. Downtown businesses also face higher operating costs than those in the suburbs because of rental prices, together with higher municipal tax rates. In addition, large suburban shopping centres continue to attract large chains, which were previously located in major city centres only. Their offer of diversified products and services, such as restaurants or entertainment venues, also competes with the downtown areas, which were formerly differentiated by this diversity.²⁸

Accessibility to the downtown core can also play an important role in visitor volume. For nearby residents, public transit and active transport will play an important role in reducing the friction in the decision to shop downtown. For people living on the outskirts of the city, either in the suburbs or in the city but far from downtown, two transportation options will support travel downtown: The availability of train stations or express bus routes, and access by car. Access by car, which is also affected by road traffic and the availability and price of parking spaces, will naturally be prioritized by people coming from further away. The increasing density of city centres has hampered automobile access. At the same time, governments and some private actors are investing in heavy rail modes such as light rail.

The type of transportation favoured will shape people's consumption habits. The availability and quality of public transit services could benefit the restaurant, entertainment and shopping sectors. Intensive shopping could be a challenge because consumers have a limited ability to carry their purchases when using public transit. In addition, if there is continued concern about transit safety in the aftermath of the pandemic, car use may remain the preferred option for many in the short term. Lastly, the direction each city takes in its post-pandemic urban development strategy will necessarily impact downtown businesses.

Estimated impacts of the use of e-commerce on each city centre

As described above, all downtowns face some common challenges to the vitality of their commercial sector: The rise of e-commerce and its attractiveness to consumers, as well as competition with suburbs and their large, diverse and more accessible shopping centres. In general, the weight of the commercial hub of downtown areas has decreased over the last decade: this trend is likely to exacerbate in the coming years. The extent of the impact will depend on the composition of the downtown areas and their usage, along with retailers' resilience to these challenges.

In the COVID-19 context, several factors will affect the recovery of the commercial sector in downtown areas, including the choice of location and shopping method (either online or at suburban malls), merchants' ability to offer specialized service that surpasses online offerings, or cities' ability to create a pleasant environment to visit. In addition, the prospects of a return of workers, students, and tourists, and the choice of whether or not to reside in the downtown areas will be decisive for downtown merchants and restaurateurs. During our consultation activities, some stakeholders mentioned that the retail trade (including restaurants) is at the end of the economic activity chain, i.e. their business model depends mainly on the attractiveness of downtown areas.

This multidimensionality makes it difficult to analyze the impact of COVID-19 on the commercial offer in each of the downtown areas. Nevertheless, some elements could be favourable to city centres. We have retained two factors that can capture the impact of COVID-19 on the downtown commercial sector, although they do not allow us to grasp its full complexity.

- **Projected traffic in the downtown areas:** Measured by the number of workers and their vulnerability to the shift to telework, the number of students, the tourist attraction capacity and the portion of residents.
 - Montréal, Toronto and Vancouver are particularly at risk because they are the downtown areas where the greatest decline in visitor traffic is expected compared with the pre-COVID-19 situation, due to the shift to telework, their dependence on the tourism sector and the size of their student population (slightly smaller for Vancouver because UBC is mainly situated outside the downtown core).
 - Toronto and Vancouver are also facing a loss of residents owing to affordability issues.

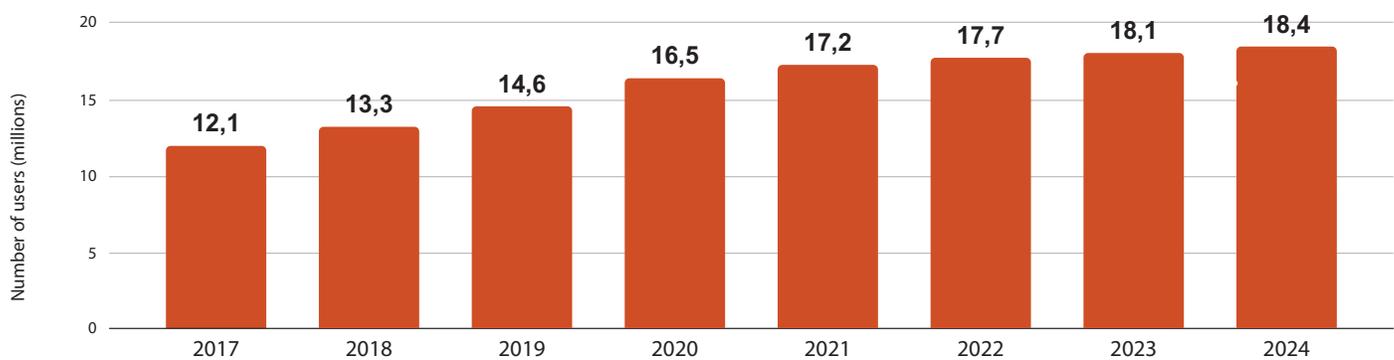
28. Gordon, Hindrichs, and Willms, 2018. Still Suburban? Growth in Canadian Suburbs, 2006-2016. Council of Canadian Urbanism: Working paper 2.2016.

- Commercial businesses of downtown Ottawa are concentrated around the Rideau Center and the Byward Market, at a walking distance from office towers. The absence of public and private sector workers, tourists and students has had a negative impact on retail, food service and services, and many uncertainties remain as to their return to the city center.
- Downtown Edmonton can rely on the resilience of the public sector to mitigate the migration of workers away from the downtown core. In addition, relatively high and stable wages may fuel strong consumption.
- Calgary’s downtown commercial sector is at risk because the offer has been designed based on the strong presence of a business clientele and business meetings. A significant decrease in these elements, particularly due to difficulties in the oil sector, could hinder recovery in this sector considerably.
- **Downtown accessibility:** Measured by the quality of the offer of public transit, active transport and accessibility by car.
 - Montréal is well served by public transit, yet there are several obstacles that keep residents of the suburbs and outlying areas from going downtown, including lack of parking spaces, traffic congestion and major construction work. The arrival of the REM (electric rail network) could make the downtown area more accessible in the coming years.
 - For Ottawa, the completion of the light rail network and its expansion should mitigate this factor and potentially encourage suburban residents to travel downtown.
 - For Vancouver and Toronto, the quality and supply of public transport could draw residents of outlying areas to the downtown core, but a lack of parking and traffic congestion may discourage visitors from outside the city.
 - Downtowns in Calgary and Edmonton are fairly easy to reach by car, a factor that could help the area by attracting people from outside the downtown core. However, a less efficient public transit system could hamper pedestrian and bicycle traffic. Nevertheless, in recent years these cities has developed its alternative transportation offer, notably through the introduction of e-scooters and their cycle track infrastructures which connect to the city center. In addition, Edmonton inaugurated a new light rail train (LRT) in 2021, which should improve transit options.

Paradigm shifts in the way people consume cultural goods and entertainment

One of the changes that has swept through the cultural and entertainment sectors over the last few years is the transition to digital consumption modes. A concrete example of digitization is the significant increase in the consumption of film and television products on online platforms. A study conducted by Convergence Research Group found that the year 2020 was marked by a strong presence of online streaming services, such as Netflix, which surpassed cable television in terms of popularity. According to Statista, 16.5 million Canadians subscribe to Netflix.

Figure 9: Number of Netflix subscriptions in Canada from 2017 to 2024



Source: Statistics Canada

A sector strongly affected by the pandemic

The culture and entertainment sector is among the sectors most affected by the COVID-19 pandemic and the resulting social distancing measures. Several organizations, including concert halls, museums and movie theatres, have had to close temporarily, and all festivals and events have been cancelled. As the country enters a recession, the sector will face several challenges to its survival in the coming years. The impact of the pandemic on the sector and the speed and strength of its recovery will depend on three main factors:

- Effects related to health measures
- Effects related to the decline in household incomes (effect of the economic crisis). Note that official statistics report a growth in Canadian household incomes;
- Effects related to changes in consumer behaviour

The first two effects on the sector will be felt more in the short and medium term, and will persist throughout the duration of the health crisis and recession. The third impact will linger in the longer term and will influence supply and consumption patterns.

Longer-term effects related to changes in consumer behaviour

The current crisis is accelerating and accentuating the transformations in consumption patterns that were already underway before the pandemic, i.e. the transition to online consumption patterns and offerings. In fact, online platforms have proven to be more resilient since the beginning of the crisis. For example, during confinement Netflix gained 15.77 million new subscribers in the first three months of 2020 and 10.09 million between April and June, amounting to the company's strongest growth spurt in its history.²⁹ Online video game consumption in Canada achieved record sales which soared by 20.1 per cent in 2020. Mobile gaming is leading the growth: Canadian forecasts show that this segment has been expanding since the beginning of the pandemic and is likely to continue to do so over the next five years.³⁰ This online consumption has also been stoked by the fact that organizations, including some museums, orchestras and dance companies, have begun offering online content.

Several performing artists have offered online and live concerts. Technology that can broadcast live performances has been around for some time, and is used by several popular digital platforms such as Youtube, Facebook, and Patreon.

While some artists have achieved reasonable results using these platforms, they have not yet been widely adopted as a substitute for the shared live music experience. There are many reasons for this, including the fact that live digital experiences are significantly less immersive than in-person experiences. However, new and existing technologies, such as virtual reality (VR), could fill some of these gaps, if they become more accessible and affordable in the future.

Impatience for cultural events to return

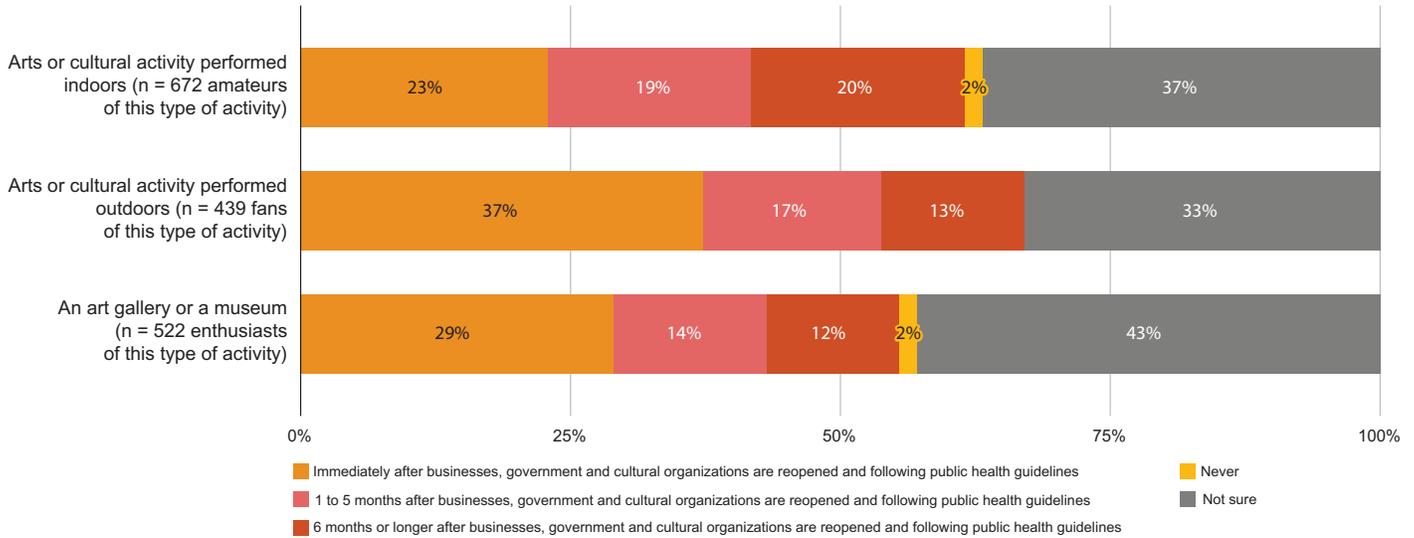
Even when things return to some form of normalcy, it is unlikely that they will be the same as before. Instead, we can probably anticipate a pre- and post-pandemic scenario. During the transition period, people's reactions will vary: Some people may be reluctant to go to places that favour proximity, and others may have a strong desire to return to concert halls to fill a need that could not be met during the confinement period. A Nanos survey shows that Canadian consumers are eager to return to cultural venues in accordance with public health guidelines, as shown in figure 10.³¹

29. Forbes, 2020. Netflix Subscriber Growth Slows After Surging During Pandemic. Link: <https://www.forbes.com/sites/joewalsh/2020/10/20/netflix-subscriber-growth-slows-after-surging-during-pandemic/?sh=3c7c8da0244e>.

30. Statista, 2020. Video Games. Link: <https://www.statista.com/outlook/203/108/video-games/canada>.

31. Nanos, 2020. Culture-goers intend to increase their donations to the arts in 2021, after 20 percent projected drop in 2020; more culture-goers want masks to feel comfortable at performances. Link: <http://www.businessandarts.org/wp-content/uploads/2020/09/Business-and-Arts-Populated-Report-English.pdf>. Survey of 1,094 nationally representative Canadians 18 years of age and older.

Figure 10: Preferred timelines for Culture and Art Lovers to return to activities and events in Canada by event category



Source: Nanos, Culture-goers intend to increase their donations to the arts in 2021, after 20 percent projected drop in 2020; more culture-goers want masks to feel comfortable at performances

Risks for the industry and implications for city centres

It is difficult to predict post-pandemic behaviour linked to the way people consume cultural goods and services and entertainment. Surveys show that culture enthusiasts will want to go back to see live shows, and that the online offer does not have the same immersive qualities as the face-to-face offer. Nonetheless, the Canadian Council for the Arts predicts that a rapid return to pre-pandemic attendance at cultural institutions is increasingly unlikely, the longer authorities delay the end of physical distancing. This is compounded by already declining attendance before the pandemic and decreasing household purchasing power.³² Moreover, the longer the period of disruption associated with COVID-19, the more likely the reactions and new behaviours are to be incorporated into the consumption of cultural goods for a longer term. A recent survey conducted by Léger finds that 39 per cent of respondents will keep their new subscriptions to online streaming platforms such as Netflix or Amazon Prime.³³

Ultimately, the cultural ecosystem faces a degree of risk. For some organizations, the loss of contact with the public could result in a decline in interest among their regular audience, and slow the cultivation of a younger audience. Without sustained government support, the pool of local artists will dwindle.

Cultural venues are at the heart of the vitality of city centres. They contribute to the effervescence of neighbourhoods and public spaces, help build the city’s international reputation, and are real drivers of tourist attraction and economic spinoffs. Thus, although it is difficult for a city to position itself regarding spectators’ return to events, there is a very real risk that the ecosystem will weaken, which will impact the attractiveness of city centres.

32. Canada Council for the Arts, 2020. Culture’s way out of this crisis. Link: <https://canadacouncil.ca/spotlight/2020/04/cultures-way-out-of-this-crisis>.
 33. National Post, 2020. Nearly 9 in 10 say they will take COVID-19 vaccine, poll finds.

A few examples of the contribution of the cultural sector to the downtown economy:

- A study conducted by the City of Toronto, the Canadian Live Music Association in collaboration with the Downtown Yonge Business Improvement Area and Ontario Creates shows that the total economic impact of Toronto's live concert halls is \$850 million annually, which is equivalent to 10,500 full-time jobs.³⁴ However, even before COVID-19, Toronto saw an alarming number of venues close, often due to rising rents and major redevelopment underway in the downtown core. Each hall closure costs an average of \$575,000 in annual contributions to GDP and \$148,000 in provincial and federal taxes. Since March 2020, Nordicity estimates that the closure of concert halls in Toronto has cost the city's economy \$99 million, the equivalent of 1,480 jobs.³⁵
- A report quoted in a Global News article, published in 2017, stated that the music ecosystem in Edmonton and Calgary generated approximately \$2.9 billion and created over 20,000 jobs in the industry.³⁶ The report emphasizes the importance of concert halls to the city's economy along with the key role of these establishments in a thriving music ecosystem.
- Between 2016 and 2018, 10 major events that took place in Montréal (mostly in the downtown area) generated \$189 million in direct and indirect spinoffs and supported 3,050 jobs.³⁷

Estimated impacts on the cultural and entertainment sector in each of the downtowns

In the short term, all city centres are facing the same issues related to the interruption of the activities related to face-to-face business in the sector. If no action is taken to massively support the sector during 2021-2022, there is a risk that the ecosystem may collapse as a result of the increased financial precariousness of large institutions or the closure of small venues that forge the unique character of city centres. The loss of creative talent is also very present: The cultural sector is largely composed of artists and craftspeople whose financial situation is often precarious. These actors might decide to move to other sectors. Moreover, changes in long-term consumer habits might result in a permanent loss of audiences.

In the short term, the impact of COVID-19 on the cultural and entertainment sectors for each of the city centres will depend on:

- The relative importance of the sector:
 - Montréal, Toronto and Vancouver have the downtown areas with the highest concentration of cultural institutions among those under study. Thus, the impact of the disruption of activities will be greater there. The strength of the ecosystem could be compromised, which could dampen the vitality of the sector if no measures are implemented to support culture and entertainment over a fairly long period.
 - The cultural sector in Ottawa, Calgary and Edmonton is also affected by the COVID crisis. For instance, Edmonton's arts district (in the heart of downtown), composed of a large concert hall, a theatre, art gallery, museum and library, has greatly suffered from the pandemic. Normally, this district attracts visitors and generate activity in local shops: cafés, restaurants, pubs, bars. Many of them were affected and had to close their door. Nevertheless, the role of this sector in the recovery and revitalization of downtowns should not be underestimated.

In the long term, the quality of the cultural ecosystem that prevailed prior to COVID and the political will to support the sector could facilitate the recovery:

- Once again, Montréal, Toronto and Vancouver have cultural sectors that are well integrated into their identity and brand image. The importance of this sector is generally recognized, and there is every indication that cities will benefit from the presence of major institutions to ensure their recovery and their attractiveness. However, uncertainty remains as to whether they will be able to preserve the smaller-scale cultural players that contribute diversity and richness to the cultural ecosystem of these downtown areas. Ottawa will also benefit from its brand image, which is closely linked to the federal institutions (Parliament Buildings, etc.), national museums and the Rideau Canal (UNESCO), etc.
- Calgary and Edmonton were, prior to the crisis, in the process of developing a strategy to revitalize their downtown areas, including significant investments in the cultural sector. Moving forward with these projects could prove to be an important factor in the recovery.

34. Toronto City, 2020. Economic impact of Toronto live music venues totals \$850 million, providing 10,500 full-time jobs. Link: <https://www.toronto.ca/news/economic-impact-of-toronto-live-music-venues-totals-850-million-providing-10500-full-time-jobs/>.

35. Nordicity, 2020. Re:Venues: A Case and Path Forward for Toronto's Live Music Industry study. Link: <https://www.toronto.ca/wp-content/uploads/2020/10/9846-Re-Venues-FINAL-REPORT.pdf>.

36. Global News, 2020. COVID-19: New report shows viability of Alberta's music industry as it looks to bounce back. Link: <https://cismfm.com/news/7431676/alberta-live-music-venues-coronavirus-impact/>.

37. KPMG, 2018. Étude de retombées économiques de 17 membres du RÉMI. Link: http://remi.qc.ca/remi.qc.ca/wp-content/uploads/2018/05/Retomb%C3%A9es-%C3%A9conomiques-consolid%C3%A9es-R%C3%89MI_Format-rapport_18-mai-2018.pdf.

Online Education

Educational institutions are also being affected by physical distancing measures. Given that post-secondary institutions are of particular interest for downtowns, they will receive special attention in this section.

A marked decrease in traffic will impact the institutions' finances.

Across the country, colleges and universities must contend with declining numbers of users of their campuses and residences. Most international students have remained in their home countries. The pandemic has thus plunged Canadian universities into financial uncertainty. The recruitment of international students, on which many universities rely to increase enrolment and revenues, has been compromised. Further, additional revenues such as parking fees and campus services (e.g., food services) can no longer be relied upon, not to mention the risk of reduced government subsidies following the pandemic.³⁸ Consequently, these institutions will face considerable financial uncertainty over the next few years.

For example, the University of British Columbia is projecting a loss of \$138 million in tuition fees and a deficit, which would be its first, of \$225 million in the next academic year.³⁹

If the situation were to continue in the long term, the consequences on the educational ecosystem of city centres would be significant. Universities contribute to downtown traffic by drawing local and international students on a regular basis. Efficient research centres are also vectors of attraction for foreign investment, and the availability of skilled workers is often cited as one of the most important factors in companies' decision to set up shop in a territory.

The quality of online education

According to a survey of 2,700 people commissioned by the Ontario Confederation of University Faculty Associations, the shift to e-learning during the pandemic has affected the quality of the educational experience. Indeed, 62 per cent of students and 76 per cent of faculty and support professionals surveyed felt that e-learning had a negative impact on the quality of education.⁴⁰

Mobility of international students

While the short-term impacts of international student mobility are significant, the long-term picture is more optimistic. Most studies that report disruptions related to international student mobility in 2020 also note that, despite the virus, people are still interested in studying abroad in the long term.⁴¹ Some industry observers point out the temporary impact of past crises, such as 9/11, MERS, SARS, and the 2007-2008 recession. In addition, longitudinal data show that global demand for study abroad sessions has increased steadily over the past 30 years.

A 2017 OECD report explains the rise in international student mobility by emphasizing that knowledge economies require higher-level skills and qualifications.⁴² The report adds that rising wealth in emerging economies has prompted children from a growing middle class to seek educational opportunities abroad. At the same time, economic (e.g., the cost of international airfare), technological (e.g., the spread of the Internet and social media to maintain contacts across borders), and cultural (e.g., the use of English as a working and teaching language) factors have contributed to making international mobility much more affordable.

Long-term perspectives

The pandemic has disrupted higher education; an adjustment period will be required before student mobility flows return to pre-pandemic levels. While many analysts predict a global decline in international student numbers, many uncertainties remain: How steep will this plunge be, and how long will it last?

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38. HuffPost Canada, 2020. Universities 'Fearfully' Approach Semester of Budget Cuts, Lost Revenue.
Link: https://www.huffingtonpost.ca/entry/coronavirus-canadian-universities-budget-cuts_ca_5f36e2edc5b65bbd8c8d0535.
39. Maclean's Magazine, 2020. Can Canada's universities survive COVID?
Link: <https://www.macleans.ca/education/can-canadas-universities-survive-covid/>.
40. CBC, 2020. Survey of university students, faculty suggests online learning has negative impact.
Link: <https://www.cbc.ca/news/canada/toronto/covid-ontario-universities-1.5814603>.
41. BizEd Magazine, 2020. International Student Mobility and the Impact of the Pandemic.
Link: <https://bized.aacsb.edu/articles/2020/june/covid-19-and-the-future-of-international-student-mobility>.
42. Ibid.

These scenarios are particularly difficult to predict because the response to the virus has been different in each country. Countries that have quickly controlled the spread of viruses may reopen earlier and be more competitive in their ability to attract international students. In addition, the crisis may accelerate the development of online education or hybrid models that are increasingly competitive with face-to-face offerings in terms of quality. For universities, the use of an online model could increase their intake capacity, particularly for programs in high demand, such as continuing education programs. For students, studying at the world's largest universities will be possible from anywhere.

In general, students are expected to return to campuses to some extent, eventually. Yet the competitive environment for universities may be shaken because competitiveness among educational institutions is expected to intensify on the global scale. Institutions' reputation in terms of the quality of teaching and their contribution to scientific development (for example, through their publications and research centres) will play a determining role in their ability to position themselves on the global stage. Consequently, investment in research and development partnerships with the private sector is more important than ever for the future.

Estimated impacts of the provision of online education on each downtown

Higher education institutions are an integral part of the dynamism of city centres not only because of the population they attract, but also because they cultivate the downtown area's brand image internationally.

In the short term, the challenge for downtowns lies in the absence of the student population, which contributes to the vitality of local businesses.

The cities of Toronto and Montréal are particularly affected, in that many institutions are located directly downtown. For Ottawa and Vancouver, the impact is also significant, although university campuses are not located in the downtown core.

In the longer term, it is estimated that students will return to campuses, but competition between universities may intensify, particularly when it comes to attracting international students. International students may opt for online education or look to countries that have opened their economies more quickly (admittedly, a short-term consideration). Thus, universities that are more dependent on international students may be vulnerable to some extent.

The universities located in Montréal, Toronto and Vancouver draw the most international students to the country. If they are unable to maintain their international positioning and outreach, they may have difficulty attracting international students to their campuses. An indirect effect would be a decrease in revenue from the higher tuition fees charged to international students. Ultimately, this could also affect universities' ability to invest in research, which is particularly important for cultivating their influence and forging links with the private sector.

Review of international initiatives

Several governments have introduced measures to help cities and their downtown areas to weather the crisis and become more resilient over the long term. This section presents some of these measures, according to different themes. This exercise is not intended to identify all of the measures implemented in the international community. It is based on a literature review from which we have selected the most promising examples given the Canadian context.

Presently, we are unable to assess the scope of these measures because they are still being implemented, and most governments are still in crisis management mode. Nevertheless, this portrait allows us to draw certain lessons that fall into three categories:

- Public initiatives to stabilize the situation in the short term and thus ensure that the economic crisis does not turn into a structural crisis
- Initiatives to improve cities' financial health
- Examples of cities that are particularly resilient to the pandemic owing to conditions that prevailed before the crisis

Stabilize the situation in order to avoid a structural crisis

Support businesses

- The City of **Barcelona** has drawn up an economic recovery project, "Barcelona Never Stops," which comprises a series of measures aimed at restoring the economic and social fabric and stimulating the city's economy. The plan, which will last until summer 2021, aims to promote new business models to make Barcelona a more resilient city, encourage local consumption, protect and stimulate employment, and burnish the city's international reputation. To achieve these objectives, the city will carry out a series of measures in the following areas: Subsidies and financing, capacity building, promotion and communication, economic instruments and adaptation of existing legislation.
- **Tokyo** has developed a roadmap for recovery that includes guidelines for businesses to prevent the spread of the virus, together with subsidies to allow small and mid-sized enterprises to invest in appropriate facilities and equipment. At the same time, to support the hotel sector, a program linking hotels offering teleworking facilities with employees who cannot telework from home has been developed.
- The London Business Hub is an organization dedicated to the city's economic development. During the crisis, it launched a new portal to help **London** businesses and employers manage their recovery efforts. Business owners can take advantage of one-hour phone calls or video conferences with an advisor to discuss the impact of the crisis and establish resilience strategies.
- In November 2020, the City of **Boston** launched three new funds totalling \$6.3 million that will support small businesses in the city affected by COVID-19. The focus will be on commercial rent relief and supporting small businesses owned by women, minorities and veterans. Since the start of the pandemic, the city has allocated more than \$15 million in direct grants to small businesses.

- The City of **Madrid** is committed to supporting businesses in the commercial, accommodation, leisure and cultural sectors by reducing municipal taxes by 66.6 million euros while providing financial support and strategic guidance. In addition, the city has implemented a comprehensive action plan to deal with the pandemic and lay the foundations for economic recovery. The plan contains measures in various areas (emergencies, health, mobility, economy, and tourism) aimed at ensuring the well-being of Madrid's residents and accelerating the city's economic recovery.⁴³
- During summer 2020, **Madrid** developed a plan proposing conditions to reopen the capital's 5,323 patios as soon as confinement ends. The goal is to relax regulations and harmonize the interests of hotel owners, merchants and residents. The plan aims to expand the authorized zones while considering the following elements: Avoid harming the interests of other business sectors, avoid impeding pedestrian traffic, and complying with universal accessibility regulations.
- The City of **Los Angeles** has temporarily capped the fees charged by third-party delivery services at 15 per cent of the cost of the order. This measure does not apply to food delivery services that are directed at consumers. It applies only to fees charged to restaurants. Several other US cities, including San Francisco, New York, Chicago, Seattle, Washington DC and Jersey City, have adopted similar measures.

Improve mobility

- The City of **Tel Aviv** has converted 11 popular streets into pedestrian areas to encourage economic activity and local mobility.
- The City of **Milan** announced that it would redevelop 35 km of streets at the end of the crisis to encourage cycling and walking. This is particularly welcome because Lombardy is one of the most polluted regions in Europe. These bold commitments to urban mobility have inspired many other cities around the world.
- **Seoul**, considered a pioneer in smart green mobility, is accelerating the implementation of driverless vehicles, delivery of goods by robot, and smart parking. Further, the city has introduced a system of bike paths and express bike lanes, intended to achieve a 15 per cent modal share for bicycles by 2030.
- **Washington D.C.**'s "ReOpen DC" proposes a roadmap focused on transportation use in a context that will be marked by COVID-19 for months to come. Specific measures to rethink the orientation of public spaces include a priority for wider sidewalks, more bicycle lanes, and the development of additional reserved bus lanes. The city has also taken advantage of low traffic during the confinement period to carry out construction and repair work. In addition, Washington D.C. is intensifying its efforts to consolidate fares across transportation modes and to deploy contactless payment.
- The City of **Bogotá** added 112 km of temporary bicycle paths, expanding the current network by more than 20 per cent. These new bike paths have become permanent.
- The City of **Seattle** has proposed legislation that would maintain a 0.1 per cent sales tax to fund essential transit services, capital projects and public transit access programs.
- The **Barcelona** transport agency has implemented a "RESPIRA" ventilation system throughout the Barcelona Metro network. This platform, based on artificial intelligence, reads temperature, humidity, air quality and electricity consumption in real time and adjusts to regulate temperature and energy consumption in the stations. The system monitors health conditions within the network and makes adjustments in real time, to promote users' sense of safety.
- The **Bristol** City Council is considering transforming parts of the Old City which include independent stores, restaurants and coffee shops into traffic-free zones. Plans for the Old City include pedestrianizing historic streets and improving mobility for a greener and fairer recovery.

43. The full report on the measures is available here: https://covidnews.eurocities.eu/wp-content/uploads/2020/07/Madrid_City_Council_Agreements_COVID-19.pdf.

Manage transit system ridership

To enhance the use of public transit capacity, some operators and municipal administrations have implemented changes largely aimed at allowing workers and students to change their travel schedules. One such change involves staggered start times for schools, public services, and offices so that fewer people need to use public transit during peak hours:

- Some parts of **Israel**, for example, open schools on different schedules, thus reducing transportation congestion and crowds around schools. Similarly, some schools and universities in the **Netherlands** have staggered class start times throughout the day. In **France**, only trips to work and school are allowed during peak periods.

Transit users can also be helped to make more informed choices, which will let them avoid crowds on the transit system. Light rail operators have begun to offer the option of making a reservation, a practice traditionally reserved for long-distance travel:

- The **Danish** rail operator DSB now lets users make advance bookings, which helps to limit train occupancy. In addition, DSB has introduced an app showing which train carriages have the most space, to promote physical distancing. The use of the app helped increase transit ridership by 6 per cent in the first week after health measures were lifted. **Taiwan** went further by implementing a strict reservation policy for commuter and intercity trains to limit overuse and allow safe physical distancing between passengers.

Encourage reopening

The British government has adopted a “risk assessment” approach to reopening. To support this vision, all employers with more than five employees are legally required to complete a government-issued risk assessment form. Employers must also form a staff committee to monitor progress. In addition, London First published an article in June 2020 entitled *Getting our capital back into growth: Collective action needed by London’s businesses and policymakers*. The aim of the article, which was widely circulated and covered in the media, is to help restore confidence in the capital, in the UK and around the world. In addition, the British government has announced an advertising campaign to encourage companies to bring their workers back to the office. Employers are being asked to reassure staff that they can return to work safely by highlighting the measures taken to prevent the spread of COVID-19.

Financial support for cities

Many federal governments have announced significant tax measures to help municipal governments deal with the fiscal shocks induced by the crisis. Examples include revenue-enhancing measures involving the provision of direct grants and measures to encourage spending and risk-taking (e.g., measures related to budget rules and debt, notably to facilitate the use of debt for both short- and long-term needs). The Organisation for Economic Co-operation and Development (OECD) has published a comprehensive study of these measures.⁴⁴ Below we present some notable examples.

Belgium

In Belgium, regional governments have announced support measures for municipal taxation. Municipalities in Wallonia now have the right to increase their fiscal deficit, and they are encouraged to use their reserves or increase their borrowing levels to cope with a recession. In Flanders, the government has implemented several measures to support cities, including a 15 million euro transfer to reduce poverty following the COVID-19 pandemic, an 87 million euro emergency fund to support local authorities in the areas of culture, youth and sports, and a fund to stimulate sustainable mobility (e.g. improvements to pedestrian areas and bicycle paths). Municipal budgets have also been granted more flexibility, depending on the impact of the pandemic on that city.

44. OCDE, 2020. *The territorial impact of COVID-19: Managing the crisis across levels of government*
Link: https://read.oecd-ilibrary.org/view/?ref=128_128287-5agkkojaaa&title=The-territorial-impact-of-covid-19-managing-the-crisis-across-levels-of-government.

Germany

In Germany, the federal and provincial governments provided support for cities and municipalities during the COVID-19 crisis in September 2020. This measure is intended to bolster the investment capacity of municipalities in the years following the pandemic. In particular, German cities have been hit hard by a reduction in taxes, their main source of revenue. The federal government is expected to cover half of the tax losses of local businesses for the year 2020, while the *Länder* (the equivalent of the provincial government) is expected to cover the other half. It has also decided to allocate a larger share to cities for expenditures related to residents' well-being, increasing subsidies to elementary schools, hospitals, public transit, and local health services as well as for digitization. In addition, the *Länder* decided to relax the tax laws surrounding municipalities by suspending the law on budget deficits and tariffs for austerity measures. Regulations related to short-term credit have also been eased.

Denmark

In Denmark, the investment ceiling for cities and regions has been removed in order to increase public investment in 2020 by 0.1 per cent of GDP. Projects that can be started quickly and completed in 2020 have been targeted to support employment in the short term. Regions and municipalities are encouraged to submit investment projects that were planned for 2021 and 2022 (*Denmark Stability Programme 2020*).

Brazil

In Brazil, the federal government announced a program of measures for states (equivalent to provinces) and cities totalling 85.5 billion reals to deal with the pandemic. On April 1, 2020, the Ministry of Economy relaxed the rules surrounding contracts with states and cities and the rules on how money is transferred. On April 13, a new set of measures for states and cities was adopted, increasing the amount to 127.3 billion reals. This package includes additional direct transfers, a freeze on debt payments to the federal government for six months and on debt owed to public banks.

Building more resilient cities to withstand the COVID-19 crisis and future disruptions

The multiple challenges brought about by COVID-19 provide policy makers with an opportunity to learn lessons to strengthen long-term social, economic, and environmental resilience, and guard against the consequences of future crises. Several cities have demonstrated that a proactive and coordinated response to the pandemic can effectively control the spread of the virus and lay the foundation for long-term resilience. South Korea (Seoul) and Finland (Helsinki) are notable examples.

South Korea/Seoul⁴⁵

Southeast Asian countries have generally demonstrated better management of the spread of COVID-19. However, there are several elements that differentiate these countries, and their type of management does not necessarily offer solutions that would be applicable in a North American context. Nevertheless, South Korea appears to offer a model that provides some interesting lessons for Canada.

South Korea was in a similar situation to the rest of the world in terms of difficulty in accessing information. Unlike Taiwan, for example, South Korea could not collect enough local information about Wuhan from unofficial sources to propose a strategy from the outset of the crisis. Nonetheless, South Korea has shown that a major epidemic can be overcome with fairly moderate restrictions. Although schools and universities switched to online education and large-scale gatherings were banned, businesses were operating as usual without interruption, a factor that led the International Monetary Fund (2020) to predict that South Korea's economy will be among the least affected advanced economies.

As highlighted in the media, South Korea has been banking on the deployment of large-scale testing. However, the effectiveness of South Korea's testing strategy mainly hinges on smart city technologies. These technologies have produced spatial and temporal maps of citizens' movements, reconstructing the paths of infected people and pinpointing potential outbreak sites. Once the spatio-temporal mapping is complete, the result is published on government websites and on mobile applications. In addition, local governments send SMS text messages to all residents. Anyone who has visited these locations can thus learn that they may have been exposed to the virus. They can then visit a district health office for testing.

45. Sonn, Jung. 2020. *The Smart City as Time-Space Cartographer in COVID-19 Control: The South Korean Strategy and Democratic Control of Surveillance Technology*.

South Korea seems to have one of the highest densities of surveillance technologies: In 2014, it was estimated that Korean cities had 9.5 million CCTV cameras, or one camera for every 5.4 people: each individual is captured 83.1 times a day and every nine seconds. This figure is likely to be greatly exceeded today. In addition, the law stipulates that when the Minister of Health and Welfare declares a pandemic, the Center for Disease Control and Prevention can request access to this data.

Such an invasion of citizens' privacy has been subject to criticism. In South Korea, however, the extensive use of smart city technology was promoted by the state long before COVID-19, so Koreans were not surprised by such use in controlling the pandemic. At the onset of the pandemic, the government thus easily convinced the public of the effectiveness of surveillance measures to save lives, as opposed to full confinement measures, which would have serious consequences on the economy.

Some indicators demonstrate public confidence in government actions. South Korea is one of the few countries where the pandemic has not led to panic buying. Another indicator of the country's success is the virtual absence of fake news related to COVID-19.

Finland/Helsinki⁴⁶

To combat the COVID-19 crisis, Helsinki has adopted a functional city approach that combines three pillars. The first of these pillars is the smart city, in which digital technology and innovation are the foundation of effective and efficient service delivery. The second pillar is the inclusive city, in which community participation is at the centre of policymaking, the design and delivery of public services, and the prioritization of budgets and investments. Finally, the sustainable city pillar focuses on a goal of carbon neutrality by 2035, together with improving quality of life, strengthening energy security and enhancing mobility. These pillars form the basis of the city's recovery plan. In addition, Helsinki's financial autonomy has played a key role in the response to the pandemic and in recovery efforts. Helsinki's right to decide on sources of revenue, in particular tax rates and the flexibility to spend responsibly on public services, provided the city with the financial resilience it needed throughout the pandemic.

Having put in place impressive digital technology platforms before the crisis, Helsinki was able to maintain the quality of its education system to create digital classrooms during the school closure. The city has also developed digital cultural services for its population, with the goal of maintaining stimulating urban life and reducing the mental health impacts of social distancing and isolation.

The city has been particularly attentive to its vulnerable population, especially the elderly who face risks on two fronts: Potential virus exposure and isolation. By partnering with charitable organizations, the city ensured that each of its residents over the age of 70 may get personalized services, including support with grocery shopping or pharmacy product purchases.

Overall, through its efforts, facilitated by pre-existing conditions, Helsinki's has successfully reduced the number of infected people, managed pressure on health care facilities and staff, delivered quality public services, maintained channels of communication with residents, and ensured citizen cooperation with restrictive measures.

46. World Bank, 2020. A functional city's response to the COVID-19 pandemic
Link: <https://blogs.worldbank.org/sustainablecities/functional-cities-response-covid-19-pandemic>.

Reflection to strengthen the role of city centres

The purpose of this report is to provide analysis and data as a foundation for thinking about the long-term future of Canada's six major downtown areas while ensuring their immediate support. The avenues for reflection presented in this section suggest directions to be taken without drawing up a specific implementation plan. In light of these proposals, a strategic approach will have to be undertaken within the cities in order to target actions that reflect the distinct issues they face.

Our consultation activities revealed one clear finding. Efforts to revitalize city centres will need to take place against a backdrop of **increasing the resilience of cities** and their downtowns to future disruptions, and focussing on **ecological transition**. The avenues of reflection presented, inspired by a consultative process and informed by numerous studies and analyses, are also in line with these objectives.

In general, it is important to understand that city centres are complex ecosystems that function largely based on their attractiveness and centrality. Thus, **the recovery action plans that will be built around these proposals must be designed in a holistic manner to ensure the sustainability of all the functions of downtowns**. For example, a city centre rich in cultural and commercial activities will naturally attract civil society, business people and tourists, just as businesses and cultural and tourist institutions depend on the massive presence of visitors. Thus, measures on several fronts, established in a coherent rather than isolated manner, must be implemented to ensure the sustainability of these places.

The principles underlying our reflection

The proposals presented aim to break the spiral of decay presented earlier and to put in place the conditions for the sustainable revitalization of city centres. They are based on their ability to mitigate the challenges illustrated in the report according to the following six principles:

1. **Foster a social continuum** by focusing on residents' well-being and the integration of marginalized populations in the downtown area;
2. Focus on development that is in line with the **ecological transition** goals;
3. **Ensure and diversify the revenues of cities**, to enable them to deliver all their services and contribute to economic recovery;
4. **Protect and improve the economic fabric of** city centres by supporting private companies, which are the driving force behind the economy, vitality and attractiveness of downtown areas;
5. **Provide support for digitization** required to make process management more efficient, for the benefit of residents and businesses alike;
6. **Increase inner cities' resilience** to the environmental, social and economic challenges they may face.

Our proposed vision for Canada's major downtowns in the post-COVID era

Proposal 1: Reinvent Downtowns

Scope of the proposal

- ✓ Foster a social continuum
- ✓ Increase diversity of use
- ✓ Support ecological transition
- ✓ Increase resilience
- ✓ Maintain/increase tax revenues

Starting point

Section 2 of this report has shown that the acceleration of certain trends induced by COVID-19 may lead to a decline in people heading to city centres in the coming years and thus initiate a spiral of urban decay. Technologies supporting telework will transform the geography of work. Although some office workers will return to their workplaces once vaccines are widely available, the shift to telework means that a significant number of employees will return to the workplace only part-time, if at all. In addition, this disconnection with workplaces may cause inner-city residents to rethink living there. One of the consequences raised in this report would be the emergence of the “doughnut hole” effect, where downtown areas would be emptied of their businesses and residents. This phenomenon could undermine efforts to counter urban sprawl.

The current crisis presents a unique opportunity to rebuild more equitable, inclusive and attractive communities by creating new ways of living and working that will nurture the downtown areas. The world's major metropolises and their downtowns should survive if they manage to reposition themselves, as they have done after even more deadly epidemics, economic crises, wars and natural disasters. Indeed, the **strength of clustering, talent and innovation is a fundamental characteristic of city centres that should support their recovery and revitalization.**

One historical example suggesting the magnitude of what could happen is the great wave of deindustrialization that swept through American cities in the 1970s and 1980s. Although this led to short-term economic and fiscal difficulties, it eventually brought about the radical transformation of iconic urban districts such as SoHo and Tribeca in New York City, in which warehouses and factory spaces were converted into artists' lofts, galleries and performance venues. The city subsequently became a destination known for its luxury boutiques, technology companies and high-end apartments.

Thus, in the wake of the crisis and in the years to come, the challenge will be to preserve the economic role of city centres, not only as places of employment and business, but as places conducive to a dense offer of services, innovation and international influence. These places also offer appealing living environments for a mixed population (workers, retirees, families and disadvantaged households). Indirectly, by investing in revitalization measures that make their downtowns more attractive, cities ensure that they can maintain and even improve the property values of residential and commercial buildings, which contribute a significant portion of their tax revenues.

The process of developing a downtown revitalization strategy should involve all stakeholders, i.e. the various levels of government, the private sector, the cultural and tourism sectors, and civil society to ensure greater buy-in and that revitalization is carried out in an orderly and inclusive manner.

Proposed immediate actions

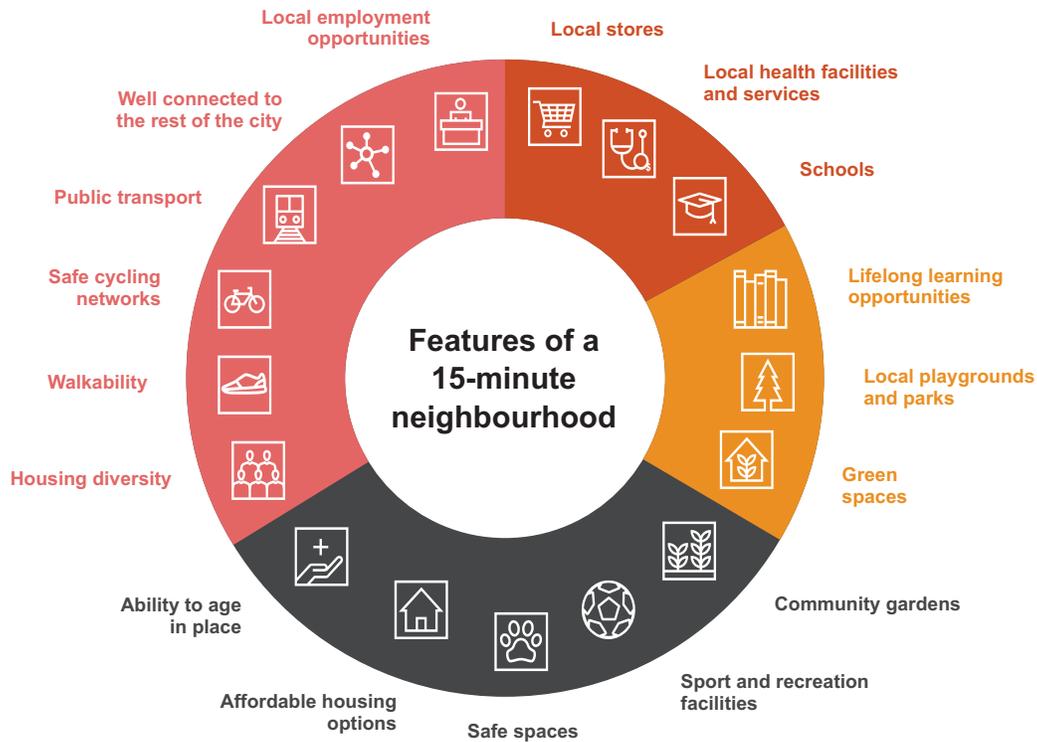
- Prioritize the transformation of existing streets and pavements to make them more pedestrian friendly, both for the immediate recovery period and the post-COVID period, as permanent measures. This would entail adding wider sidewalks that meet the needs of physical distancing and those of people with reduced mobility such as the elderly and people with disabilities.
- Reduce reliance on mechanized transportation by increasing the supply of bike lanes, while keeping pedestrian safety and well-being in mind.
- Rapidly implement a vast program make city centres greener, which would include increasing the plant cover to combat heat islands and converting vacant lots into parks and public spaces.
- Build attractive public spaces with a four-season perspective. Most Canadian downtowns face seasonality issues, and tourist traffic is concentrated in the summer period. By cultivating a participatory and festive winter experience, Canadian downtowns could position themselves as winter destinations. This could be done through the development and animation of underground arteries and shopping malls, as well as the deployment of outdoor activities.
- Rethink the positioning of city centres as a destination through a unique and distinctive commercial offer and experience.
- Revitalize downtown shopping malls by integrating shopping with other activities (cultural and entertainment venues, spas, gyms, retirement homes, etc.).

Proposed medium- and long-term actions

- Ensure that the supply of public transit is conducive to reducing mechanized “street-level” traffic in downtown areas. It is important that cities provide more subway lines (where possible) or light rail service heading into the downtown area to ease travel downtown for residents of outlying districts of the city and those who live in the suburbs. This measure is intended to support the reduction of spending on mechanized transportation in city centres while recognizing the importance of maintaining the regional attractiveness of inner cities. City centres should not be limited to local residents; it is crucial that they remain accessible to all.
- Introduce support programs, in partnership with the private sector, to enable office building owners to reconfigure their premises. As we emerge from the crisis, offices will be more of a place where people go to engage in dialogue, meet, and collaborate. To remain competitive, office space will need to offer larger meeting rooms, spaces dedicated to relaxation and entertainment, and isolated rooms equipped with state-of-the-art technology for videoconferencing meetings.
- Introduce support programs for the conversion of residential rental buildings to reflect residents’ needs, i.e., offer larger spaces and conference facilities. As noted in this report, greater use of telework implies a greater need for space, such as office space or access to a quiet place for conference calls. By allowing certain amenities that make living environments more pleasant, developers are helping to retain residents in downtown areas. However, these improvements should not detract from affordability. Thus, support should be conditional on rent maintenance.
- Provide incentives for developers to incorporate more green space and public places in their new construction.
- Increase the supply of social housing, notably by converting commercial buildings.
- Commit to creating residential areas in which local services are within walking distance for all residents (“15-minute city” concept). Concretely, implementing this recommendation would involve the creation of public spaces, parks and green spaces within city centres that are aligned with the densification objectives. Ensuring that living spaces appeal to a diversified population also depends on the accessibility of services such as daycare, schools and health care, which are often lacking in the inner cities. The concept of the “15-minute city” is also a response to the health crisis; it could provide a viable solution for future crises. If citizens need to reduce their travel, it is crucial that they be able to find services for “vital” needs close to home.

The “15-minute city “

The “15-minute city” is an approach to urban planning that aims to improve quality of life by creating cities where everything a resident needs can be reached in 15 minutes by foot, by bike or via public transit. This concept emphasizes careful neighbourhood planning, giving residents the things they need to live fully: jobs, food, recreation, green space, housing, medical services, education, small businesses and more. Because of their density, city centres are ideal locations for developing neighbourhoods that promote proximity to services and reduce the expenses linked to car use.



Proposal 2: Build a resilience strategy to enable downtowns to adapt to future challenges

Scope of the proposal

- ✓ Expand resilience
- ✓ Foster a social continuum
- ✓ Support ecological transition

Starting point

Cities’ resilience lies in their ability to survive, adapt and prosper in the face of major shocks, and to manage the degree of stress they induce on various economic players. **The current crisis has highlighted the role of proximity of large cities along with the urgent need for them to act on the front line during an emergency situation.**

Cities will increasingly face significant challenges in the coming years, which will become more complex as technological, climate and demographic changes accelerate. Cities thus need to better understand the impact of stress during a shock and put in place strategies to mitigate these impacts in a preventative manner. Poverty and social inequalities, an ageing population, the impacts of climate change and ageing infrastructure, among other factors, affect cities’ potential for resilience.

In general, project approval processes need to go beyond traditional cost-benefit analyses and incorporate resilience considerations and damage mitigation following unexpected events-shocks.

Proposed immediate actions

- Establish a global diagnosis of current and future areas of vulnerability according to different crisis scenarios. Based on this portrait, formulate a strategy conducive to a proactive adjustment while ensuring that the necessary crisis management measures are implemented.
- Systematically incorporate downtown-specific vulnerability criteria into the cost-benefit analyses required for the approval of all infrastructure projects and perform a sensitivity analysis based on the different scenarios considered.
- Preserve an environment that meets the essential needs of inner-city residents, in particular by consolidating the offer of accommodation and emergency services for vulnerable clientele. The COVID-19 crisis has had a particularly significant impact on marginalized populations. In fact, there is a notable concentration of people in the city centres who do not have access to housing, who live in isolation or who experience difficulties with social and cultural integration. These situations, if not monitored and mitigated, can amplify the impacts of stress and become real crises within the crisis.

Proposed medium- and long-term actions

- Ensure that risks are better taken into account in land and infrastructure planning, notably through the implementation of resilient construction standards and rules along with the integration of green infrastructure. One way to do this would be to develop a planning model specific to the vulnerabilities of each city centre. The evolution of the risk profile in downtown areas must be integrated into resilient, sustainable and safe territorial planning.
- Promote concerted actions across Canada's major cities to ensure continuity for inner-city businesses in the event of a crisis. Implementation could involve targeted training for business managers. Research centres could also pilot a modelling initiative using various scenarios based on vulnerabilities, and work in partnership with the private sector to establish a contingency plan to ensure business continuity.
- Ensure the efficient and safe movement of people and goods under all circumstances. Transportation is an inseparable part of the economic vitality of city centres. The COVID crisis has highlighted the importance of ensuring the mobility of essential workers and maintaining the efficiency of supply chains. Leverage the development of smart mobility solutions for day-to-day and emergency situations and establish a contingency plan in the event of supply chain disruptions.

Proposal 3: Accelerate the implementation of the smart city

Scope of the proposal

- | | |
|---------------------------------|--|
| ✓ Support digitization | ✓ Increase resilience |
| ✓ Support ecological transition | ✓ Protect and strengthen the economic fabric |

Starting point

In support of the resilience strategy, **cities need to accelerate digitization**. Several international examples have demonstrated that the deployment of smart city infrastructure is an important resilience factor. Better data collection will enable city leaders to prepare for future episodes. Thus, the ability to collect data should be at the heart of cities' resilience strategies. As demonstrated by the Helsinki example, the use of massive data can also support an ecological transition plan while fostering a social continuum in the event of a crisis.

A smart city is a city that uses information and communication technologies (ICT) to improve the quality of urban services or reduce their costs. Its construction is based on a technological infrastructure that allows the collection of data obtained from sensors, the analysis of massive data and the use of artificial intelligence. Smart cities leverage data and digital technology to improve decision-making and citizens' quality of life.

For example, interventions based on real-time data could enhance road safety, optimize emergency response, and allow dynamic development of transportation options, public health interventions, air quality monitoring, etc.⁴⁷ In addition, the development of technological infrastructure would attract more businesses and skilled workers to the inner city.

One of the biggest obstacles to the development of smart cities is the confidentiality of data and the engagement of civil society. Cities that successfully address these concerns will be better positioned to benefit from these technologies. For example, South Korea exemplifies the advantages of managing the COVID crisis through the use of information technology to engage citizens.

Proposed medium- and long-term actions

- Build a clear legislative framework to ensure data security.
- Set aside a budget to support technological transformations, in order to encourage cities to take certain risks.
- Accelerate the deployment of fibre connections and 5G by highlighting their contributions to industrial advances such as supporting artificial and predictive intelligence, and improving workplace safety and operational efficiency. The deployment of 5G can also potentially contribute to citizens' health and well-being by improving infrastructure and fostering sustainable industrialization and innovation. By supporting the deployment of smart cities, 5G enables communities to be more sustainable, promoting high value-added jobs while supporting economic growth.
- Deploy an accurate information campaign surrounding the smart cities concept by promoting the benefits while reassuring the public about data protection (see the example of South Korea).

Proposal 4: Strengthen the role of higher education institutions

Scope of the proposal

- ✓ Protect and strengthen the economic fabric
- ✓ Support digitization
- ✓ Foster a social continuum
- ✓ Increase resilience

Starting point

Universities and colleges, at the heart of the downtown ecosystem, are important vectors of economic growth that will have a role to play in the revitalization of inner cities. They are sources of human capital development: Through their educational function, they contribute to the development of highly skilled workers. The presence of these workers is often one of the factors often mentioned by companies (national and foreign) when choosing where to set up shop.

Further, through their research activities, universities promote the development of innovations that have an impact on businesses. Major research centres are essential to create technology clusters that attract companies and are instrumental to the implementation of the smart city. As a result, high-productivity technology companies tend to cluster around universities to take advantage of the rich flow of ideas and skilled workers.

Finally, the acceleration of technological change induced by COVID-19 implies that workers in all sectors will have to adapt to rapidly changing conditions. For example, in the health sector, physicians must learn to make effective and safe diagnoses remotely. In addition, the pandemic is causing permanent changes in the employment landscape that may require large-scale retraining of workers in some sectors. As such, measures to retrain workers and upgrade their skills will need to be implemented in order to adapt to the new business models in the post-pandemic era.

In order to boost the economy of city centres, higher education institutions should be seen more as platforms for innovation and as actors contributing to local economic activity through their ability to provide skilled workers. They have a role to play as an engine of innovation and for retraining and development of post-pandemic skills.

47. McKinsey & Company, 2018. Smart cities: Digital solutions for a more livable future.
Link: <https://www.mckinsey.com/business-functions/operations/our-insights/smart-cities-digital-solutions-for-a-more-livable-future>.

Immediate proposed actions

- Enhance the budgets of university research centres, accelerators and incubators working in strategic sectors.
- Redesign the relationship between companies and applied research centres so that scientific knowledge is fully harnessed to ensure the prosperity of downtowns, and to allow companies to take advantage of innovation opportunities. To this end, university accelerators and incubators are relevant links to be strengthened in that they help create startups.

Proposed medium- and long-term actions

- Commission colleges and universities in the inner cities to develop training programs intended to retrain the workforce in sectors heavily affected by COVID-19.
- Involve universities in the development of smart cities. Universities produce a creative and highly skilled workforce, and can act as a laboratory for new technologies and work on their development.⁴⁸ A symbiotic relationship between cities and students and researchers could also be created such that these actors could participate in the large-scale deployment of the technologies they have worked on. In turn, a forward-thinking, technology-driven city can offer universities exciting projects and courses. By helping to make cities even smarter, universities will increase their international reach and attract new students.

Proposal 5: Give big cities more autonomy over their budgets.

Scope of the proposal

✓ Secure and diversify cities' revenues

✓ Increase resilience

Starting point

The COVID-19 crisis has shed light on the financial pressures cities face. Despite being the source of economic development, cities are facing mounting pressures in terms of service delivery, while contending to deal with declining revenues. Municipalities receive, on average, 48 per cent of their funding from property taxes, 22 per cent from user fees such as transit fares and licenses, and 19 per cent from provincial and federal transfers.⁴⁹ Public transit ridership has declined significantly. In April, Montréal subway ridership plunged by 91 per cent, while Toronto's TTC saw an 80 per cent decline. Transit ridership in Vancouver also fell by 80 per cent compared with a 90 per cent drop in Calgary. The Canadian Urban Transit Association estimates monthly losses of \$400 million in public transit alone.⁵⁰ Further, property tax revenues are based on property assessments that may be subject to downward adjustments.⁵¹ In particular, the shift to working from home can potentially erode non-residential property taxes and could create enormous pressure to raise additional revenues. However, cities do not have the same revenue-generating capacity as other levels of government do, and are not allowed to run deficits.

Canada's cities will need new and sustainable sources of revenue to fund the full range of services they provide, such as transit systems that meet communities' transportation needs and support inner-city businesses. This reality was already present before the pandemic, and will be even more pronounced after the crisis is over. Action must therefore be taken to stabilize city finances and ensure that their budgets are commensurate with their responsibilities and the economic contribution of major urban centres.

Proposed immediate actions

- Call for new financial resources from higher levels of government in the upcoming fiscal negotiations, and seek additional transfers to support recovery works without increasing municipal debt. Accordingly, provincial and federal governments must recognize the fiscal pressures faced by cities and ensure predictable, recurrent and increased funding that is commensurate with the economic contribution of major city centres.

48. One of the main limitations in this regard is the difficulty in adapting the regulatory and legislative frameworks for conducting such tests, which are often under provincial jurisdiction.

49. Ibid.

50. Canadian Politics and Public Policy, 2020. <https://policymagazine.ca/cities-in-crisis-need-urgent-federal-support/>.

51. Ibid.

- Set aside a specific budget envelope for actions related to promising economic development projects for city centres.
- Focus more on eco-taxation based on the user-pay principle. This avenue would notably make it possible to reduce dependence on property taxation. It would also encourage behaviours that are better aligned with the principles of ecological transition, particularly with respect to water management, waste management and transportation. Users would be charged according to their consumption, whether through the installation of water meters, the volume of recycling bins used or a tax on gasoline. These tax choices should be made in a harmonized manner on the provincial scale to avoid creating major distortions that would increase the costs of living, working and doing business in large cities, and hence accentuate urban sprawl.
- A greater federal commitment as a financial partner to large cities would benefit cities and enable them to invest within their financial framework.
- Establish a standing committee made up of the six city managers of the major Canadian cities, municipal affairs representatives from Québec, Ontario, Alberta and British Columbia, and federal representatives. This committee would be tasked with addressing issues that are cross-jurisdictional, such as ecological transition and digitization, economic, cultural and tourism development, along with homelessness, social inclusion and housing. Over the next two years, this committee should meet quarterly to develop a roadmap with clearly defined objectives and distribution of financial responsibilities. Potential objectives of the committee would include:
 - Communicating observations, research and results regarding implementation of policies related to inner-city issues
 - Working together to develop coordinated solutions to common issues using examples of solutions from cities in Canada and abroad
 - Advocating for provincial and federal government involvement in policy solutions
 - Raising awareness among the public and other levels of government about the role of cities in addressing major issues facing the Canadian economy.

After this period, the committee could become an annual event, in the form of a downtown summit, by broadening its audience.

Proposed medium- and long-term actions

- Affirm the importance of city centres in terms of economic contribution, job creation and as a vector of social inclusion. Downtowns should thus be recognized as a cluster because they are areas of high commercial density, with a critical mass of large and small businesses, post-secondary institutions and other research institutions. They energize the economy and serve as engines of growth. A program modelled on the federal “supercluster” program should be implemented for inner cities.

Proposal 6: Ensure support for sectors that are sustainable in the long term and that need help to endure beyond the crisis

Scope of the proposal

- ✓ Protect and enhance the economic fabric
- ✓ Increase resilience

Starting point

Hotels, cultural institutions, shops, restaurants, and bars in the city centres suffered an extreme shock due to the health measures. As noted in this report, prior to COVID-19, some of the downtowns studied had strong and thriving ecosystems, including Montréal, Toronto and Vancouver. Restrictions to limit the spread of the virus put them at particular risk.

Preserving the commercial, cultural and tourist functions of city centres is important because these functions are part of downtowns' DNA of city centres, and instrumental to their vitality, attractiveness and international influence. Cities that are unable to act quickly risk losing important assets in these areas, such as flagship institutions or even a migration of talent to sectors considered more stable. A weakening of ecosystems might impede inner cities' ability to seize opportunities for recovery in a timely fashion.

Inevitably, some businesses and institutions will have to close. In the short term, it is important to limit the damage through a territorial strategy specific to city centres, to ensure that these ecosystems will be strong enough to participate in the post-crisis recovery. However, not all organizations can be saved: Some will not be able to adapt to future structural changes. Therefore, **it is important for each city to engage in a strategic reflection on the sectors perceived as sustainable in the long term in order to set priorities for future investments.**

Proposed immediate actions

- Recognize elements in the tourism, culture, retail, restaurant and bar sectors that will play a key role in the recovery and revitalization of city centres, and implement appropriate support programs to ensure their long-term sustainability and competitiveness. The time horizon of these programs must be long enough to ensure the survival of the sectors throughout the transition period, i.e. 2021-2022. **It is important that support programs related to the current situation be integrated and consistent with the vision and structural transformation envisioned by each of the city centres.**
- Adapt support programs that take the reality of downtown areas into account. Downtown stores and businesses have been more impacted than similar businesses in other areas due to the drastic decline in traffic, but also due to significantly higher fixed costs.
- Provide financial support and promote initiatives to stimulate local and national tourism through grant programs, public investments and calls for projects.
- Financially support projects and initiatives that contribute to strengthening the image of downtowns, particularly through an international promotional campaign highlighting the unique character of each city centre.
- Encourage the development of an exemplary tourism destination, notably by promoting sustainable business practices and integrating health safety issues into long-term tourism industry protocols. It could be worthwhile to position Canada as a leader in the offer of events and conventions integrating the highest environmental standards.
- Support the innovation and creation ecosystem in city centres. Downtowns host several research and educational institutions, and benefit from the richness of cultural and artistic networks. These characteristics are conducive to the emergence and sustainability of companies, organizations and spaces dedicated to innovation and creation. Accordingly, measures must be implemented to support the actors most sensitive to property prices (start-ups, artists, venue managers, etc.) and the promotion of collaborative spaces.

Proposal 7: Encourage visitors to return to the downtown core via public transit and active transport

Scope of the proposal

- ✓ Protect and enhance the economic fabric
- ✓ Increase resilience
- ✓ Support ecological transition

Starting point

As soon as the health situation is under control, it will be important to implement the necessary conditions to attract visitors to the downtown areas. Most of Canada's major city centres rely on public transit to bring in visitors. However, the fear of using public transit has been well documented since the beginning of the pandemic; this could hinder the rapid return of visitors to the inner city.

Given this legitimate fear of proximity to others, individual modes of transport such as cycling or walking seem particularly attractive. Cars are also gaining popularity as a means of safely pursuing social interactions.⁵² However, an increase in the number of cars on the road may exacerbate climate change and congestion, and delay cities' ecological transition. It may also have negative impacts on public health. In addition, increased automobile use could undermine cities' efforts to attract people to the main street in downtown areas.

In this context, it seems necessary to act quickly to reposition public transit and active transport as safe and efficient options before citizens' behaviours crystallize around car use. Short-term inaction on this issue could have far-reaching consequences on downtowns' long-term efforts to ensure their revitalization, in areas such as ecological transition, resilience and even social inclusion. In addition, the use of electric and smart vehicles could help make individual vehicles more acceptable. Although this avenue is promising for the achievement of the transition objectives ecological and even congestion reduction, the fact remains that it could support greater urban sprawl.

Proposed immediate actions

- Establish a clear, robust and scientifically proven sanitation protocol for public transit.
- Improve transit service delivery by recognizing that interim physical distancing requirements will require more vehicles on existing routes, given the limits on the number of passengers on buses, trains and subways.
- Establish a communications strategy that will demonstrate to civil society that government, business and transit operators are working together to eliminate silos and facilitate a safe return to the office.
- Ensure an adequate supply of means of transport perceived as safer from a health standpoint: bicycles, e-scooters, etc.

Annexes

Appendix A: Pre-pandemic portrait of the six downtowns

Montréal

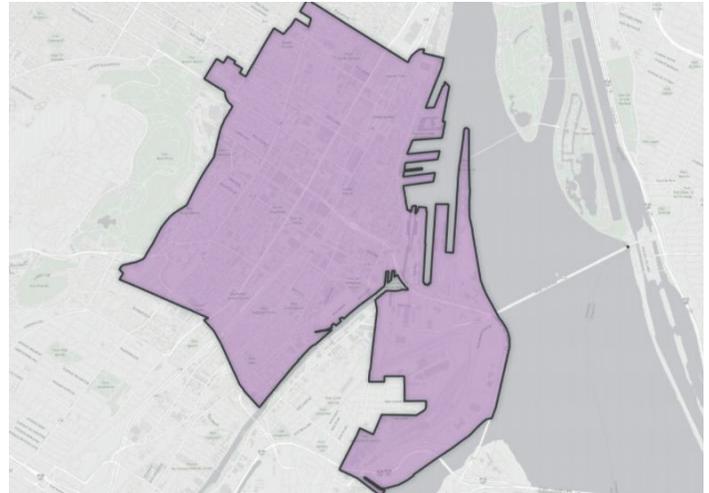
Geographical definition

Downtown Montréal is defined as the area bordered by Rues Papineau, Atwater/Guy, Sherbrooke/des Pins and the St. Lawrence River.

Neighbourhoods:

- **Business district:** Area where most of the large office towers are found, along with a high density of jobs.
- **Historic district of Vieux-Montréal:** An important heritage site in North America and a major tourist attraction.
- **Quartier des spectacles:** Cultural heart of the metropolis featuring several performance halls, public spaces and outdoor venues where numerous festivals are staged.
- **International District:** One of 17 UN and ICAO headquarters.
- **Several destination districts:** Chinatown, Museum District, Cité des Ondes, Shaughnessy Village, the Quartier Latin and the Village.

Downtown Montréal



Source: Statistics Canada.

Residential function

Demography

There are approximately 50,700 permanent households in the downtown core, representing nearly 85,000 residents, or 5.0 per cent of the city's total population. Downtown residential developments are mainly located in Vieux-Montréal, Griffintown, Pointe-Saint-Charles, and Little Burgundy. The population density in the inner city is higher than that of the city overall, with more than 6,400 inhabitants/km², but it is near the average of the other city centres studied. The inner city population stands out because of its level of education: 82.9 per cent of residents between the ages of 25 and 64 have a university education, the highest ratio of the six downtowns examined.

As shown in Table 18, households in the inner city are wealthier on average than those in the rest of the city. Nevertheless, median income downtown is lower than in the city as a whole, indicating a greater disparity in income among inner-city households. Among the downtowns studied, only Montréal has this characteristic. This may be partly explained by the high proportion of students living downtown, who generally have less employment income. Indeed, more than 19 per cent of the population is between ages of 15 and 24, the highest proportion among all the downtowns studied. However, the proportion of residents ages 15 to 64 in downtown Montréal, at 79 per cent, is not the highest among the downtowns analyzed. For example, the proportion in Calgary is over 84 per cent.

The proportion of inner-city owner households is lower than citywide, and a high proportion of these households consist of one person.

Table 18: Demographic portrait of residents of Montréal and its downtown, 2016

Demographic characteristics	City	Downtown
Population	1,704,694	84,645
Population density per square kilometre	4,662.1	6,436.4
Proportion of the population between ages 15 and 64 years	68.4%	79.0%
Proportion of one-person households	40.8%	56.8%
Proportion of owner households	36.7%	27.6%
Median annual gross household income*	\$50,227	\$39,678
Average annual gross household income*	\$69,047	\$72,929
Unemployment rate	9.3%	11.3%
Proportion people ages 25-64 with a university certificate or diploma	45.6%	82.9%
Proportion of immigrants	33.5%	35.3%

Source: Statistics Canada, 2016 Census data, by place of residence; PwC analysis.

* In 2015 dollars.

Residential real estate

The continued popularity of the downtown core as a place to live is reflected in the sustained growth in housing starts in recent years, a reduction in the inventory of unsold new construction and a decline in vacancy rates in the rental market (see table 19). Demand comes from young professionals who want to live close to their workplace, but also from the baby boomers who want to have a pied-à-terre in the city centre, close to all services.

The average price per square foot for downtown condominiums in 2019 was \$709, an increase of 13 per cent over the previous year.⁵³ The average price across the island of Montréal was \$352. Although the downtown condominium market has experienced strong growth, it is still affordable compared with the Vancouver and Toronto markets, where the price per square foot is more than \$1,000.

Table 19: Portrait of residential real estate, downtown Montréal, 2015-2019

	2015	2016	2017	2018	2019
New home market					
New units built	1,505	1,927	2,972	2,094	1,930
Stock of unsold new buildings	126	49	68	51	40
Rental market					
Average monthly rent	\$1,121	\$1,133	\$1,126	\$1,131	\$1,228
Annual change in rents	+4.8 %	+1.1%	-0.6%	+0.4%	+8.6%
Vacancy rate	5.5 %	4.6%	2.8%	2.6%	2.5%

Source: CMHC, 2020

Note: The area covered excludes Little Burgundy, but includes Île-des-Soeurs. This differs somewhat from Statistics Canada's definition of downtown.

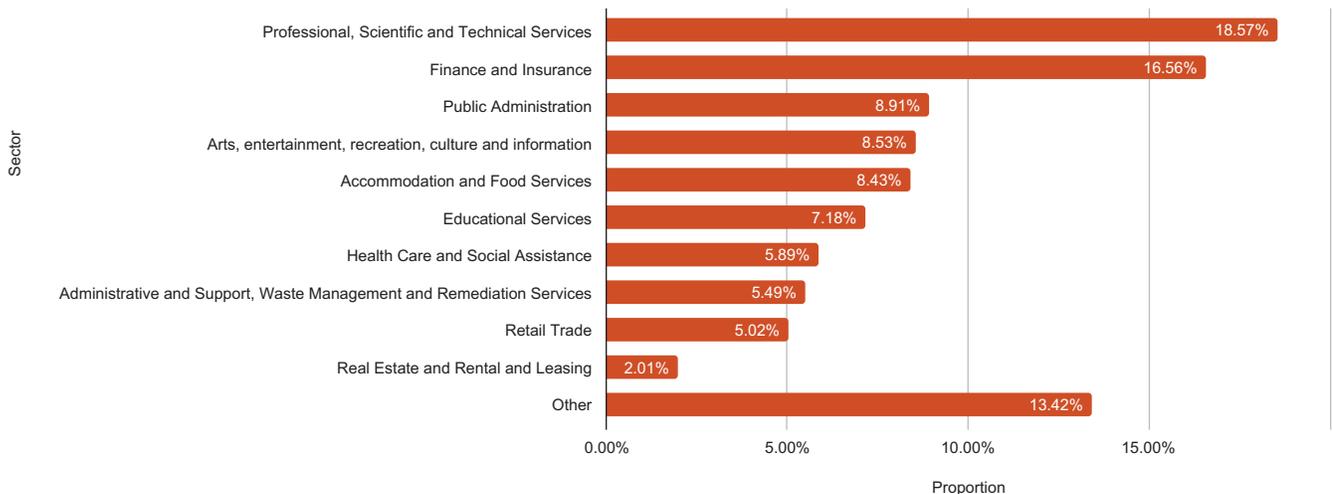
53. CENTURY21 Canada. Price per square foot Survey 2020. Link: <http://www.century21franchise.ca/price-per-square-foot-survey-2020/#1597778836874-cdedae9e-9b71>.

Economic function

Downtown Montréal is both the economic engine of Greater Montréal and its primary employment hub. It is home to nearly 11,000 businesses, or about 8.1 per cent of all businesses in the Census Metropolitan Area (CMA). These businesses provide nearly 300,000 jobs, representing 14.4 per cent of the employed population of the CMA.⁵⁴ The density of jobs is also very high: Approximately 22,750 jobs per square kilometre, compared with about 450 for the CMA as a whole. In 2016, downtown Montréal generated approximately \$28.7 billion in GDP, equal to 14.3 per cent of that of the CMA and 7.8 per cent of that of the province.

More than one-third of the jobs in downtown Montréal are in the professional services, finance and insurance sectors (see figure 11). The arts, culture and entertainment sector also provides many jobs, as do food services and retail trade, serving the many businesses in the sector, as described above. Lastly, a high proportion of jobs in the education sector are located in the inner city, reflecting the large number of universities, colleges, CEGEPs and other educational institutions. In 2016, the average personal annual income of people working downtown was \$76,195.

Figure 11: Proportion of employment by sector, downtown Montréal, 2020

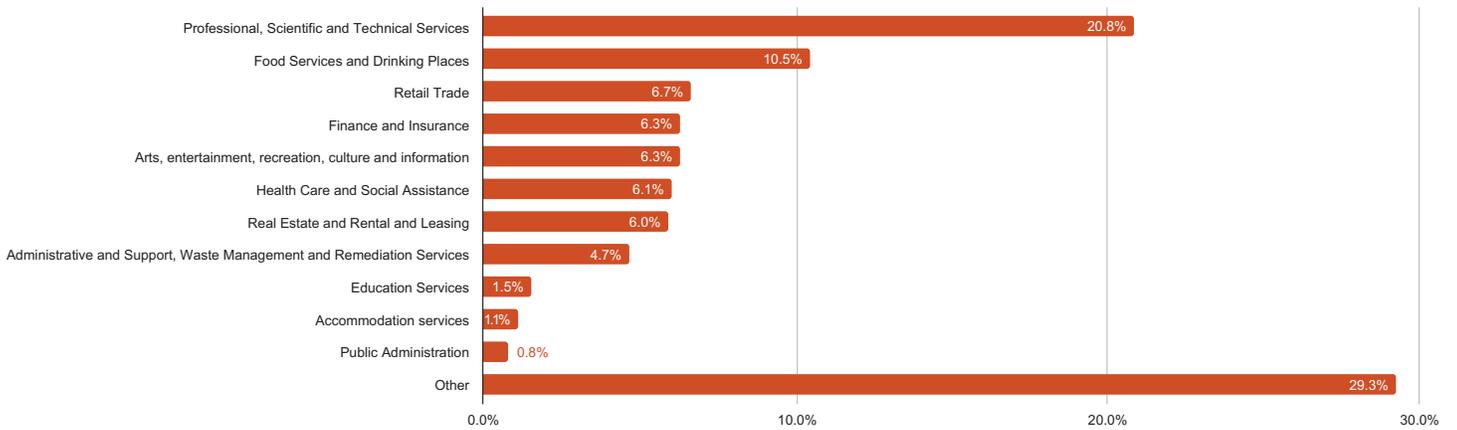


Source: Statistics Canada; PwC analysis.

The breakdown of the number of firms in downtown Montréal is typical of a large urban centre: The dominant sector is professional services, with a strong presence of the financial sector as well (see figure 12). There is also a high proportion of businesses related to the restaurant and bar sector and retail trade. Lastly, the arts, culture and entertainment sector is also well represented, reflecting the city's cultural and tourism character.

54. "Employed population" refers to residents of the CMA who were employed either full-time or part-time, as reported by Statistics Canada's 2016 *Labour Force Survey*. This number differs from the number of jobs in the CMA.

Figure 12: Proportion of businesses by sector, downtown Montréal, 2020

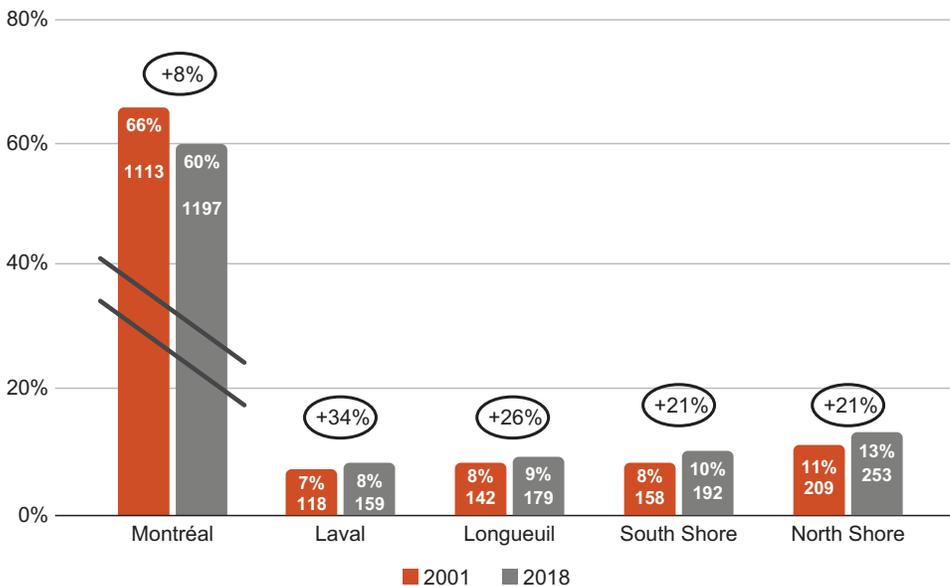


Source: Statistics Canada, 2020; PwC analysis.

Note: The number of businesses is the number of physical locations of any business, organization, or other corporation that has at least one employee and either (1) has a workforce for which it submits remittances to the Canada Revenue Agency, (2) has an annual income of more than \$30,000, or (3) is considered a corporation under federal or provincial law and has completed a corporate income tax form within the last three years.

A study by Statistics Canada finds that the proportion of jobs located in downtown Montréal compared with the rest of the metropolitan area decreased by a little more than 1 per cent between 1996 and 2016.⁵⁵ The economic growth experienced by the metropolitan area in recent years has benefitted the peripheral areas of the island of Montréal. The share of downtown jobs within the CMA decreased from 66 per cent to 60 per cent between 2001 and 2018 (see Figure 4). The Origin-Destination (OD) survey conducted by the Autorité régionale de transport métropolitain (ARTM) also shows that trips made during the morning rush hour for work to the suburbs increased by 12 per cent between 2013 and 2018.

Figure 13: Employment by place of work for areas in the Montréal CMA, 2001 and 2018



Source: CMM Consortium using Statistics Canada data (Business Register, Census, National Household Survey and Labour Force Survey); PwC analysis.

55. Statistics Canada, 2019. Results from the 2016 Census: Commuting within Canada's largest cities. Link: <https://www150.statcan.gc.ca/n1/pub/75-006-x/2019001/article/00008-eng.htm>.

Downtown Montréal also has a significant concentration of head offices and subsidiaries of large foreign global companies:

- 24 head offices or main offices of companies with annual revenues in excess of \$1 billion
- More than 700 subsidiaries of foreign companies
- 65 international organizations
- Between January 1, 2018 and September 30, 2020, 107 foreign investment projects valued at \$3 billion, which generated 11,400 new jobs

Real estate - offices

Downtown Montréal has the second largest concentration of office towers in Canada, after Toronto. Overall, the downtown office rental market was healthy before the pandemic; the vacancy rate decreased by 1.8 per cent between 2018 and 2019 (table 20). Nevertheless, a CBRE report states that competition between suburban and inner-city neighbourhoods is quite present. For example, because of the disruptions expected from the construction of the REM, some employers are looking for solutions to accommodate their employees, including the opening of satellite offices outside the downtown core. In addition, fast-growing technology sectors such as artificial intelligence and video gaming are looking for large spaces, often located on the outskirts of the downtown area.⁵⁶

Table 20: Portrait of the office real estate market, downtown Montréal, 2018-2020

	T1-2017	T4-2018	T1-2019
Stock (square feet)	52,700,000	53,520,408	54,571,239
Vacancy rate	12.2%	11.8%	9.8%
Asking rental rate (per square foot)	\$15.74	\$19.08	\$19.15
Under construction (square feet)	1,000,000	956,311	998,139

Sources: CBRE; Avison Young; Colliers Canada;

Commercial function

Downtown Montréal has an important commercial offer. There are several commercial arteries that invigorate the district, while offering a showcase for local and international merchants. There are nearly 4.5 million square feet of commercial space, or 10 per cent of all of Montréal's commercial centres.⁵⁷ Rue Sainte-Catherine, the most important commercial artery in Canada, hosts nearly 1,200 stores and restaurants. Vieux-Montréal, the Quartier Latin and the Village are also important centres of commercial activity in the downtown area. In total, 732 retail businesses currently operate within the boundaries of downtown Montréal.

The number of commercial locations per 1,000 downtown workers, at a ratio of 2.5, ranks Montréal last among the six downtown areas under study. The number of locations per 1,000 residents is higher, at 8.7 (second highest ratio among the downtowns studied).

Figure 5: Main commercial arteries in downtown Montréal



Source: CCMM, recovery plan for downtown Montréal.

56. CBRE Research Canada. Montréal Office Marketview Q3 2020. Link: <https://www.cbre.ca/en/research-and-reports/Montréal-Office-Marketview-Q3-2020>.

57. Chamber of Commerce of Metropolitan Montréal, 2020. Recovery plan for the downtown core as part of the Relaunch Montréal initiative.

In addition to shopping streets, the downtown area is home to major malls such as the Eaton Centre, Place Montréal Trust, Complexe Desjardins, the Promenades Cathédrales and Place Ville-Marie. Montréal also has an extensive underground network that boasts nearly 1,700 stores and fast food restaurants.

Commercial real estate

According to the Retail Council of Canada, Montréal has seen significant investment, despite the restructuring context in the retail sector. Ivanhoé Cambridge has invested more than \$1 billion in several of its downtown properties. Works gave rise to the Time Out Market, a 40,000-square-foot food hall, a 38,000-square-foot Decathlon sporting goods store and, more recently, the advent of Japanese clothing retailer Uniqlo. The extensive commercial building renovations could make downtown Montréal one of North America’s most popular destinations for the shopping experience.⁵⁸

Restaurants and bars

Montréal is known for its gourmet offer. Downtown is home to nearly 1,200 restaurants, bars and food courts such as the Time Out Market, Cathcart and Central, representing 13 per cent of the CMA’s total offering. It also boasts eight of the country’s top 100 restaurants.⁵⁹ The concentrated offer of entertainment activities of all kinds on Rues Crescent, Sainte-Catherine, Place Jacques-Cartier and Saint-Paul, in addition to the entertainment around the Bell Centre and Percival-Molson Stadium, makes the downtown quite alluring, especially for the younger population. This helps to cultivate the city’s dynamic and trendy image, hence its degree of attractiveness in the long term.

The city core has 13.6 restaurants and bars per 1,000 inhabitants. It thus ranks first among the city centres studied in terms of food and beverage services offer.

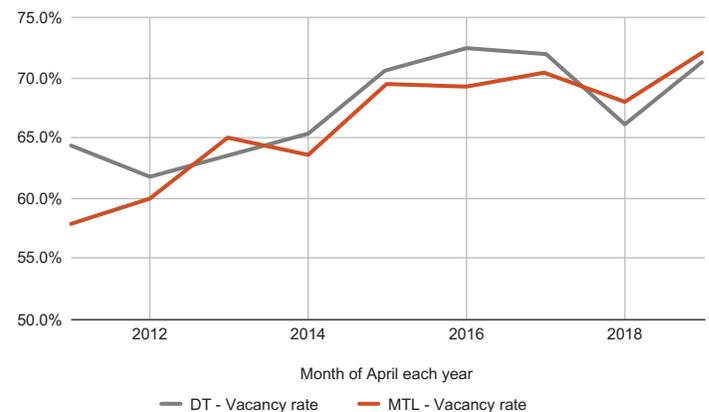
Tourism, culture and entertainment function

Tourism is a major source of activity for Montréal and its downtown area. According to Tourisme Montréal, the city receives close to 11 million tourists annually, generating nearly \$4.9 billion in economic spinoffs, corresponding to 50 per cent of the economic weight of international tourism in Quebec. The Palais des congrès (convention centre) alone hosts more than 350 events annually and draws 1.3 million participants, generating \$214.5 million in economic spinoffs.⁶⁰ For the fourth consecutive year, Montréal was also crowned Number One in North America by international meetings by the International Congress and Convention Association; it attracted more than 129 international events.⁶¹

The city core has a diversified and prestigious offer in terms of tourist accommodations. More than 64 hotels offer a total of more than 16,000 rooms, representing 75 per cent of the supply in the Greater Montréal area. In 2019, the average occupancy rate was 73 per cent.⁶² As the following figure shows, the occupancy rate is generally higher in the downtown area than in the rest of the city, indicating that there is a strong demand for accommodation downtown.

Each year, some 100,000 passengers disembark at the Port of Montréal’s cruise terminal during the cruise season, which runs from early May until the end of October.⁶³

Figure 14: Average occupancy rate of the Montréal hotel sector



Source: Hotel Association of Greater Montréal.

58. Retail Council of Canada, January 2020. Downtown Montréal seeing incredible retail boom. (Link: <https://www.retailcouncil.org/province/quebec/regional-focus-downtown-montreal-seeing-incredible-retail-boom/>).

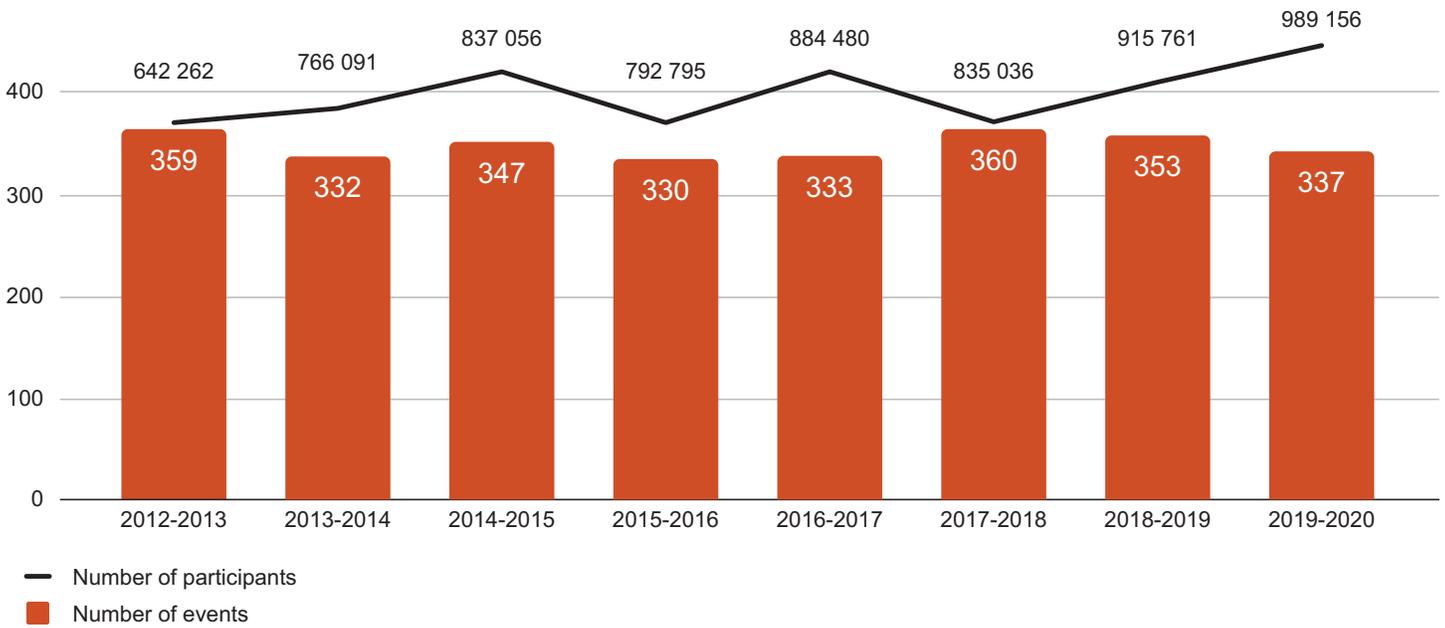
59. Canada’s 100 Best Restaurants 2020. Link: <https://canadas100best.com/best-restaurants-2020-ranking/>.

60. Chamber of Commerce of Metropolitan Montréal, 2020. Downtown recovery plan as part of the Action Plan to Strengthen the Downtown Area.

61. Newswire, 2020. Montréal Retains Title as Top City in the Americas for International Events. Link: <https://www.newswire.ca/news-releases/Montréal-retains-title-as-top-city-in-the-americas-for-international-events-836611641.html>. 62 Tourisme Montréal based on data from the Hotel Association of Greater Montréal (HAGM).

63. Tourisme Montréal.

Figure 15: Change in the number of conventions and convention attendees in Montréal (2012 to 2019)



Source: Annual reports of the Palais des congrès de Montréal.

In total, there are more than 2,260 businesses in the arts, recreation and culture sector in the downtown core, representing more than 10 per cent of all businesses in this sector in the CMA. This high concentration powers the downtown’s attractiveness in terms of tourism and entertainment.

Complementary to the tourist offer, downtown Montréal is the crossroads of entertainment and culture in the province. It is home to the Quartier des spectacles, a square kilometre of cultural offers of all kinds.

In addition, there are many outdoor festivals (International Jazz Festival, the Francos de Montréal, Montréal en lumière, Just for Laughs Festival, Trans-America Festival, etc.). A total of 61 per cent of tickets sold for festivals in the province are related to events taking place in downtown Montréal.⁶⁴

Downtown is also home to major cultural institutions (Les Grands Ballets, the Montréal Museum of Fine Arts, the Orchestre métropolitain, the Théâtre du Nouveau Monde, the National Film Board, etc.) and renowned concert and performance venues (the Bell Centre, Place de Arts, MTelus, Astral, etc.).

Finally, Montréal is renowned for its local sports teams. The zeal surrounding its professional hockey (Montréal Canadiens) and soccer (CF Montréal) teams has earned it the distinction of best sports city in Canada for three consecutive years according to the Canadian Sport Hosting Index developed in 2018 by the Canadian Sport Tourism Alliance.⁶⁵

64. Chamber of Commerce of Metropolitan Montréal, 2020.

65. MTL Blog, 2020. Top Sports City 2020. Link: <https://blog.mtl.org/en/top-sports-city-2020>.

Table 21 shows the 2019 visitor traffic to some of the most popular cultural attractions in the downtown core.

Table 21: Visitor volume at selected tourist attractions in downtown Montréal

Attractions	Visitors (2019)
Bell Centre	1,794,668
Montréal Museum of Fine Arts	1,046,120
Notre-Dame Basilica	1,027,627
Palais des congrès de Montréal	915,761
Place des Arts	905,252
Montréal Science Centre	595,176
Pointe-à-Callière Museum	504,793

Source: Tourisme Montréal, Palais des congrès de Montréal.

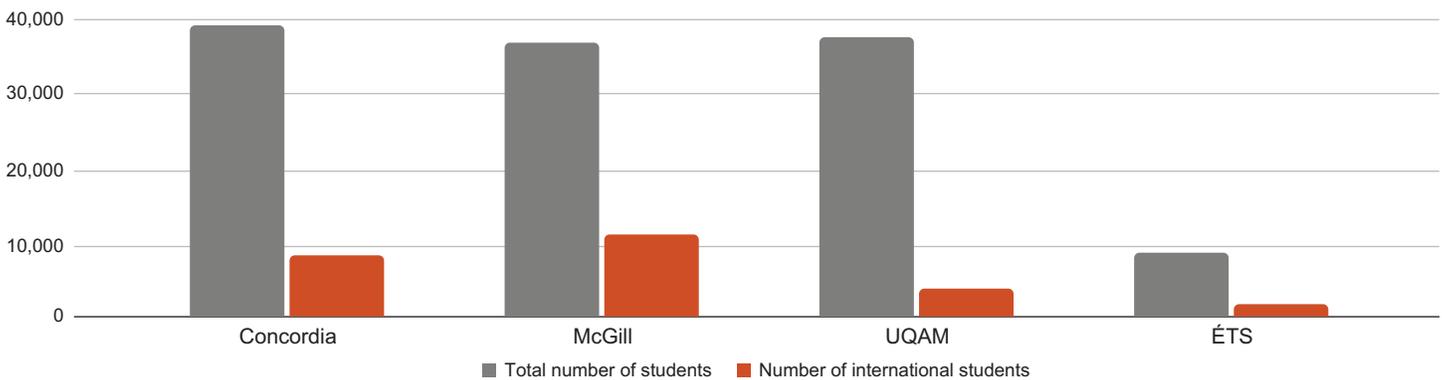
Educational function

Montréal is recognized as a student city. There are five university campuses, one CEGEP and one college in downtown Montréal:

- McGill University
- Concordia University
- École de technologie supérieure (ÉTS)
- Université du Québec à Montréal (UQAM)
- Institut national de recherche scientifique (INRS)
- Cégep du Vieux-Montréal
- Dawson College
- Downtown Pavilion of HEC Montréal, which will be added in 2022

In 2019, nearly 123,000 students, including 35,000 international students, attended post-secondary institutions in the inner city.⁶⁶ This number is the highest of all the downtowns studied. Based on the growth in the number of students at McGill University, the downtown student population would have increased by an annual average of 0.85 per cent since the 2010-2011 academic year. In addition, there has been strong growth in the number of international students at McGill, with an annual increase of 5.70 per cent over the same period. Montréal also offers students an opportunity to pursue higher education in French. The city also hosts two major English-speaking universities, McGill and Concordia, which draw English-speaking international students. Figure 16 shows the proportion of international students in the four main universities located downtown.

Figure 16: Distribution of students at universities in downtown Montréal, 2019



66. Bureau de coopération interuniversitaire, 2019. Data collected from https://www.bci-qc.ca/wp-content/uploads/2019/10/Insc_automne_2019.pdf.

These institutions are home to world-class research centres, particularly in health. Notably, the Centre hospitalier universitaire de Montréal (CHUM), is one of the largest research centres in Canada (1,800 employees and 38 research chairs). Montréal is therefore well positioned to take advantage of the sector’s growth prospects.

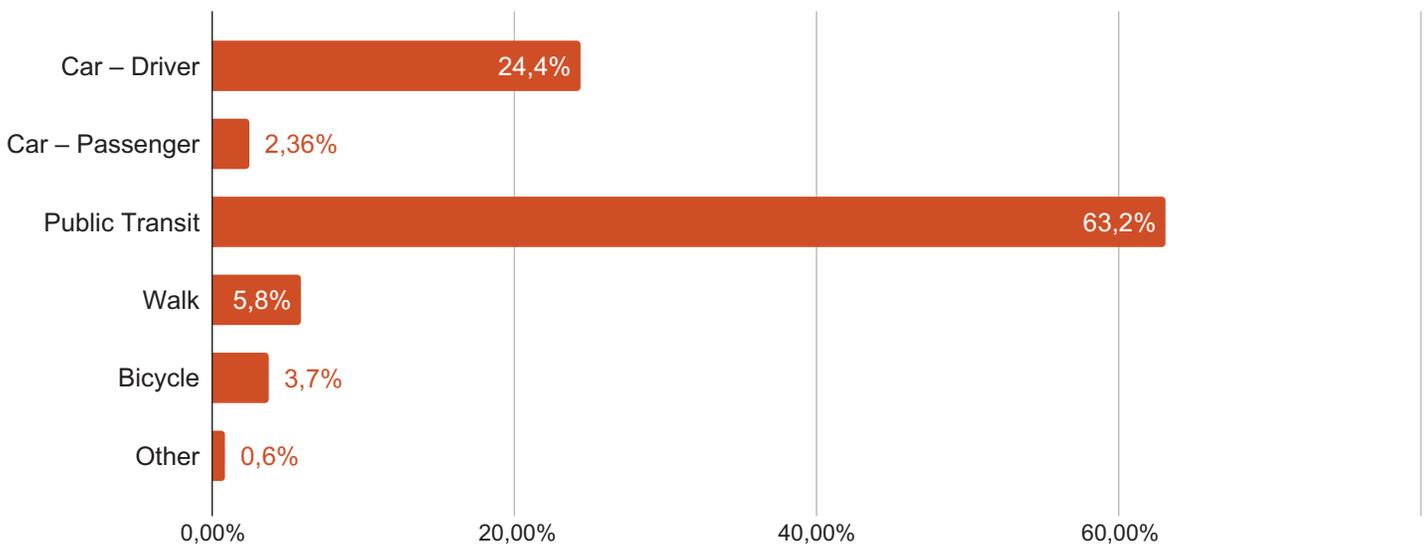
Transport and transit function

Montréal has one of the largest metropolitan transit systems in North America. The city is also a leader in active transportation, with one of the highest modal shares for bicycles in North America. Normally, 600,000 people head downtown every day, including 300,000 workers.⁶⁷ Access to downtown is facilitated by the radial structure of the main arteries, commuter train and subway lines that converge on the downtown area. In addition, the arrival of the Réseau express métropolitain (REM) network in 2022-2023 will connect the downtown area, the airport and the metropolitan region, thus easing transportation flow through the addition of three stations. WalkScore gives Montréal a score of 67 out of 100, ranking it as a “good” to “excellent”⁶⁸ city.

However, the public transit system has some shortcomings. The growth in ridership is outstripping the supply of transportation, resulting in overcrowding in the métro and road congestion. According to Deloitte, the average commuter spends more than 145 hours a year in traffic congestion caused by “on-going public works programs and repair of road systems.”⁶⁹ The company states that ridership on the Société de transport de Montréal (STM) bus network has decreased by more than 13 per cent over the past five years.

In 2016, most downtown workers used public transit to get to work (see figure 17). Commuter trains and the métro offer an attractive alternative for those living far from the downtown core. This modal share is the highest among the six downtowns studied, just above that of Toronto. The large number of métro stations in the downtown core accentuates this share, even for those within walking distance. Incidentally, the modal share of walking is the lowest of all the downtowns studied. It is likely that major road and rail transport infrastructures contribute to the isolation of neighbourhoods and hinder the movement of pedestrians and cyclists.

Figure 17: Primary mode of commuting to work, downtown, 2016



Source: Statistics Canada, 2016 Census

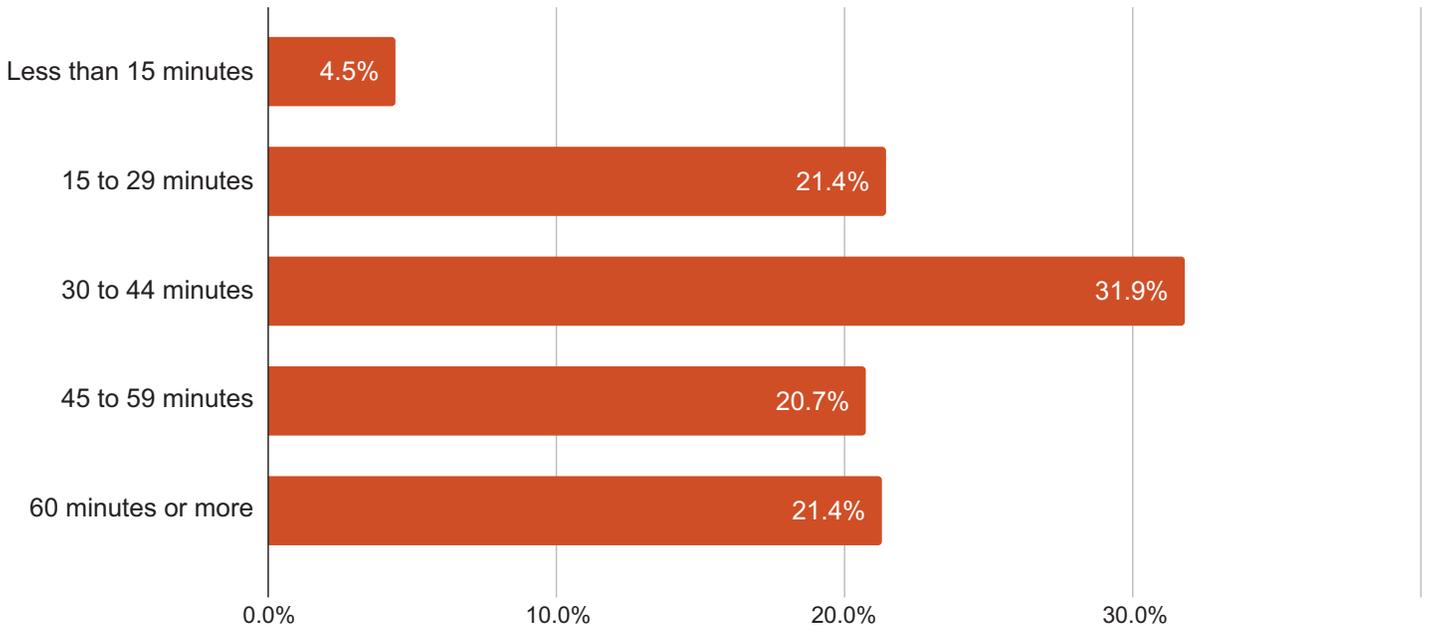
67. Radio-Canada, 2020. Le centre-ville de Montréal peine à retrouver sa vigueur. Link: <https://ici.radio-canada.ca/nouvelle/1734292/frequentation-tours-bureaux-retour-travail-metropole>.

68. WalkScore is an independent organization that, among other things, evaluates the quality of public transit in North American cities. The methodology assigns higher scores to heavy systems (train, subway, etc.) and lower scores to buses, also considering frequency of use and distance between stops. More information here: <https://www.walkscore.com/transit-score-methodology.shtml>.

69. Deloitte, 2019. City Mobility Index. (Link: https://www2.deloitte.com/content/dam/insights/us/articles/4331_Deloitte-City-Mobility-Index/Montréal_GlobalCityMobility_WEB.pdf)

Workers in downtown Montréal have a fairly long commuting time compared with other downtown areas, with more than 74.0 per cent spending more than 30 minutes travelling to work (Figure 18).

Figure 18: Commuting time from home to work, workers in downtown Montréal, 2016



Source: Statistics Canada, 2016 Census

Lastly, Montréal's Pierre Elliott Trudeau International Airport serves approximately 20 million passengers annually, with one of the highest proportions of international trips among the six city centres studied, or nearly 43 per cent of the total.

Ottawa

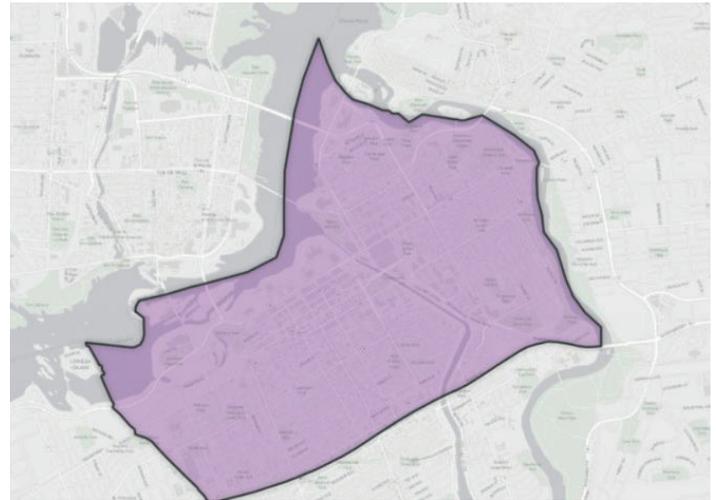
Geographical definition

Downtown Ottawa is bordered on the west by the Trillium Pathway, on the south by the Trans-Canada Highway 417, on the east by the Rideau River, and on the north by the Ottawa River.

Neighbourhoods:

- **Little Italy, to the west:** A small hybrid neighborhood with several Italian shops and restaurants.
- **Chinatown, to the centre-west:** A small hybrid neighborhood with a strong Chinese cultural presence, but also several other nationalities.
- **Centretown, in the centre:** The business district, where most of the large office buildings are located.
- **Sandy Hill, to the east:** A residential neighbourhood with a strong student presence due to the University of Ottawa, which is located in the district.
- **The ByWard Market, to the north:** A highly commercial neighbourhood, with the CF Rideau Centre and the ByWard Market, a large open area with many small shops and restaurants.
- **Lower Town, to the northeast:** A highly residential neighbourhood with several schools, parks and other public places.

Downtown Ottawa



Source: Statistics Canada.

Residential function

Demography

In 2016, Statistics Canada counted 59,395 people living in the downtown core, forming 36,200 households. Inner city residents represented 6.4 per cent of the City of Ottawa's population in 2016. Downtown Ottawa is made up of several neighbourhoods with high residential density combined with a commercial mix, with the exception of the Centretown core, where most of the office towers are located, and the ByWard Market, which hosts a large shopping mall with a strip of outdoor stores and restaurants. The population density of 6,125 residents per square kilometre is significantly higher than the city's overall density, although this figure is near the average of other downtowns studied.

In general, inner-city residents are younger and more educated than those in the city as a whole (table 22). In contrast, downtown households have significantly lower annual incomes than those in the city overall. This can be explained by the higher concentration of young professionals and students, as reflected in the proportion of one-person households.

Table 22: Demographic profile of residents of Ottawa and its downtown, 2016

Demographic characteristics	City	Downtown
Population	934,243	59,395
Population density per square kilometre	334.8	6,125.8
Proportion of the population between ages 15 and 64 years	67.9%	79.0%
Proportion of one-person households	28.3%	56.6%
Proportion of owner households	65.7%	24.3%
Median annual gross household income*	\$85,981	\$54,944
Average annual gross household income*	\$106,372	\$73,212
Unemployment rate	7.2%	8.6%
Proportion of 25-64 year olds with a university certificate or degree	56.4%	76.1%
Proportion of immigrants	23.2%	23.7%

Source: Statistics Canada, 2016 Census data.

* In 2015 dollars.

Residential real estate

The composition of residential housing is fairly diverse compared with the other downtowns studied. For example, Lowertown and the easternmost portion of Sandy Hill have several single-family semi-detached houses, and several rental buildings near the University of Ottawa house a large student population. Multiple high-rise condominium towers are also present in Centretown and further west.

Data on recent developments in the residential real estate market in downtown Ottawa show some tightening of market conditions (table 23 below). For example, the inventory of unsold new construction has decreased from over 268 in 2015 to 42 in 2019. The vacancy rate has remained below 2 per cent over the period, meaning that very few options are available to tenants.

Table 23: Residential real estate snapshot, downtown Ottawa, 2015-2019

	2015	2016	2017	2018	2019
New home market					
Construction of new units ⁷⁰	707	17	315	630	186
Stock of unsold new buildings	268	235	178	83	42
Rental market					
Average monthly rent	1,128	1,136	1,202	1,246	1,397
Annual change in rents	3.7%	3.8%	5.8%	5.7%	7.8%
Vacancy rate	1.6%	1.7%	1.5%	1.3%	1.5%

Source: CMHC; PwC analysis

Note: CMHC's downtown boundary. Excludes Little Italy and Chinatown to the west.

70. New units include detached and semi-detached homes, townhouses and apartments. In the city centre, apartments make up almost all of the new construction, which is to be expected.

According to CMHC’s most recent housing market assessment, demand growth has outpaced supply growth in the resale market, which has created pressure on the price of existing homes and pushed the measure of prices acceleration closer to its threshold. Strong demand and weak supply continued to support significant price increases in 2019.⁷¹

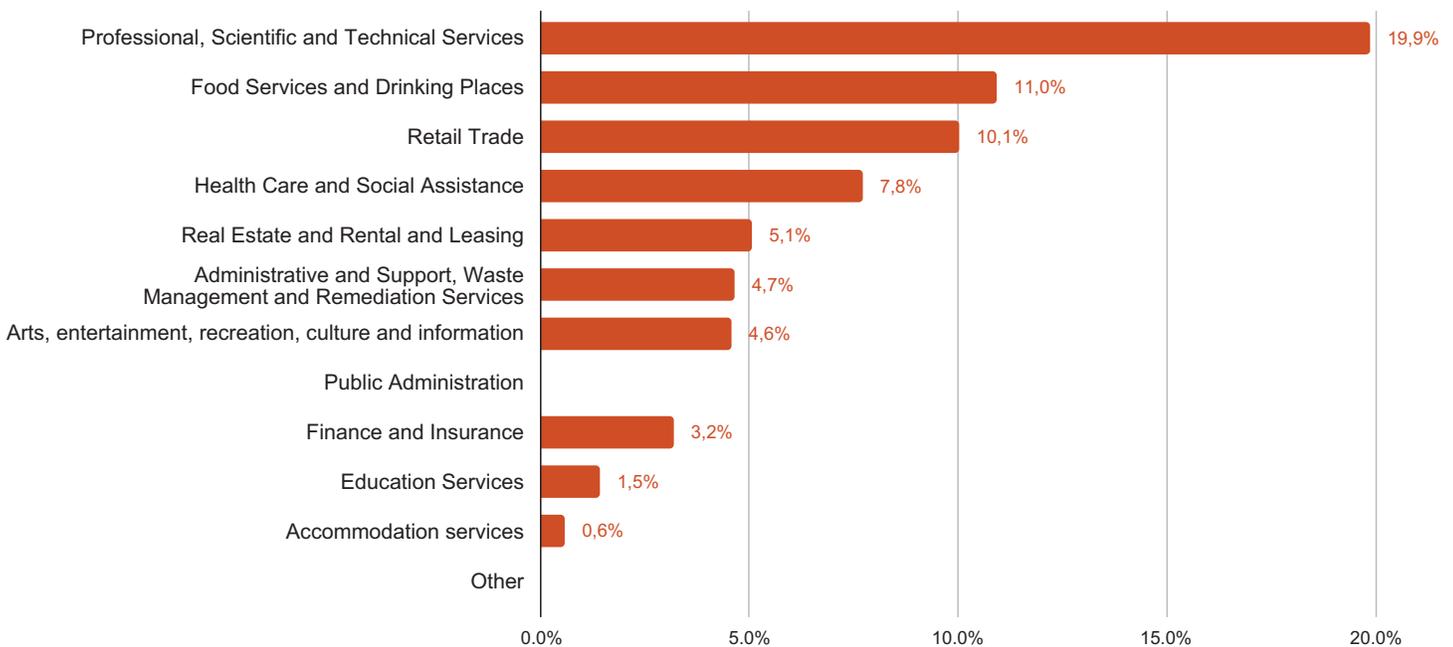
This pre-pandemic tightening is due to a low construction rate combined with strong demand driven by growth in the high-tech sector, stable federal government jobs, a perception of a clean and safe city and more affordable prices than in other major Canadian urban centres such as Toronto and Vancouver. A recent Ottawa government plan calls for the addition of between 1,200 and 1,650 hectares of land for development just outside Ottawa. This could help balance supply and demand, especially in the single-family segment, thereby lowering the prices of condominium apartments, and possibly even cooling the rental market.⁷²

Economic function

There are more than 4,200 organizations in the downtown area, representing 10.7 per cent of the CMA total in 2020. The downtown area accounts for nearly 125,000 jobs, or 27.5 per cent of jobs in the CMA, according to 2016 data. In terms of GDP, downtown Ottawa generated \$13.9 billion in GDP in 2016, representing approximately 21.6 per cent of the CMA’s GDP and 1.9 per cent of the province’s GDP.

There are a good number of companies in the professional services sector, which is typical of large urban centres. In addition, the restaurant and retail trade sectors are strongly represented, both of which generally rely on a region’s traffic and economic strength (figure 19). In general, however, the city’s economic fabric is largely based on the public service sector, as reflected in the high concentration of jobs in this sector (figure 20). Low sector diversity often means vulnerability to economic disruption. Yet the public sector is relatively robust to economic downturns, and offsets the concerns raised by this low extent of diversity. The city’s most recent strategic plan identifies economic diversity as a priority.⁷³

Figure 19: Proportion of businesses by sector, downtown Ottawa, 2020



Source: Statistics Canada, 2020; PwC analysis.

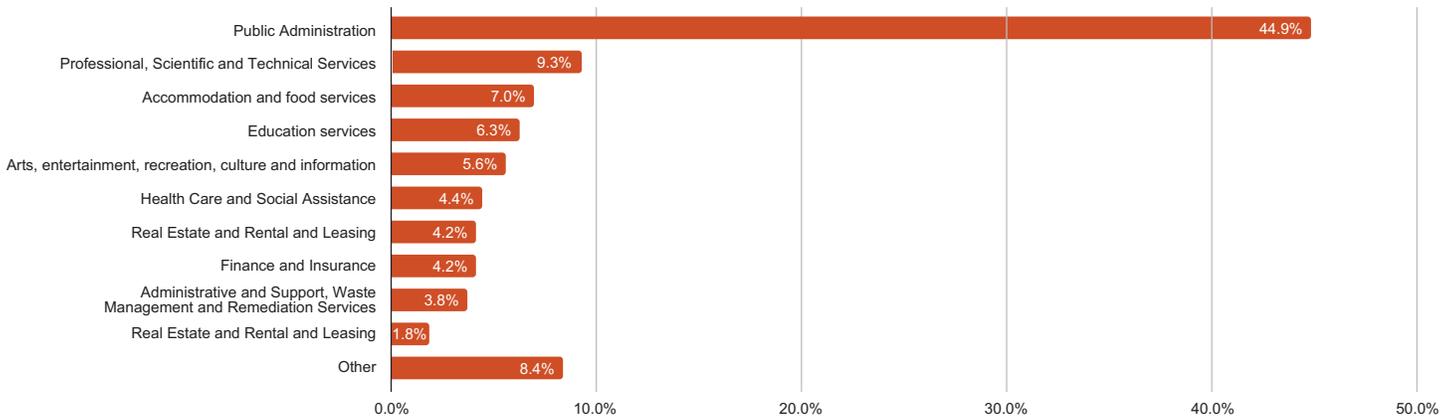
Note: The number of businesses is the number of physical locations of any business, organization, or other corporation that has at least one employee, and either (1) has an employee workforce for which they submit payroll remittances to Canada Revenue Agency, (2) has a minimum of \$30,000 in annual revenue; or (3) is incorporated under a federal or provincial act and has filed a federal corporate income tax form within the past three years.

71. CMHC, T1-2020. Housing Market Assessment, Ottawa CMA. Link: <https://assets.cmhc-schl.gc.ca/sites/cmhc/data-research/publications-reports/housing-market-assessment/2020-q01/housing-market-assessment-ottawa-68621-2020-q01-en.pdf?rev=63bc41a0-c801-4c7d-ad84-6e6a152848e5>. Note: Although the analysis covers the entire CMA, the findings are valid for the downtown area.

72. CBC, 2020. Ottawa looks to add up to 1,650 hectares to its suburbs. Link: <https://www.cbc.ca/news/canada/ottawa/ottawa-urban-boundary-staff-recommendation-1.5543765>.

73. City of Ottawa, 2019. City of Ottawa Strategic Plan 2019-2022. Link: https://documents.ottawa.ca/sites/documents/files/strategic_plan_2019_2022_en.pdf.

Figure 20: Proportion of employment by sector, downtown Ottawa, 2016



Source: Statistics Canada, 2016 Census data; PwC analysis.

Hubs and industrial agglomerations

In developing its 2017 Strategic Plan, the City of Ottawa has identified several initiatives to diversify the economic fabric through a knowledge-based economy and development of the creative industries. The Ottawa Film Office strives to promote Ottawa to the outside world as a film-friendly city and to encourage the development of the local film, television and animation sector.

Close to Kanata to the west, a renowned high-tech hub is helping Ottawa attract more and more companies in this sector. For example, the international e-commerce company Shopify was headquartered in the downtown core and could accommodate approximately 1,000 employees. Other companies from different sectors have research and technology development offices in Ottawa, such as General Dynamics and Lockheed Martin in defence and aerospace, Waste Management and Johnson Controls in clean technologies, and Cisco and Blackberry in telecommunications technologies. In total, more than 1,750 companies and research affiliates employ more than 68,500 advanced-skilled workers in the region.⁷⁴

Real estate - offices

The availability of office space was relatively limited prior to the pandemic in downtown Ottawa (see table 24 below). According to Cushman and Wakefield, tenant demand for Class A space was strong, and options for accommodating tenants were quite scarce. With the advent of light rail, proximity to train stations became a location priority for new employers entering the downtown market.

Thus, with limited space available in the Ottawa office market and very few new development plans on the horizon, prices were expected to rise in the short term (pre-pandemic period). Properties near train stations, considered prime locations, were most at risk of experiencing strong lease price growth.⁷⁵ With a vacancy rate of just over 4.6 per cent, Ottawa is considered one of the tightest markets in North America (after Toronto, Vancouver, San Francisco, Victoria, and Austin).⁷⁶ The Ottawa area is also considered to be one of the most attractive in North America. All the same, the market remains relatively affordable compared with Toronto and Vancouver, with rents per square foot almost 30 per cent and 20 per cent lower, respectively.

74. Innovations of the World. Why Ottawa. Link: <https://innovationsoftheworld.com/why-ottawa/>.

75. Cushman & Wakefield, Q4 2019. Ottawa Office. (Link: file:///C:/Users/rbegin001/Downloads/Ottawa_Americas_Marketbeat_Office_Q42019.pdf).

76. CBRE Research Canada, 2020. Canada Market Outlook 2020. Link: <https://www.cbre.ca/en/research-and-reports/Canada-Market-Outlook-2020>.

High-tech companies occupy nearly 650,000 square feet of office space, according to CBRE. This is a recent development for the downtown area, which previously depended heavily on the public sector.⁷⁷

Table 24: Property portrait - offices, downtown Ottawa, 2016-2019

	2016	2017	2018	2019	2020
Stock (square feet)	28,709,047	28,675,482	28,617,038	28,617,038	28,573,864
Vacancy rate	5.4%	5.4%	6.1%	5.3%	4.6%
Under construction (square feet)	-	10,138	-	34,245	34,245
Average gross rent (per square foot)	37.92	38.23	38.21	37.19	39.09

Source: CoStar, 2020. Data as of the first quarter for each year.

Commercial function

The downtown's commercial presence is primarily limited to its Rideau Centre, located in the ByWard Market area. This Rideau shopping centre welcomes nearly 20 million customers annually. Spread over four floors, it has close to 150 stores, a large proportion of which are major chains. The centre alone occupies 1.55 million square feet.

Downtown Ottawa has an average level of commercial locations per 1,000 residents or workers, with a ratio of 7.1 and 3.4 respectively.

There are also a few businesses on Sparks Street pedestrian mall and Elgin Street, a major business artery, although both contain a higher proportion of restaurants and bars. Few other areas have businesses, and there is not really an underground commercial city as there is in Montréal or Toronto.

Commercial real estate

The commercial real estate market in the downtown core is not as diverse as in the other downtowns studied. As described in the previous sub-section, the commercial sector is largely limited to the Rideau Centre and the restaurant and bar offerings. In fact, a net demolition of stock occurred between 2016 and 2017. The vacancy rate was very low until 2018, before a significant upturn occurred until the first quarter of 2020 (table 25), although it is relatively low compared with the other downtowns analyzed (average of about 4.1 per cent).

Table 25: Commercial real estate snapshot, downtown Ottawa, 2016-2020

	2016	2017	2018	2019	2020
Stock (square feet)	6,146,865	6,037,561	6,037,561	6,070,561	6,071,738
Vacancy rate	2.9 %	1.0 %	1.9 %	2.7 %	3.5 %
Under construction (square feet)	5,265	5,265	38,265	15,781	10,516
Average rent (per square foot)	22.72	26.79	26.47	32.42	32.54

Source: CoStar; Statistics Canada; PwC analysis.

Note: CoStar's definition of downtown excludes Little Italy to the west and Lower Town to the east.

Restaurants and bars

Downtown Ottawa has a notable density of restaurants and pubs. Statistics Canada counts over 460 restaurant and bar locations in the downtown core, which puts Ottawa in the mid-range in terms of the number of restaurants and bars per downtown worker. Downtown Ottawa is home to 3.7 restaurants and bars per 1,000 workers, identical to the average for the other downtowns studied. The high-end culinary offer is also present, notably to serve federal government diplomatic meetings. In addition, Ottawa has a campus of Le Cordon Bleu Ottawa Culinary Arts Institute, attracting students from more than 100 countries each year to its fine cuisine program.⁷⁸ Regarding downtown nightlife, the ByWard Market is home to a majority of nightlife establishments.

77. The Globe and Mail, 2019. Tech firms taking over Ottawa's downtown. Link: <https://www.theglobeandmail.com/business/industry-news/property-report/article-tech-firms-taking-over-ottawas-downtown/>.

78. Le Cordon Bleu Ottawa. Link: <https://www.cordonbleu.edu/ottawa/en>.

Tourism, culture and entertainment function

In 2019, Ottawa Tourism estimates that tourism generated \$2.3 million in spending, \$762 million of which from international tourists. These visitors booked a total of 2.8 million hotel nights, a record for the city. Business tourism is important to Ottawa, particularly because of the presence of a G7 federal government, which attracted 88,600 delegates to various conferences.⁷⁹ Ottawa Tourism launched a strategic plan in 2019 to increase the supply of conferences and events related to science and technology innovation, and thus capitalize on the momentum of this industry in the CMA.

Ottawa is home to many cultural attractions and award-winning sites such as the Rideau Canal, which is Ontario's only UNESCO World Heritage Site.

The Shaw Centre, the city's premier convention facility, is located in the heart of downtown, and is within walking distance of over 6,000 hotel rooms. Since 2015, there has been an upward trend in the number of events at the Shaw Centre and a rising occupancy rate (table 26). In 2015, the City of Ottawa established the *Major Events Fund* to support Ottawa Tourism and the Shaw Centre in their mission to attract more major international and corporate conventions to Ottawa.

Table 26: Traffic at the Shaw Centre in Ottawa, 2015-2020

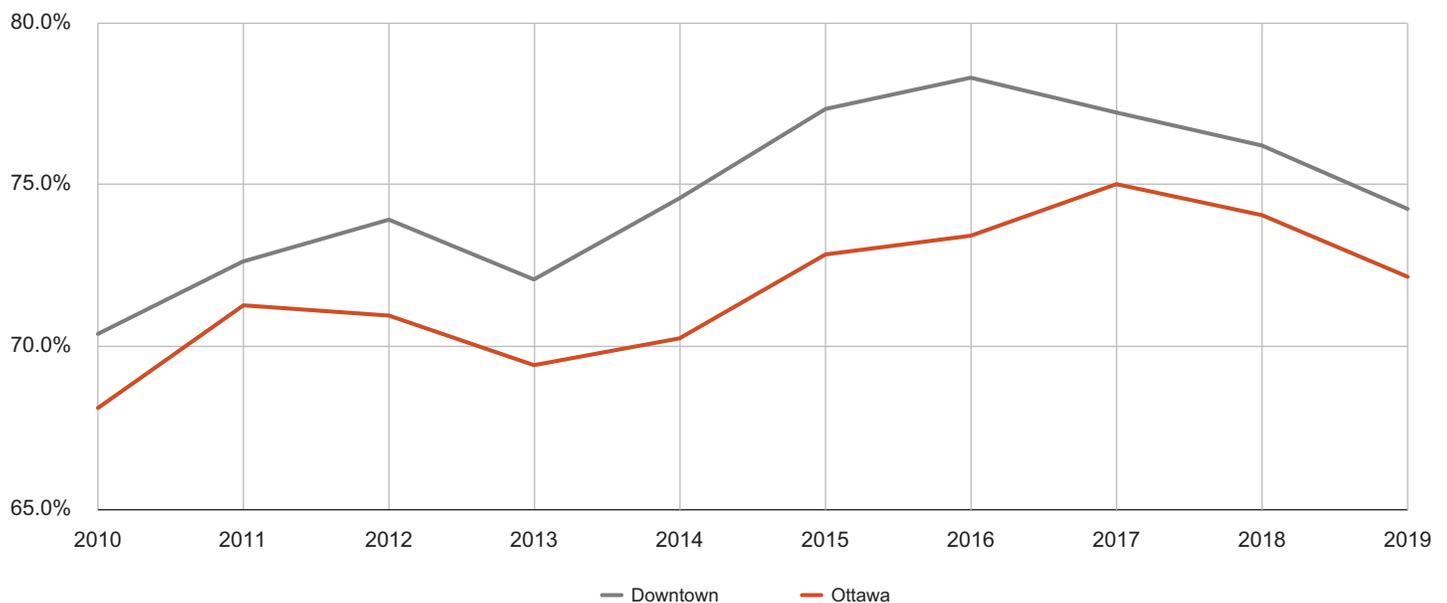
Traffic at the Shaw Centre	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Occupancy rate	39.4%	43.0%	49.9%	47.2%	47.2%
Number of conferences/events	39	39	55	44	46

Source: Annual Reports, Shaw Center.

The ByWard Market, with its Rideau Centre, is one of Ottawa's major tourist attractions for shopping, dining, arts, entertainment and professional services for residents and visitors alike. The area receives an average of 50,000 visitors per weekend during the summer months. It is home to both a local farmers' and artisans' market with numerous booths and more than 600 businesses.⁸⁰

Ottawa's hotel market is strong for its size, with over 12,000 rooms available city-wide, reflecting its status as the capital of a G7 country. The downtown core averaged 74 per cent occupancy in 2019. Figure 21 shows the evolution of this rate.

Figure 21: Change in occupancy rates for hotels in downtown and Greater Ottawa, 2010-2019



Source: Province of Ontario, Ministry of Heritage, Sport, Tourism and Culture Industries, 2020.

79. https://ottawatourism.ca/sites/default/files/media/documents/2020-07/2019-Annual-Report_1.pdf.

80. https://documents.ottawa.ca/sites/documents/files/ADR_2018_Full_Report_FINAL.pdf.

Downtown Ottawa is home to several museums, including the Bank of Canada Museum, the Bytown Museum, the Canadian Museum of Nature, and the National Gallery of Canada. Tripadvisor also lists several art galleries. Federal government heritage buildings, such as Parliament, also welcome visitors.

Several major festivals and outdoor attractions take place downtown each year. These include the Ottawa Jazz Festival, RBC Bluesfest, *Winterlude* and the Festival franco-ontarien, which unfold in large open spaces downtown each summer. The inner city also hosts culinary events such as the Sparks Street Ribfest.

Several professional sports teams are located in Ottawa. The soccer team, the Redblacks, plays at TD Place, just south of downtown. Ottawa is also home to the Atlético Soccer Club, which will soon be joining the Canadian Premier League. Atlético will also be playing at TD Place. The city's hockey team, the Senators, play in Kanata, a city west of Ottawa.

Education function

Downtown hosts the University of Ottawa, which is attended by over 43,000 students, including more than 8,300 international students. The university offers a standard range of programs, but its social science programs attract the largest number of students. There are also a few private and professional colleges, including Dominican University College, which specializes in philosophy and theology. Carleton University is also close to the downtown core, located further south in the Old Ottawa South district. It had 31,790 students in 2019. Université Saint Paul and two colleges (La Cité and Algonquin College) are also located on the outskirts of the downtown core.

Absolute student presence is lower than in other city centres such as Toronto or Montréal, but in terms of the ratio of students per capita, the downtown education sector is still significant.

Transport and transit function

The City of Ottawa has two integrated bus networks, that of Québec and that of Ontario. Many of the routes of these two networks converge in downtown Ottawa, via the bridges connecting Gatineau and Ottawa, which contributes significantly to traffic. With the completion of the new light rail lines, OC Transpo has reduced the number of bus routes passing through the downtown in an effort to ease road traffic and thereby encourage train use. In 2019, OC Transpo estimated its number of rides at 97.8 million.⁸¹

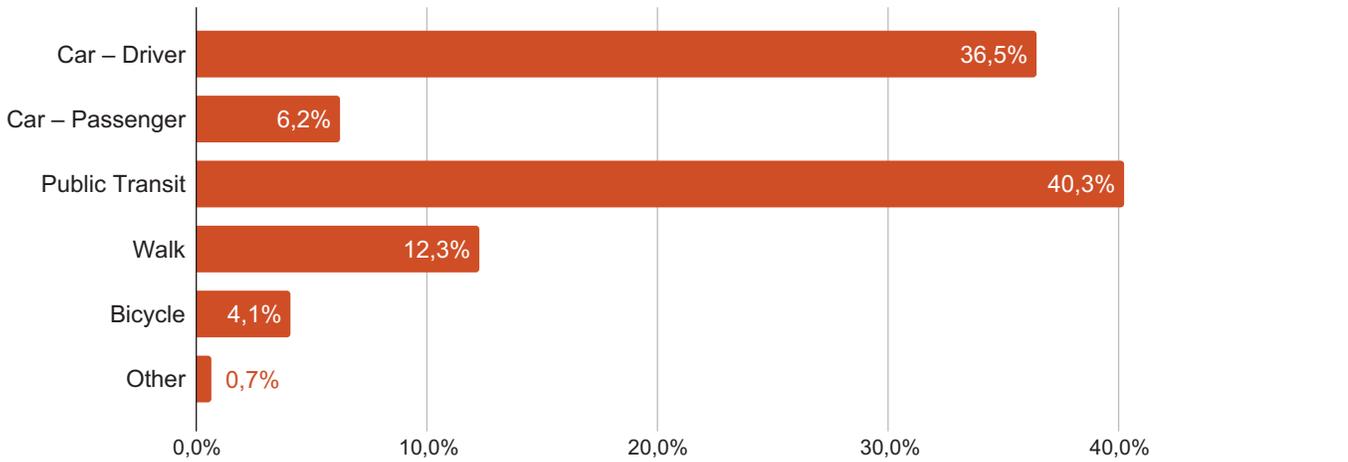
Based on 2016 data, the majority of downtown workers use public transit to get to work, although the modal share of the automobile is also very high (figure 22). Nevertheless, transit use is believed to have increased since then, with the completion of construction of the light rail extensions from 13 to 41 stations. This network now provides a station to 77 per cent of Ottawa's population within 5 kilometres of their homes.⁸² The City of Ottawa is currently evaluating another extension to Kanata and Gatineau, which would contribute further to this modal share and reduce vehicular traffic.⁸³ WalkScore gives Ottawa a low score of 49.5 out of 100.

81. CBC, 2019. OC Transpo 'not a reliable system right now,' Manconi says. Link: <https://www.cbc.ca/news/canada/ottawa/oc-transpo-john-manconi-horrible-reliability-1.5025961>

82. OC Transpo, 2020. Welcome to your future Otrain network. Link: <https://www.octranspo.com/en/news/article/welcome-to-your-future-otrain-network/>.

83. Carleton University, 2020. O-Train Transportation Plan Update. Link: <https://carleton.ca/transportationplan/o-train/#:~:text=As%20part%20of%20its%20Phase,will%20resume%20in%20September%202022.>

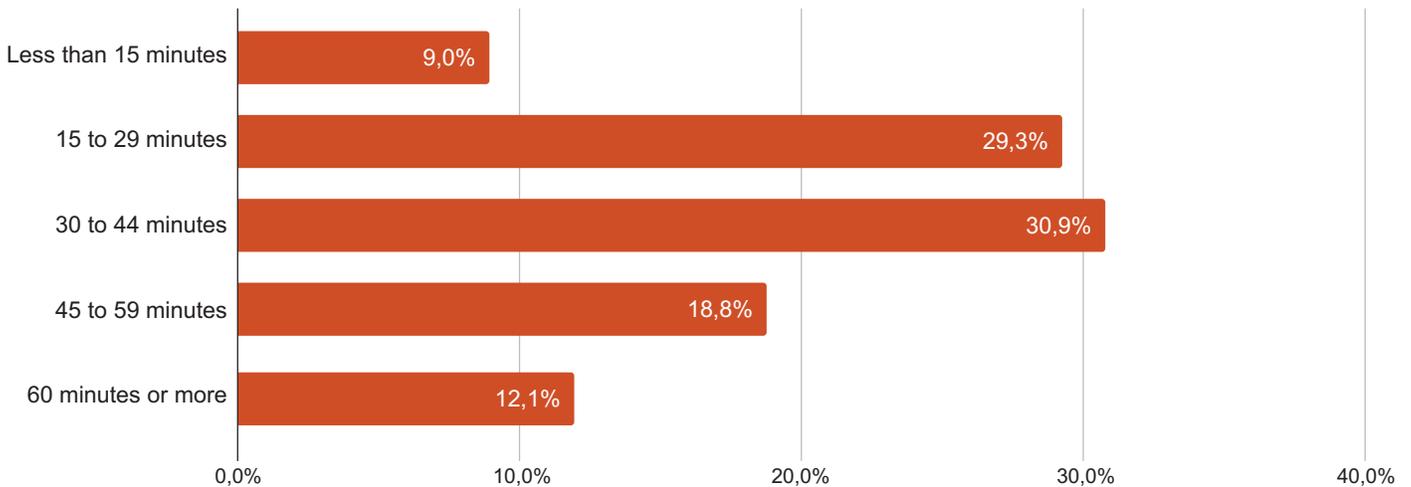
Figure 22: Primary mode of commuting to work, downtown workers, 2016



Source: Statistics Canada, 2016 Census

Workers in downtown Ottawa have a commuting time near the study average, with approximately 61.7 per cent spending more than 30 minutes travelling to work (figure 23)..

Figure 23: Commuting time from home to work, workers in downtown Ottawa, 2016



Source: Statistics Canada, Census 2016.

Finally, the Ottawa International Airport serves more than five million passengers annually.

Toronto

Geographical definition

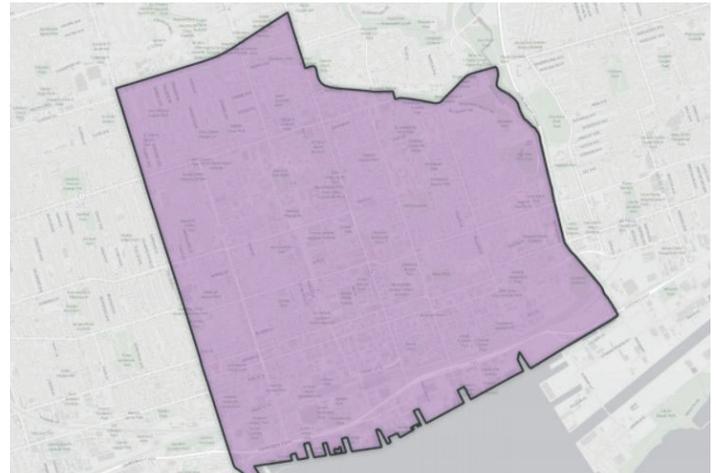
Downtown Toronto is bordered on the south by the Lake Ontario shoreline, on the west by Bathurst Street, on the northwest by the rail line running parallel to Dupont Street, on the northeast by Yonge Street and the Rosedale Valley Road, and on the east by the Don River.

Neighbourhoods:

The Annex and Harbord Village, to the west and

- **The Annex and Harbord Village, to the west and northwest:** This neighbourhood just opposite the University of Toronto's St. George campus is home to many students and teaching professionals. Harbord Street is the main shopping street in the area, with numerous restaurants, cafés and shops.
- **Kensington Market and Alexandra Park, to the west:** A neighbourhood located around an outdoor market and a large park, attracting several restaurants, cafés and shops.
- **City Place, to the southwest:** A new, very dense residential neighbourhood that was developed following a very detailed urban plan. The Entertainment District is located in this area, along with the Rogers Centre, etc.
- **Grange Park/Chinatown, to the centre west:** Located around Grange Park, Toronto's Chinatown is also a very artistic neighbourhood, and is home to the Art Gallery of Ontario, the Ontario Crafts Council, and the Ontario College of Art.
- **Downtown West and South Core, to the south:** This area includes the Financial District and the tunnel to the Billy Bishop Airport. Several high-rise condominium towers have also been developed to accommodate professionals in the area.
- **Bay Street and Church-Yonge Corridor, from the centre to the north:** A very dense residential area with several shopping streets, including the popular Yonge Street. This neighbourhood also includes the Hospital District, Ryerson University and the Toronto Eaton Centre.
- **St. James Town, to the northeast:** One of the densest residential neighbourhoods in Canada, with several high-rise residential apartment buildings.
- **Cabbagetown, to the east:** A residential neighbourhood with several streets with Victorian-style semi-detached houses, for which the area is nationally recognized.
- **Regent Park to the east:** Historically an affordable housing neighbourhood developed by the city. It has been significantly redeveloped, with several high-rise condominium towers and inviting landscaping around a large park.
- **Moss Park, to the centre-east:** A highly residential area with a large proportion of affordable housing and small shops.
- **Corktown, Saint Lawrence and West Don Lands, to the centre-south:** A former industrial area with a large outdoor market. This neighbourhood has undergone a major wave of revitalization, with several renovated residences, green and redeveloped public spaces and small local businesses. This neighbourhood is on the edge of Common Corktown Park, a large green space.

Downtown Toronto



Source: Statistics Canada.

Residential function

Demography

The downtown area is home to many diverse and rapidly growing communities. With a population of nearly 230,000, downtown Toronto represents 8.4 per cent of the city's population. Downtown Toronto appears to be very attractive to young workers who are at the beginning of their careers and want to live close to their workplace. High real estate prices in Toronto are delaying or even preventing the purchase of a home: Only one-third of the approximately 135,000 households in the downtown core live in homes they own (see table 27 below).

However, the proportion of one-person households is in line with the average for the other city centres studied. Taking this variable into account, the average annual household income is considerably high, at \$97,156 for the year 2015. Finally, the difference between median and average income suggests that the distribution of income is unequal in Toronto and its inner city.⁸⁴

Table 27: Demographic portrait of the residents of Toronto and its downtown, 2016

Demographic characteristics	City	Downtown
Population	2,731,571	229,900
Population density per square kilometre	4,334.5	13,855.2
Proportion of the population between ages 15 and 64	69.8%	82.5%
Proportion of one-person households	32.3%	52.8%
Proportion of owner households	52.8%	33.8%
Median annual gross household income*	\$65,829	\$60,763
Average annual gross household income*	\$102,721	\$97,156
Unemployment rate	8.2%	7.4%
Proportion of 25-64 year olds with a university certificate or degree	53.3%	78.4%
Proportion of immigrants	46.4%	38.2%

Source: Statistics Canada, 2016 Census data.

* In 2015 dollars.

Residential real estate

The Toronto residential market is one of the highest priced markets in the country. For example, the square footage of a condominium apartment was \$1,000 in 2019 due to high demand.⁸⁵ Supply is trying to meet this demand with the construction of new high-rise condominium towers, but rents for new rental units are naturally higher. However, the population seems willing to pay, as the very low vacancy rate demonstrates (see table 28 below). According to the CMHC, the market was overheating in 2019, as the number of new listings was struggling to keep up with sales growth.⁸⁶

84. A high proportion of lower-income households lower the median, but the few very high-income households raise the average. This phenomenon is typical of the large business centres where the executives of large multinational companies live. For example, downtowns with a high proportion of the public sector have a more similar median and average: The difference is \$18,000 for Ottawa and \$20,000 for Edmonton, whereas the difference is more than \$36,000 for Toronto. This is also true for Montréal (\$33,000) and Calgary (\$46,000).

85. CENTURY21 Canada, 2020. Price per square foot survey 2020. Link: <http://www.century21franchise.ca/price-per-square-foot-survey-2020/#1597778718899-d81a6b85-d91c>.

86. CMHC, 2020. Housing Market Assessment. Link: <https://www.cmhc-schl.gc.ca/fr/data-and-research/publications-and-reports/housing-market-assessment>

Table 28: Residential Real Estate Snapshot, Downtown Toronto, 2015-2019

	2015	2016	2017	2018	2019
New home market					
Construction of new units	13,661	6,759	5,654	6,975	5,392
Stock of unsold completed housing units	659	325	132	23	135
Rental market					
Average monthly rent	\$1 465	\$1 449	\$1 606	\$1 648	\$1 815
Annual change in rent	+4.5%	-1.1%	+10.8%	+2.6%	+10.1%
Vacancy rate	1.7%	1.4%	1.4%	1.3%	2.9%

Source: CMHC, Statistics Canada; PwC analysis.

Note: The definition of downtown corresponds closely to that of Statistics Canada, but includes the Rosedale neighbourhood to the northeast.

Economic function

Toronto, in particular its downtown core, is the commercial and financial capital of Canada. It is a growing financial centre in North America and one of the ten largest financial centres in the world. The downtown area is home to 38 per cent of Canada's head offices in diverse industries.⁸⁷ These include American Express Canada, the five largest Canadian banks (RBC, Scotiabank, Bank of Montréal, CIBC and TD), Bell Canada, Eaton's, Famous Players, Hewlett-Packard and IBM Canada. Downtown Toronto alone has more than 20,400 businesses, or 8.2 per cent of the entire CMA.

As a result, downtown Toronto is a major employment hub. In 2019, there were 584,660 jobs in downtown Toronto, or 37.2 per cent of the jobs in the agglomeration, with an average density of 27,320 jobs per square kilometre (table 29). In terms of GDP, downtown Toronto generated almost \$53.2 billion in 2016, representing approximately 13.8 per cent of the CMA's GDP and 7.2 per cent of the province's GDP. It is by far the largest city centre in Canada by this measure. Employment in the downtown area grew steadily between 2014 and 2019: More than 100,000 jobs were added during the period, an increase of 21.1 per cent.⁸⁸ In addition to the financial sector, which accounts for 23.1 per cent of jobs and 7.8 per cent of businesses in the downtown core (figures 24 and 25), this growth also comes from the expansion of the technology sector. In recent years, companies such as Shopify, eOne and eBay have opened locations in the city centre, making downtown Toronto a technology destination.⁸⁹

Table 29: Changes in employment in downtown Toronto and the city of Toronto

	2014	2015	2016	2017	2018	2019	Change 2014-2019
Downtown	482,710	508,640	511,370	543,530	565,220	584,660	21.1%
City of Toronto	1,384,390	1,422,280	1,400,790	1,496,250	1,522,880	1,569,800	13.4%

Source: Toronto City Planning; PwC analysis.

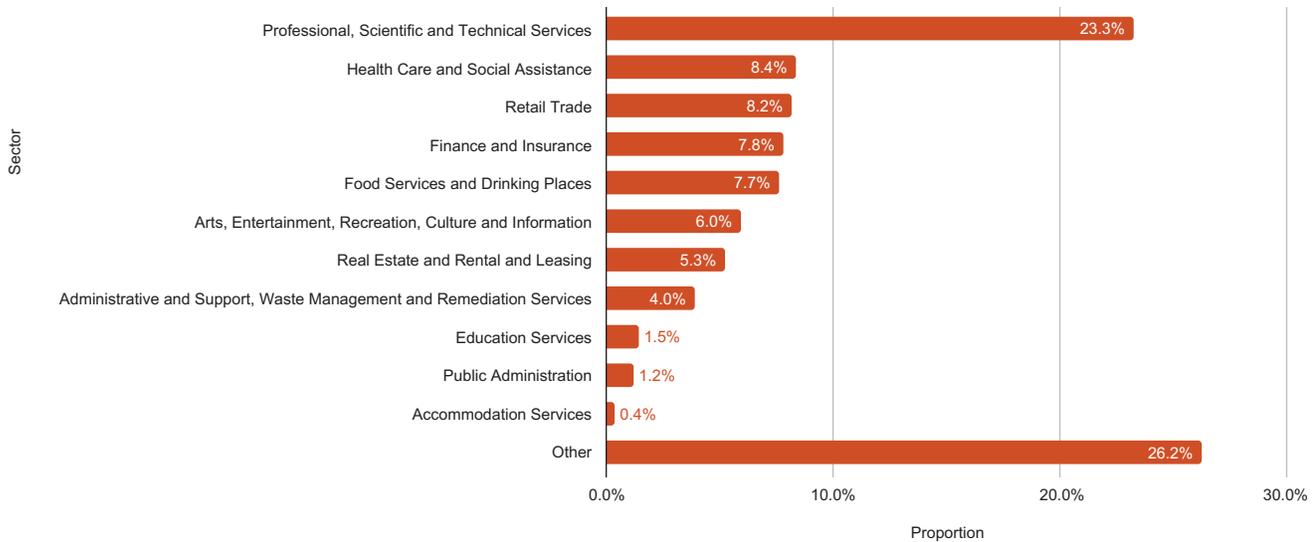
87. https://hvi.hvs.com/market/canada/Toronto_Downtown.

88. Toronto City Planning, 2019. Toronto Employment Survey 2019.

(Link: <https://www.toronto.ca/wp-content/uploads/2020/01/9453-Toronto-Employment-Survey-2019-Bulletin.pdf>).

89. CBRE.

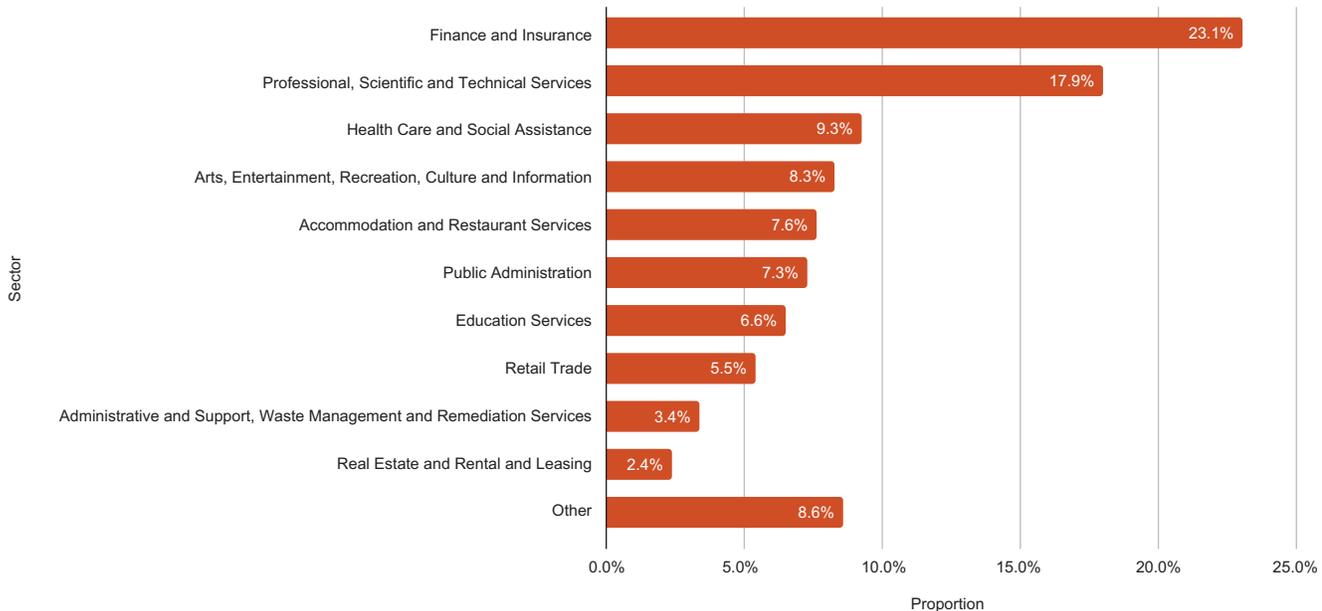
Figure 24: Proportion of businesses by sector, downtown Toronto, 2020



Source: Statistics Canada, 2020; PwC analysis.

Note: The number of businesses is the number of physical locations of any business, organization, or other corporation that has at least one employee, and either (1) has an employee workforce for which they submit payroll remittances to Canada Revenue Agency, (2) has a minimum of \$30,000 in annual revenue; or (3) is incorporated under a federal or provincial act and has filed a federal corporate income tax form within the past three years.

Figure 25: Proportion of employment by sector, downtown Toronto, 2016



Source: Statistics Canada, 2016 Census; PwC analysis.

Hubs and industrial agglomerations

Toronto is the largest financial centre in Canada and the second largest in North America after New York City. Most of the head offices of the major banks, insurers, pension funds and private equity firms are located there. Thanks to this high concentration of the financial sector, a Financial Technology (“Fintech”) hub is also located in the region: The region has approximately 190 fintech start-up companies and surpassed more than \$220 million in investment in 2018.⁹⁰

90. Toronto Finance International, Accenture and McMillan, 2019. Seizing the opportunity: Building the Toronto Region into a global fintech leader, Update 2019. Link: https://tfti.ca/files/common/BuildingTheTorontoRegionIntoAGlobalFintechLeader_UPD2019_FINAL_V6.pdf.

Real estate - offices

Economic growth in the downtown core has also contributed to a tighter downtown office rental market. In the first quarter of 2020, the downtown core had 102 million square feet of office space (Table 30). The office vacancy rate has been steadily declining in recent years, from 4.7 per cent in 2016 to 2.7 per cent in the first quarter of 2020.⁹¹ This tightening has naturally been reflected in prices, which have increased by 14.2 per cent in five years. Contractors continued to find new construction opportunities during this period to meet the high demand. Office space construction represent 7.9 per cent of the actual square feet stock in 2020.

Table 30: Office real estate snapshot, downtown Toronto, 2016-2020

	2016	2017	2018	2019	2020
Stock (square feet)	99,644,138	99,962,965	101,069,767	101,671,207	101,889,980
Vacancy rate	4.70%	3.80%	3.60%	3.00%	2.70%
Under construction (square feet)	1,742,002	1,995,867	3,465,965	6,074,431	8,054,823
Average gross rent (per square foot)	\$47.39	\$46.73	\$48.25	\$52.81	\$54.24

Source: CoStar, 2020. Data as of the first quarter for each year.

Commercial function

Downtown Toronto is home to the world's largest underground retail complex, The Path, located beneath the Financial District.⁹² This complex houses more than 1,200 shops, restaurants and cafés, covering more than 3.7 million square feet of space and generating \$1.7 billion in revenues annually. The Path connects 50 office towers, 6 hotels, 5 subway stations and several major attractions such as the Hockey Hall of Fame and the Scotiabank Arena.⁹³

The Downtown Yonge district hosts more than 700 businesses, 80 per cent of which are local SMEs. These stores cover more than 4 million square feet and are part of four shopping centres, including Toronto's Eaton Centre, the busiest shopping centre in North America. This district is renowned as a fashion destination.⁹⁴ In total, there are 1,676 stores in downtown Toronto, representing a ratio of 7.3 locations per 1,000 residents and 3.3 per 1,000 workers. These ratios are close to the average for the six city centres (8.0 and 3.5 respectively).

Commercial real estate

Commercial real estate in downtown Toronto is the second most expensive in the country, after Vancouver, with very low vacancy rates (table 31). However, contractors appear to be very active in trying to meet demand, with a large number of new constructions underway since 2018.

Table 31: Commercial real estate snapshot, downtown Toronto, 2016-2020

	2016	2017	2018	2019	2020
Stock (square feet)	24,807,735	24,672,455	24,592,619	24,718,320	24,738,531
Vacancy rate	1.90%	1.90%	1.50%	2.00%	2.00%
Under construction (square feet)	42,512	170,955	853,615	805,953	801,740
Average gross rent (per square foot)	\$44.77	\$44.65	\$51.99	\$55.56	\$56.83

Source: CoStar; Statistics Canada; PwC analysis.

Restaurants and bars

The city of Toronto is recognized as the culinary capital of Canada, with more than 7,000 restaurants and bars. Statistics Canada lists more than 1,565 restaurants, cafes and bars in the downtown area alone. The ratio of the number of restaurants and bars per 1,000 residents is 6.8, which is lower than the ratio for all downtown areas (8.9).

The analysis per 1,000 workers shows results that are similar to what is observed in all city centres (a ratio of 3.1 for Toronto and 3.7 for all city centres).

91. CBRE Research Canada. Toronto Office Snapshot: Growing Tech Companies Transform Toronto's Downtown West Office Market October 2017. Link: <https://www.cbre.ca/en/research-and-reports/Toronto-Office-Snapshot-Growing-Tech-Companies-Transform-Torontos-Downtown-West-Office-Market-October-2017>.

92. Toronto Path. Link: <https://www.torontopath.com/>.

93. The Toronto Convention and Visitors Association. Link: <https://www.seetorontonow.com/explore-toronto/neighbourhoods/financial-district-underground-city/>.

94. The Toronto Convention and Visitors Association. Link: <https://www.seetorontonow.com/explore-toronto/neighbourhoods>.

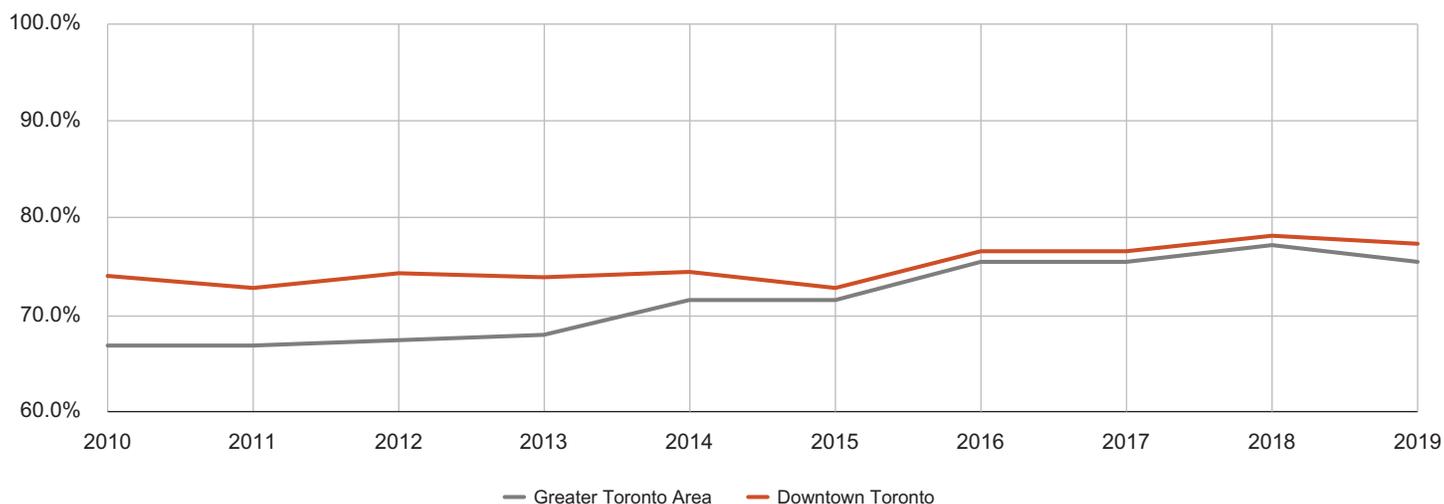
The Kensington Market district, adjacent to Chinatown, is known for its outdoor market. Downtown West is the district with the most urban and nightlife attractions. Its vitality is attributable to Toronto's entertainment, fashion and financial districts all being located in this neighbourhood.

Tourism, culture and entertainment function

The City of Toronto welcomes more than 28 million tourists a year. According to a study by *Tourism Economics*, tourism generates more than \$6.5 billion annually in direct spending, supporting 4.6 per cent of the city's jobs. Toronto is thus an internationally recognized destination. A high proportion of tourism spending is in accommodation, at 25 per cent, while 28 per cent is in restaurants and bars. Retail trade accounts for approximately 17 per cent of spending.⁹⁵

Toronto has the largest choice of accommodation in Canada, including more than 44,180 hotel rooms in the Greater Toronto Area, 38 per cent of which are located downtown.⁹⁶ As illustrated in figure 26 below, between 2010 and 2019, downtown hotels had an occupancy rate of 78 per cent, almost 3 per cent higher than the GTA as a whole.

Figure 26: Change in occupancy rates for hotels in downtown Toronto and the Greater Toronto Area, 2010-2019



Source: Province of Ontario, Ministry of Industry, Heritage, Sport, Tourism and Culture, 2020.

Downtown Toronto offers a wide choice of venues to the meeting and convention market, including the *Metro Toronto Convention Centre (MTCC)*, the *Toronto Congress Centre* and the *Energare Centre*. The MTCC hosts about 500 events annually (see table 32). In addition, the Canadian National Exhibition, the largest technology exhibition in the country, welcomes over 1.8 million visitors annually.

Table 32: Metro Toronto Convention Centre Events

	2015-2016	2016-2017	2017-2018	2018-2019
Number of events	569	569	508	493
Occupancy (%)	51%	53%	63%	57%

Source: Metro Toronto Convention Centre, Annual Report 2018-19.

95. Tourism Economics, 2019. Toronto's Visitor Economy. Link: <https://partners.seetorontonow.com/wp-content/uploads/sites/7/2019/11/Toronto-Visitor-Economy-final.pdf>

96. City of Toronto. Link: <https://www.toronto.ca/business-economy/industry-sector-support/tourism/>.

Toronto is one of the most ethnically diverse cities in the world, which contributes to the city's cultural richness. Its downtown area hosts many music festivals, along with events linked to the arts, food and other themes each year. These include the Dreams Festival, Canadian Music Week and the famous Toronto International Film Festival (TIFF). The King West Village now has the added cachet of being the host neighbourhood for TIFF, which takes place every year in September. TIFF attracts big stars for preview screenings and creates buzz throughout the neighbourhood and across the city. The festival is headquartered at the TIFF Bell Lightbox Theatre on King West, which is surrounded by sparkling new condominium buildings that reflect the urban lifestyle enjoyed by residents of this neighbourhood.

The Grange Park area, in which Chinatown nestles, is studded with bilingual English-Chinese signage. This neighbourhood, also known for its artistic side, is home to the Art Gallery of Ontario, Craft Ontario and the Ontario College of Art.

Toronto hosts several major North American sports teams, including the Maple Leafs (hockey), Raptors (basketball), and Blue Jays (baseball), whose matches play out downtown in the Entertainment District. The Rogers Centre, at which these three teams play, attracts more than six million spectators annually. Two other major sports teams, Toronto FC (soccer) and the Argonauts (football), play their games in Toronto just outside the city's downtown core.

Educational function

Two major universities have their main campuses in the downtown core: Ryerson University and the University of Toronto. There are also two smaller niche universities: OCAD, which specializes in the arts, and a campus of the US-based Northeastern University. These universities have over 110,000 students, of whom approximately 17,500 of whom hail from overseas.

The University of Toronto is internationally recognized for its health programs, ranking in the top 10 universities for many of its specialties.⁹⁷ The university has experienced 34 per cent growth in student enrolment since the 2010-2011 academic year. The relative growth in international students is even higher, at 153 per cent for the same period.⁹⁸ If this trend is generalized to other universities, even to a lesser extent, the influx of foreign students will contribute significantly to the student population and the economy of the city centre.

Ryerson University has the largest undergraduate business program in the country. The Ryerson DMZ's start-up incubator has helped create more than 430 technology companies since its inception, resulting in more than \$736 million in funding and more than 3,500 jobs.

Transport and transit function

The Toronto region, characterized by high employment density, has been investing in its public transit system for several years to reduce traffic congestion. There is a bus system, streetcar system, subway, commuter train system and a bicycle sharing service. With 75 stations, the Toronto Transit Commission (TTC) subway system serves three million passengers daily.⁹⁹ Before the pandemic, approximately 450,000 people headed downtown each day, including roughly 117,000 from outside the city. To make these trips, passengers can take the GO commuter train, which runs between Kitchener to the east, Oshawa to the west, Niagara to the south, and Barrie to the north.¹⁰⁰ The bike sharing service, Bike Share Toronto, offers more than 6,850 bicycles 24/7 in 625 stations throughout the city. Walk Score gave Toronto an excellent score of 78.2 out of 100, the best in Canada.

Toronto stands out because of its use of the various means at its disposal: 62 per cent of downtown workers commute primarily via public transit (figure 27). Downtown Toronto has the lowest use of cars as a transportation mode compared with the other inner cities studied because the road infrastructure does not allow for smooth car traffic flow due to the density of workers, which is the highest in the country, at 30,300 jobs per km².

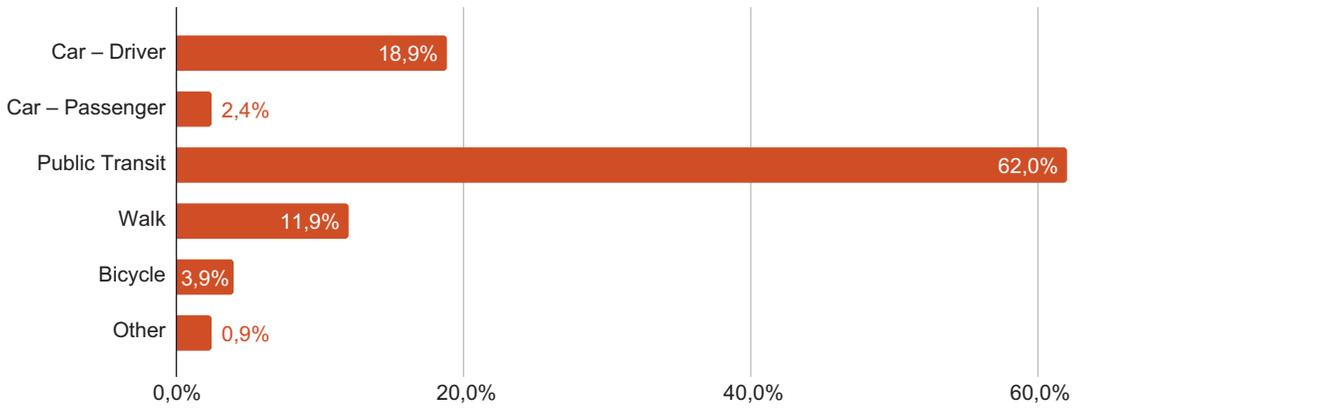
97. University of Toronto. U of T ranked top 10 internationally in six subjects: QS ranking. Link: <https://www.utoronto.ca/news/u-t-ranked-top-10-internationally-six-subjects-qs-ranking>.

98. University of Toronto. Link: <https://data.utoronto.ca/reports/facts-and-figures/>.

99. Toronto Transit Commission, 2019. Link: http://www.ttc.ca/About_the_TTC/Operating_Statistics/2019/index.jsp.

100. <https://static1.squarespace.com/static/52e56487e4b06bec4dd7898a/t/5fd28741e7add02208f9a8e7/1607632706645/Summary+of+Findings+-+Economic+Impact+of+COVID+on+Downtown+7+December+2020+FINAL.pdf>.

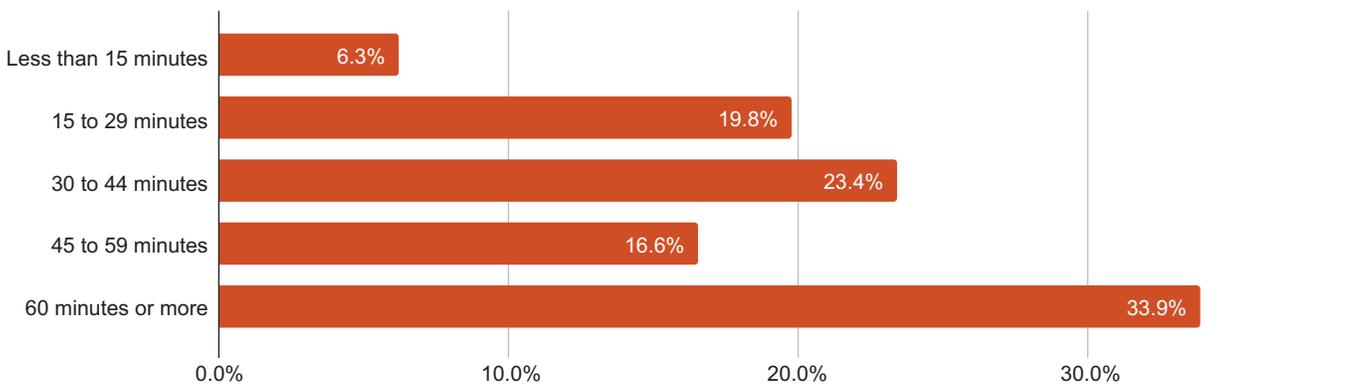
Figure 27: Primary mode of commuting to work downtown, 2016



Source: Statistics Canada, 2016 Census

Downtown Toronto has the highest proportion of people who commute to work for 30 minutes or more, at 73.9 per cent (figure 28). In addition, the proportion of workers who commute for an hour or more, at more than one-third, is by far the highest of all the city centres analyzed.

Figure 28: Commuting time from home to work, workers in downtown Toronto, 2016



Source: Statistics Canada, 2016 Census

There are two airports in the Greater Toronto Area: Toronto Pearson Airport and Billy Bishop Toronto City Airport.

Pearson is Canada's largest airport, with more than 50 million passengers in 2019. Although it is further from the downtown core, about 20 km away, infrastructure connects it to the downtown core. The *Union Pearson Express* train offers departures between downtown and the airport every 15 minutes, with a travel time of 25 minutes. Billy Bishop Toronto City Airport, which is located within the downtown core as defined by Statistics Canada, primarily serves a local clientele, with 2.8 million passengers in 2018.

Edmonton

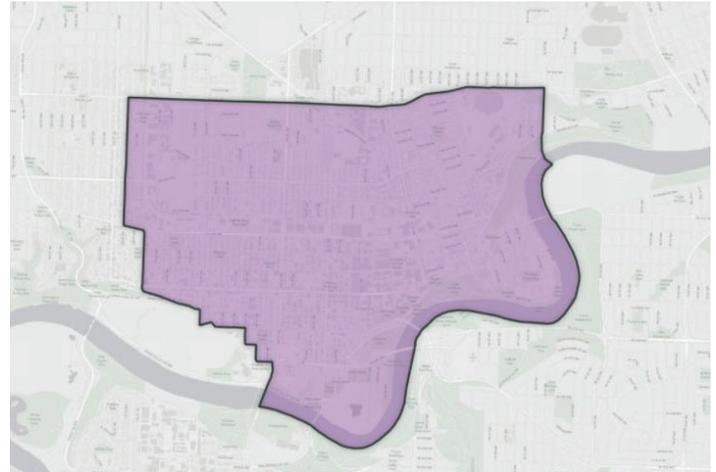
Geographical definition

Downtown Edmonton is bordered on the southwest by the River Valley Victoria, on the west by 123 Street NW, on the north by 111 Avenue NW, on the northeast by 82 Street NW, and on the south and southeast by the North Saskatchewan River.

Neighbourhoods:

- **Oliver/West End, to the west:** An old residential area with houses and residential towers. It also has several small strip shopping centres.
- **Queen Mary Park, to the northwest:** A hybrid residential neighbourhood with several stores.
- **Central McDougall, to the north:** A hybrid district, very residential, but also home to many businesses, a school, and a hospital.
- **McCauley, to the northeast:** A neighbourhood undergoing revitalization. It owes popularity to its proximity to the central core, and hosts several small ethnic businesses.
- **Boyle Street/Downtown East Side, to the east:** Formerly downtown Edmonton, an old industrial area with several old buildings.
- **Riverdale, to the east:** River valley neighbourhood with historical allure, features a small church and cottages.
- **Downtown core, in the centre:** The hub of business, arts and festivals. Includes Sir Winston Churchill Square.
- **Rossdale to the south:** A river valley residential area with historical appeal and old houses.

Downtown Edmonton



Source: Statistics Canada.

Residential function Demography

In 2016, Statistics Canada reported a population of 52,085 people living in the downtown core, forming 31,400 households, or 5.6 per cent of the total population of the city. Downtown Edmonton has several hybrid neighbourhoods, which combine residential and commercial functions. The Downtown Core is the main business district, where the office towers are located.

Households in the City of Edmonton have a fairly high annual income compared with other major Canadian cities, at almost \$121,620 on average. This is notably due to the presence of the public sector, which offers stable but competitive salaries for both professional and support staff (administrative assistants, maintenance, clerical, etc.).¹⁰¹ However, this high household income may also reflect the low proportion of one-person households, at 54.5 per cent. In fact, annual incomes in the downtown core are fairly close to the average for the other downtown areas. The proportion of one-person households is also in the middle range. However, the population is younger than that of the city as a whole, which may partly reflect the presence of young professionals and students. Residents' level of education is the lowest of the six city centres: only 48.4 percent of the population aged 25 to 64 has a university education (table 33).

101. Toronto Star, 2019. Rich Calgarians make way more than rich Edmontonians - but it is opposite for those in the lower-income groups. Link: <https://www.thestar.com/calgary/2019/09/25/rich-calgarians-make-way-more-than-rich-edmontonians-unless-youre-in-the-lower-income-group.html>.

Table 33: Demographic portrait of residents of Edmonton and its downtown, 2016

Demographic characteristics	City	Downtown
Population	932,546	52,085
Population density per square kilometre	1,360.9	4,540.6
Proportion of the population between 15 and 64 years	70.3%	81.7%
Proportion of one-person households	27.2%	54.5%
Proportion of owner households	64.3%	27.5%
Median annual gross household income*	\$87,225	\$57,484
Average annual gross household income*	\$112,619	\$77,681
Unemployment rate	8.8%	8.5%
Proportion of 25-64 year olds with a university certificate or degree	38.2%	48.4%
Proportion of immigrants	29.4%	30.7%

Source: Statistics Canada, 2016 Census data.

* In 2015 dollars.

Residential real estate

Neighbourhoods on the periphery of Edmonton's downtown business core have a strong residential presence. Some neighbourhoods are made up of single-family homes, which differentiates Edmonton from the other downtowns studied. There has been little construction activity in recent years compared with other downtowns, and a growing proportion of new construction is slow to sell. Rents are also lower. The combination of lower rents and relatively high vacancy rates implies lower demand. One reason for this is the much lower density of residents in downtown Edmonton compared with the other major centres.

The city centre's situation reflects that of the rest of the CMA. According to CMHC, the housing market in the Edmonton area remained very quiet in late 2019 and early 2020. In fact, real resale prices (including inflation) decreased by 3.5 per cent between 2018 and 2019, even though the demographic segment of 25 to 35-year-olds, who are generally the most frequent buyers, increased in the region.¹⁰² This is also reflected in the increasing number of unsold new units (Table 34).

102. CMHC, 2020. Housing Market Assessment, Edmonton CMA Q1 2020. Link: <https://assets.cmhc-schl.gc.ca/sites/cmhc/data-research/publications-reports/housing-market-assessment/2020-q01/housing-market-assessment-edmonton-68603-2020-q01-fr.pdf?rev=ba65e2a1-a909-4b7a-a6ff-ac3b0a93eac5>.

Table 34: Residential real estate snapshot, downtown Edmonton, 2015-2019

	2015	2016	2017	2018	2019
New home market					
New units built	182	1,062	735	224	409
Stock of unsold new buildings	1	6	1	63	87
Rental market					
Average monthly rent	\$1,154	\$1,126	\$1,145	\$1,184	\$1,181
Annual change in rents	2.9%	- 2.4%	1.7%	3.4%	- 0.3%
Vacancy rate	3.6%	7.0%	7.1%	5.4%	5.7%

Source: CMHC, 2020.

Note: CMHC's geographic boundary excludes the north-central area, which is the rectangle formed by 121 Street NW to the west, 111 Avenue NW to the north, 101 Street NW to the east, and 104 Avenue NW to the south. The two districts concerned are Queen Mary Park and Central McDougall.

Economic function

In 2016, there were 92,730 jobs in the downtown area. According to Statistics Canada, there are more than 3,990 businesses in the inner city, or 7.7 per cent of the total number in the CMA. In terms of GDP, Edmonton's downtown generated approximately \$11.4 billion in 2016, representing 13.2 per cent of the CMA's GDP and 3.9 per cent of the provincial GDP.

Although the suburbs of Edmonton have many oil refineries and pipelines, Canada's petroleum business centre is primarily in Calgary. Economically, Edmonton is usually associated with the activities of the Government of Alberta, which is located primarily in the downtown core. The City of Edmonton also had between 10,000 and 15,000 employees during the year. As figure 29 below shows, almost 24 per cent of employment is in public administration. The city's universities and colleges also generate many jobs, particularly with the presence of MacEwan University in the downtown core, which has over 30,000 students.

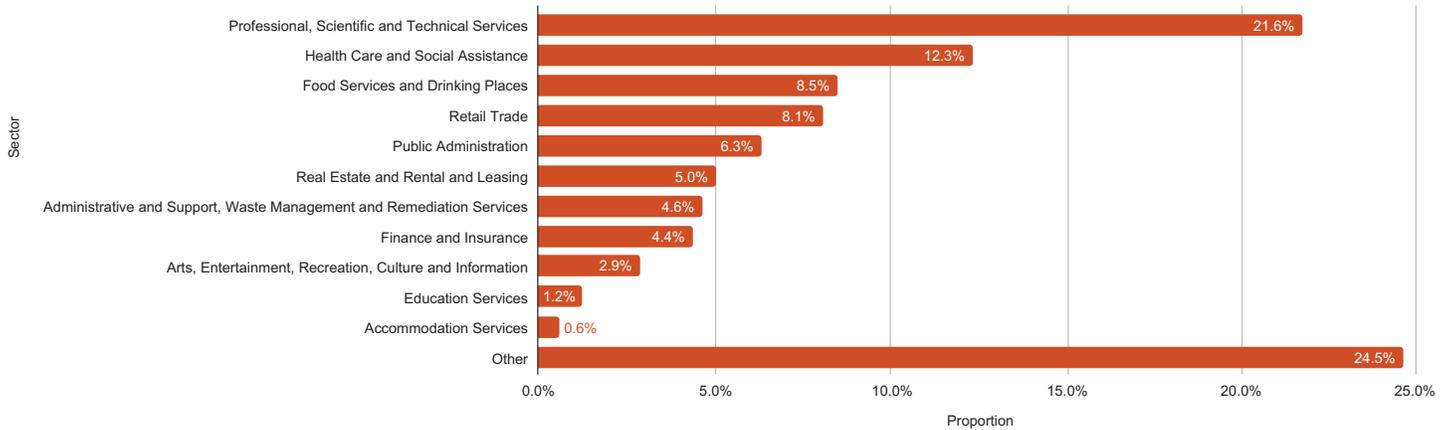
A recent Statistics Canada publication on commuting in major Canadian cities reports that Edmonton recently experienced the second largest decline in the proportion of its jobs located within five kilometres of the city centre, from 38.2 per cent to 30.2 per cent between 1996 and 2016.^{103,104} This trend is noticeable for five of the six city centres studied, and suggests that the inner city periphery and other neighbourhoods and suburbs are becoming increasingly attractive to employers. The affordability of office space on the outskirts of the city centre is often cited as the main reason for locating there. Another possible reason is to offer employees the opportunity to live closer to work and benefit from more affordable residential rents.

On the tax front, Edmonton has introduced a tax on new construction to generate revenue to reinvest in public assets in the neighbourhood where construction takes place, known as the *Community Revitalization Levy*. This tax is an attempt to balance municipal finances while providing an incentive for real estate developers to invest in a neighbourhood that will be revitalized in turn.

103. Statistics Canada, 2019. 2016 Census Results: Commuting in Canada's Major Cities. Link: <https://www150.statcan.gc.ca/n1/pub/75-006-x/2019001/article/00008-fra.htm>.

104. Note that a downtown core, in this report, is defined as a five-kilometre radius from City Hall. This definition, which differs from the rest of the analysis, does not, however, detract from it; the conclusions are relevant.

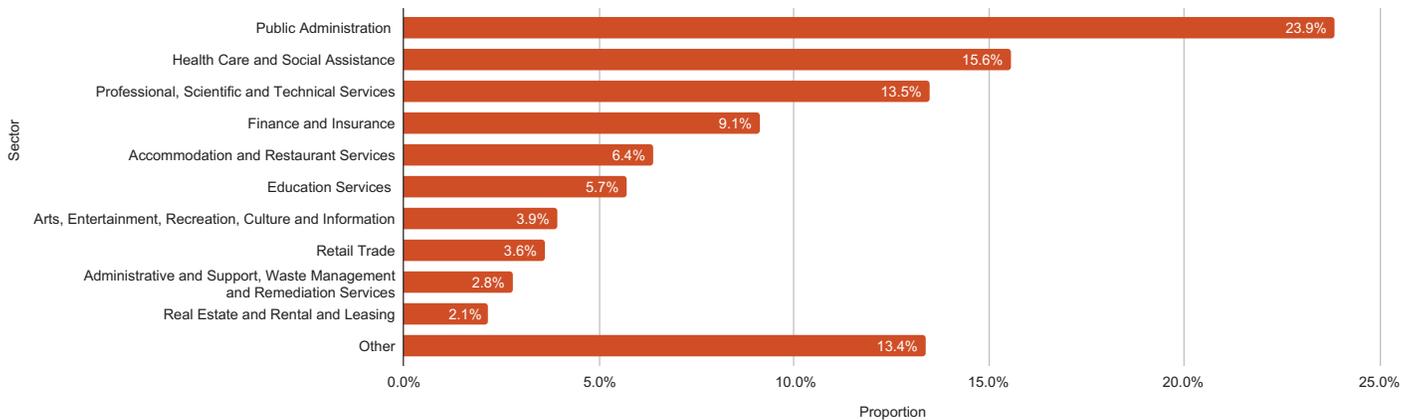
Figure 29: Proportion of businesses by sector, downtown Edmonton, 2020



Source: Statistics Canada, 2016 Census

Note: The number of businesses is the number of physical locations of any business, organization, or other corporation that has at least one employee, and either (1) has an employee workforce for which they submit payroll remittances to Canada Revenue Agency; (2) has a minimum of \$30,000 in annual revenue; or (3) is incorporated under a federal or provincial act and has filed a federal corporate income tax form within the past three years.

Figure 30: Proportion of employment by sector, downtown Edmonton, 2016



Source: Statistics Canada, 2016 Census

Hubs and business agglomerations

A new artificial intelligence hub has recently been developed in Edmonton. The hub is powered by a supercomputer from the University of Alberta, one of the world's leading artificial intelligence schools and creator of the Amii (Alberta Machine Intelligence Institute) in 2002. In 2017, the university joined forces with DeepMind, a research centre owned by Google, based in London, England, which opened an office in downtown Edmonton.¹⁰⁵ Note that the hub also has some players that are outside of the downtown core, south of the North Saskatchewan River, surrounding the main University of Alberta campus.

Real estate - offices

Downtown Edmonton is smaller than the other downtowns analyzed. There has been little new office tower construction in the last two years following strong activity between 2016 and 2018. Even so, rents remain relatively affordable in an attempt to fill vacant space (table 35). This reflects, among other things, the trend described above, which assumes that a growing proportion of employers are moving to the outskirts of city centres. One of the main reasons for this slowdown is the difficulties of Alberta's petroleum industry. However, the presence of the Government of Alberta, with its long-term leases, reinforced the stability of the downtown office building sector.

105. Edmonton.AI, 2021. Link: <https://edmonton.ai/#about>.

Table 35: Office real estate snapshot, downtown Edmonton, 2016-2020

	2016	2017	2018	2019	2020
Stock (square feet)	19,947,511	20,497,511	20,978,290	21,567,742	21,410,742
Vacancy rate	6.40%	10.80%	11.90%	9.60%	10.50%
Under construction (square feet)	1,880,282	1,396,476	778,476	10,560	10,560
Average gross rent (per square foot)	\$37.87	\$37.29	\$34.51	\$37.04	\$36.63

Source: CoStar, 2020.

Note: Data as of the first quarter for each year. Data include all classes of buildings. CoStar's geographic delineation partially differs from that of Statistics Canada and CMHC.

Commercial function

There are five shopping centres in downtown Edmonton: Oliver Square, Edmonton City Centre, Commerce Place, Brewery District and Manulife Place. The inner city has a very high level of retail sales per capita compared with other city centres. This can be explained in particular by a high level of household income, but also by the presence of the largest shopping centre in North America, West Edmonton Mall, ranked fifth in the world in terms of area.¹⁰⁶ It features two hotels, an ice skating rink, a water park and more than 800 stores. It also has the largest parking lot in the world, with parking for over 20,000 vehicles. However, this shopping centre is not located in the downtown area, but just a few kilometres west of the study limits.

In the downtown area, Statistics Canada currently counts 322 retail businesses, which represents a ratio of 6.2 per 1,000 residents and 3.5 per 1,000 workers. The ratio per resident is the lowest among the six downtowns studied. In contrast, the ratio for workers is the second highest.

The main shopping street in downtown Edmonton is Jasper Avenue. The segment that runs through the downtown business core connects several large office towers and businesses, which rely on the traffic of workers in the neighbourhood. The segment further west of Jasper Avenue that passes through the Oliver neighbourhood is home to several commercial and residential buildings. Jasper is currently undergoing revitalization, following a redevelopment plan launched by the city in 2015. The goal is to make the arterial roadway more pleasant, accessible and safe for pedestrians and cyclists.¹⁰⁷ 97 Street and 107 Avenue also have a significant commercial presence.

Commercial real estate

The economic slowdown related to the difficulties in the petroleum sector in the Canadian Prairies is also being felt in the commercial space. As illustrated in table 36 below, there has been relatively little new construction in the last five years, vacancy rates have increased and rents have declined.

Table 36: Commercial real estate snapshot, downtown Edmonton, 2016-2020

	2016	2017	2018	2019	2020
Stock (square feet)	2,050,590	2,050,590	2,055,909	2,143,670	2,143,670
Vacancy rate	2.50%	8.20%	5.30%	3.80%	6.80%
Under construction (square feet)	-	93,080	87,761	-	88,000
Average gross rent (per square foot)	\$26.18	\$17.17	\$15.66	\$16.46	\$11.14

Source: CoStar, 2020.

Note: Data as of the first quarter for each year. Data include all classes of buildings. CoStar's geographic delineation partially differs from that of Statistics Canada and CMHC.

106. Traveler Master, 2020. 3 Biggest Shopping Malls in North America. Link: <https://travelermaster.com/3-biggest-shopping-malls-in-north-america/>.
 107. City of Edmonton, 2021. Jasper Avenue New Vision. Link: https://www.edmonton.ca/projects_plans/downtown/jasper-avenue-new-vision.aspx.

Restaurants and bars

Statistics Canada counts roughly 340 restaurants and bars in the downtown core, which places Edmonton last in terms of the number of restaurants per 1,000 workers, at a ratio of 6.5. In contrast, the ratio per 1,000 residents (3.7) places Edmonton at the average of all the downtown areas studied. Bündok, located in downtown Edmonton, ranks 50th on the list of Canada's 100 Best restaurants.

Tourism, culture and entertainment Function

According to 2014 data, the Edmonton area attracts approximately 7 million tourists annually, representing more than \$1.3 billion in tourism expenditures. The Edmonton Convention Centre and Edmonton EXPO Centre generate more than \$113 million in economic benefits annually through the nearly 800 events that they host.

Edmonton is known as the last large city before the great Canadian north, especially Yellowknife and the Northwest Territories, and was dubbed the *Gateway to the North*. Thus, many tourists stop in Edmonton before continuing their journey north, which generates traffic. Its proximity to Jasper National Park also contributes to the number of international visitors to Edmonton.

Edmonton also has two professional sports teams, the Edmonton Oilers (hockey) and the Edmonton Eskimos (football), both based in the downtown core. Rogers Place, home of the Oilers, attracts more than three million people annually to its events.

The hotel sector has seen its occupancy rate decline due to the economic slowdown in the city in recent years, and more broadly because of the downturn in the region. The occupancy rate in inner city hotels hovered around 60.9 per cent at the end of the third quarter of 2019, according to CBRE, a sharp decline compared with 2018 (64.8 per cent occupancy).

Educational function

There are two universities in Edmonton, the University of Alberta and MacEwan University, in addition to Norquest College. Collectively, over 92,000 students attend these three institutions. Located south of the North Saskatchewan River, the University of Alberta is not in the downtown core, but its 40,000 students can still contribute to downtown traffic.

According to QS rankings, the University of Alberta is recognized worldwide for its health sciences programs, primarily in nursing and sports science programs. In addition, the university is renowned for its programs related to mining and petroleum extraction.¹⁰⁸ Maclean's says that MacEwan University stands out for its social work programs.¹⁰⁹

Transport and transit function

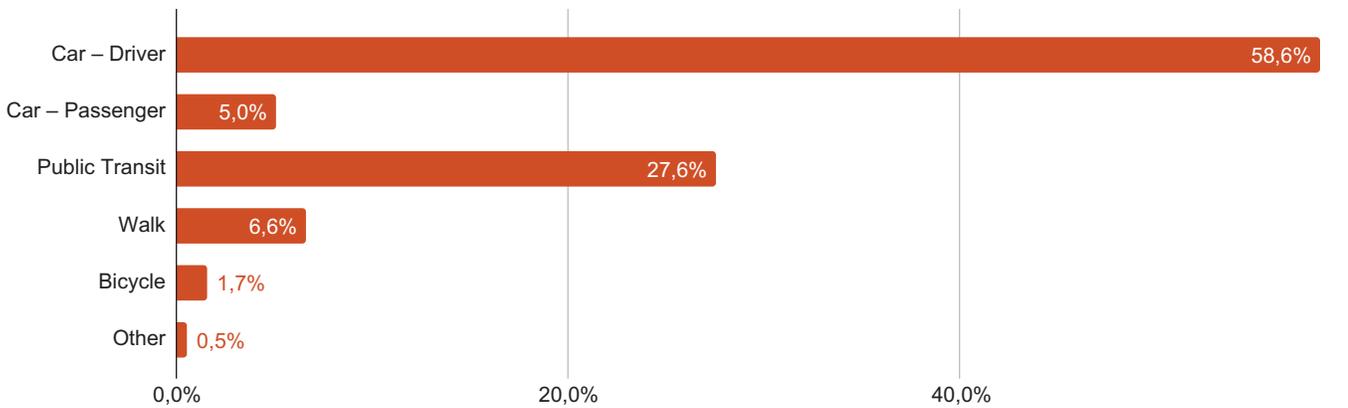
Edmonton has a light rail system with two lines in operation. A third line has been under construction since 2016 and should be completed in 2021. The city is also served by a bus network, to which a fleet of 40 electric buses was recently added. The downtown area also boasts a 7.8 km bike path network. WalkScore gives Edmonton a low score of 48.6 out of 100, the worst of the six cities surveyed.

In 2016, people working in downtown Edmonton were mostly likely to travel to work by car, compared with the other downtowns in the study, with a usage rate of over 58 per cent (see figure 31). The large number of low-cost parking spaces in the downtown area also motivates this choice. In addition, major arterial roads make it easier to travel by car. The employment density in downtown Edmonton, by far the lowest of the six downtowns studied, with about 8,000 jobs per km², may have reduced traffic congestion and thus dampened the sense of urgency to invest in the transition to other transportation modes.

108. <https://www.topuniversities.com/universities/university-alberta>.

109. <https://www.macleans.ca/schools/macewan-university/>.

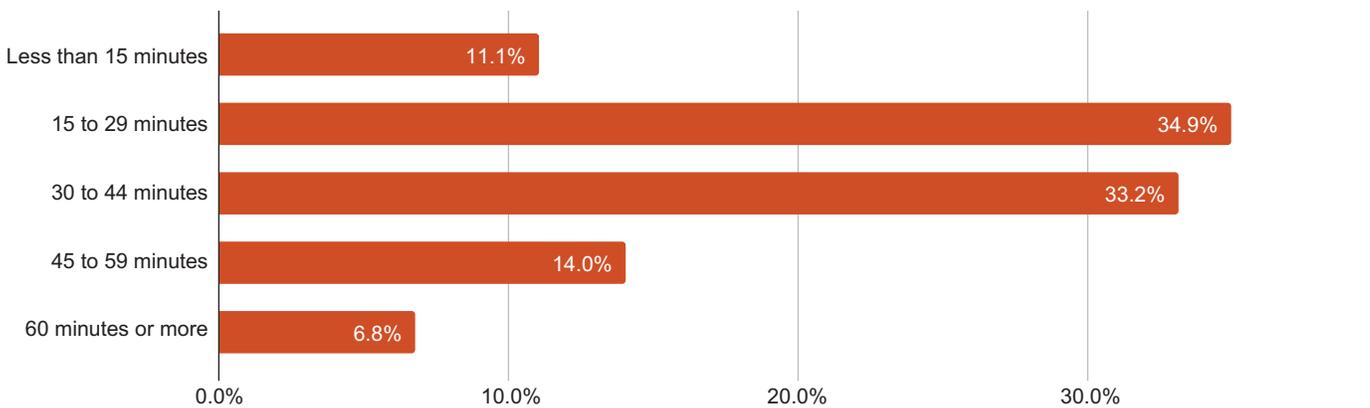
Figure 31: Primary mode of commuting to work, downtown, 2016



Source: Statistics Canada, 2016 Census

Workers in Edmonton’s inner city are characterized by the lowest proportion of people who must travel for 30 minutes or more to get to work, at 54.0 per cent (figure 32). The proportion of workers who commute to work for an hour or more, at 6.8 per cent, is also the lowest of all of the downtowns studied. This could be explained by easier access to the city centre by car, as also reflected in the high modal share of automobiles described above.

Figure 32: Commuting time from home to work, workers in downtown Edmonton, 2016



Source: Statistics Canada, 2016 Census

Finally, Edmonton’s airport, on the outskirts of the city, serves more than 7.6 million passengers annually.

Calgary

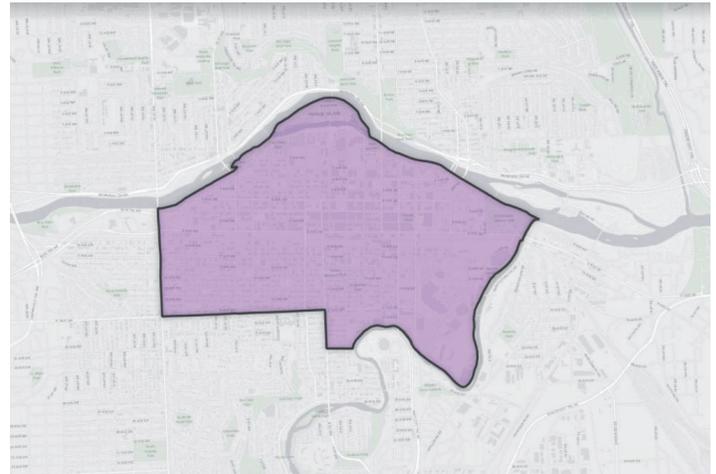
Geographic definition

Downtown Calgary is bordered on the west by 14 Street Southwest, on the north by the Bow River, on the east and southeast by the Elbow River, and on the south by 17th Avenue Southwest.

Neighbourhoods:

- **Downtown West End, to the west:** Largely residential with high-rise condominium and apartment towers.
- **Eau Claire, to the north:** This formerly industrial neighbourhood has been revitalized and now includes a market and parks where several festivals are held, such as the Calgary Folk Music Festival.
- **Beltline/Connaught:** Hybrid neighbourhood with several condos, apartments, offices and shops, and a vibrant nightlife.
- **Victoria Park:** A small, trendy neighbourhood just north of Calgary's sports and event stadiums. It abounds with designers and decorating shops, and features several cafés, restaurants and bars.
- **East Village:** This neighbourhood has been revitalized since the 2000s and now hosts several high-rise condominium towers. It is home to the National Music Centre and the Calgary New Central Library.
- **Chinatown, to the northeast:** An ethnically dense neighbourhood that includes the Chinese Cultural Centre, the largest of its kind in North America.

Downtown Calgary



Source: Statistics Canada.

Note

The portrait presented for downtown Calgary must be interpreted in its context and within the limits of the data available at the time of writing this report. Remember that most of the analysis is based on census data released in 2016. Yet Calgary, the center of Canada's petroleum industry, has been affected in recent years by falls in oil prices and the difficulties that have been felt through the different links in the supply chain. Therefore, the sections on demography and employment should be interpreted with caution: if the data presents a relatively favorable situation, updated data could lead to different conclusions.

Residential function Demography

In 2016, Statistics Canada reported 36,565 people living in the downtown core, forming 28,110 households, or 3.0 per cent of the total population of the city. In terms of population, Calgary is the fourth most populous city in Canada (after Toronto, Montréal and Vancouver). However, in terms of area, it is larger than each of these cities, giving it a less dense character. This can create challenges in developing a strong sense of community.¹¹⁰ All the same, Calgary is the only city in this study with a much higher proportion of immigrants in its downtown area than the city as a whole.

The City of Calgary has been investing in the revitalization of its downtown core for several years to maintain its attractiveness. Several notable projects have been initiated, including the Eau Claire Promenade, the Jaipur Bridge replacement, the 5 St. S.W. crossing and the Stephen Avenue project.

Calgary benefits from the high proportion of the population aged 15-64 years, the highest proportion among all the downtowns studied (table 37). In addition, more than half of the households are composed of only one person, reflecting the presence of young professionals. Nonetheless, there is a lower proportion of youth under age 14, suggesting that families are less likely to settle downtown than in the rest of the city. Finally, 65.9 per cent of residents aged 25 to 64 have a university degree.

110. Ernst & Young, 2010. Economic Impact Assessment of the Rivers District Revitalization in Calgary. (Link: file:///C:/Users/rbegin001/Downloads/Rivers-District-Final-Report-Jan-25.pdf).

Calgary is also one of the wealthiest large cities in the country, with an average household income of \$137,333. This is largely due to the presence of the oil industry and its executives. The downtown core is also the wealthiest in the country, with an average household income of \$116,000. Nevertheless, there is a significant difference between the median and the average, which indicates a relatively unequal distribution of income, even more marked than in Toronto and Montréal.

Table 37: Demographic portrait of residents of the City of Calgary and its downtown, 2016

Demographic characteristics	City	Downtown
Population	1,239,220	36,565
Population density per square kilometre	1,501.1	6,140.5
Proportion of the population between ages 15 and 64 years	70.5%	84.5%
Proportion of one-person households	24.5%	55.5%
Proportion of owner households	71.5%	30.5%
Median annual gross household income*	\$97,334	\$70,282
Average annual gross household income*	\$137,333	\$116,171
Unemployment rate	9.5%	8.1%
Proportion of 25-64 year olds with a university certificate or degree	45.6%	65.9%
Proportion of immigrants	30.9%	35.6%

Source: Statistics Canada, 2016 Census data.

* In 2015 dollars.

Residential real estate

Population gains have powered increases in the housing supply. The downtown area has added nearly 1,000 dwellings between 2018 and 2019 (table 38). The downtown residential vacancy rate of 3.4 per cent is slightly lower than the citywide rate of 3.9 per cent. Monthly rents have increased slightly in the last two years, but less than in the other major centres under study.¹¹¹

According to CMHC's latest Housing Market Assessment report, the Calgary CMA has a fairly stable housing market. Moderate signs of overbuilding have been detected: New housing inventories have remained high. The buyer-friendly market maintained downward pressure on housing prices, resulting in weak signs of overheating and accelerating prices. In general, house prices are in line with prices driven by market fundamentals. In the labour market, as the unemployment rate continued to decline to 7.1 per cent in the third quarter of 2019, real personal disposable income lost some of its gains from the beginning of the year: It declined 3.0 per cent between the second and third quarters of 2019. In addition, slow population growth among people ages 25 to 34, the first-time homebuyer cohort, continued to weigh on housing demand. The growth of this cohort has been slowing year over year since the third quarter of 2017, which partly explains the weaker demand for housing.¹¹²

111. City of Calgary, 2019. State of Downtown Calgary, 2019.

Link: <https://www.calgary.ca/pda/pd/downtown-calgary/state-of-downtown-report.html>.

112. Canada Mortgage and Housing Corporation, T1-2020. Housing Market Assessment, Calgary CMA. Link: <https://assets.cmhc-schl.gc.ca/sites/cmhc/data-research/publications-reports/housing-market-assessment/2020-q01/housing-market-assessment-calgary-68599-2020-q01-fr.pdf?rev=05660aef-a065-4bfa-9259-f44cee3a67b7>.

Table 38: Residential real estate snapshot, downtown Calgary, 2015-2019

	2015	2016	2017	2018	2019
New home market					
Construction of new units	582	1,097	752	276	752
Stock of unsold new buildings*	-	82	228	130	83
Rental market					
Average monthly rent	\$1,242	\$1,165	\$1,127	\$1,144	\$1,166
Annual change in rents	-3.5%	-6.2%	-3.3%	1.5%	1.9%
Vacancy rate	6.9%	6.3%	5.8%	3.7%	3.4%

Source: CMHC; PwC analysis.

Note: CMHC's geographic boundary excludes the Beltline/Connaught neighbourhood in the south-centre, but includes a small rectangle bordered by 214 Street SW to the west, 17 Avenue to the south, 14 Street SW to the east, and the Bow River to the north.

* The inventory of unsold new buildings in 2014 and 2015 was 0, so the annual change cannot be calculated as a percentage. The average annual change in the last column therefore reflects annual changes between 2016 and 2019 only.

Economic function

With the exception of 2009, Calgary experienced 24 years of sustained economic growth from 1990 to 2014. Between 2004 and 2014, the city's gross domestic product increased by nearly 45 per cent, largely driven by rising oil prices. However, the rapid decline in oil prices starting in 2014 has hampered growth. As a result, the City of Calgary, and particularly its downtown core, was facing significant economic challenges long before the COVID-19 crisis. In 2016, the GDP of downtown Calgary was approximately \$24.4 billion, representing 24.1 per cent of the CMA's GDP and 8.3 per cent of the province's GDP, the highest proportion among all the city centres examined. The importance of Calgary's oil sector is undeniable.

In 2016, Statistics Canada counted just over 137,000 jobs in downtown Calgary, 23.2 per cent of which are in the resource extraction industry (figure 33). Compared with the other downtowns studied, Calgary experienced the largest decrease in the proportion of its workforce located in the downtown area relative to the rest of the city, from 49 per cent to 38 per cent between 1996 and 2016. This trend is also seen in households, with a greater proportion moving to the outskirts of the downtown core. Thus, employers and residents had already begun to leave the downtown core before the pandemic. As for businesses, according to Statistics Canada, there are more than 6,000 businesses in the downtown area, or 10.2 per cent of the total number in the CMA. The natural resource extraction industry is strongly represented, with 8.1 per cent of the total number (figure 34). This is in contrast to the other downtowns analyzed, for which this industry accounts for less than 1 per cent of the total, except for Vancouver, at 2 per cent.

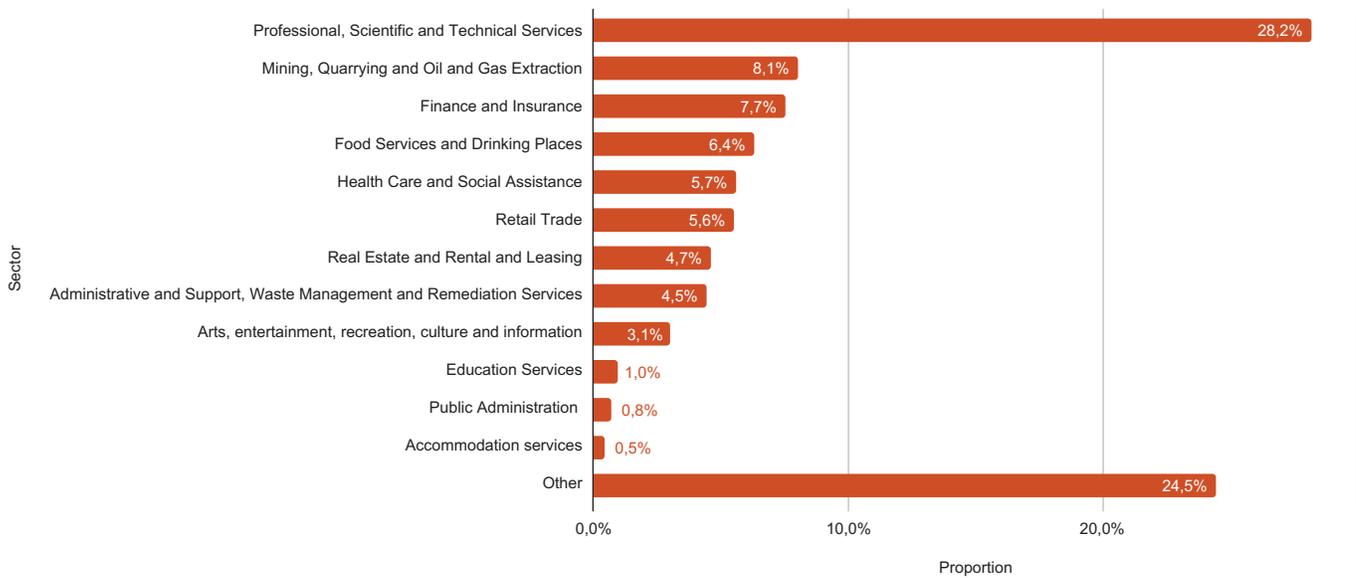
Faced with the consequences of the weak diversity of its economy, the City of Calgary adopted a strategy in 2018 to develop a new vision "Calgary in the New Economy, the Economic Strategy for Calgary."

Given the significant impacts of the oil sector crisis on the vitality of the downtown core, this initiative incorporates a strategy specific to the inner city. Thus, even before the crisis, the City of Calgary had already made efforts to boost the attractiveness of its downtown core.

In recent years, Calgary has had the highest number of head offices per resident in Canada, and 73 per cent of these head offices are energy and petroleum service companies, according to Calgary Economic Development.¹¹³

113. <https://www.cbc.ca/news/canada/calgary/road-ahead-calgary-post-covid-aid-1.5549965>.

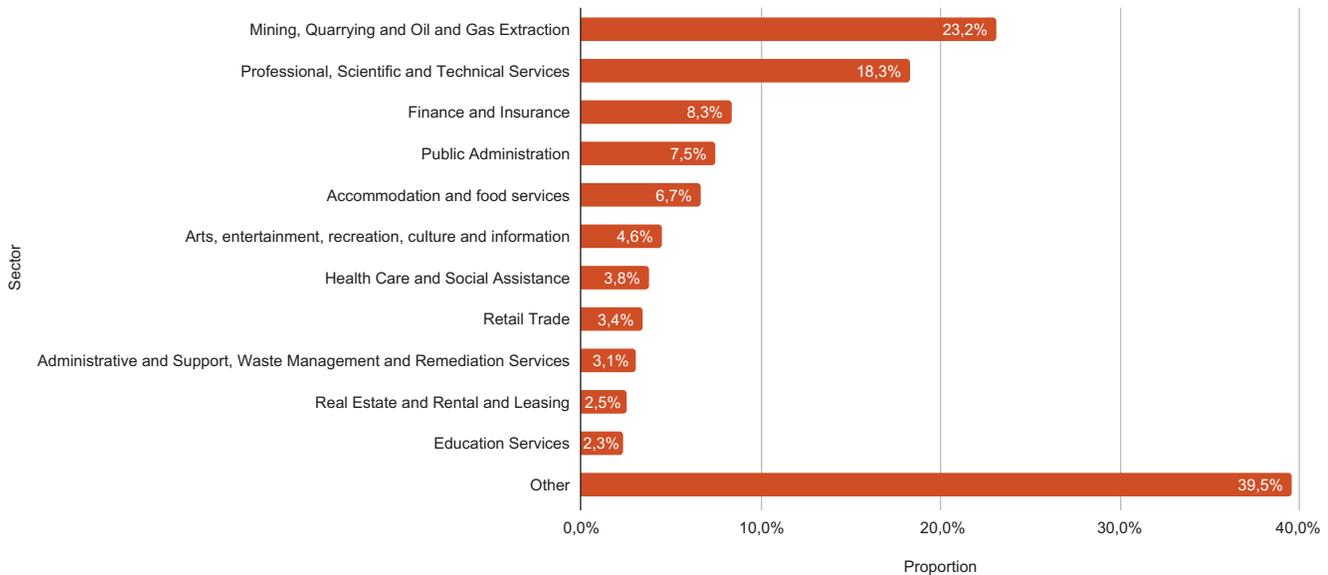
Figure 33: Proportion of businesses by sector, downtown Calgary, 2020



Source: Statistics Canada, 2020; PwC analysis.

Note: The number of businesses is the number of physical locations of any business, organization, or other corporation that has at least one employee, and either (1) has an employee workforce for which they submit payroll remittances to Canada Revenue Agency, (2) has a minimum of \$30,000 in annual revenue; or (3) is incorporated under a federal or provincial act and has filed a federal corporate income tax form within the past three years.

Figure 34: Proportion of employment by sector, downtown Calgary, 2020



Source: Statistics Canada, 2016 Census

Hubs and industrial agglomerations

Nevertheless, the strong presence of the oil industry has stimulated innovation in the technologies related to this industry over the years. For example, the Southern Alberta Institute of Technology (SAIT) recently announced a \$30 million investment to launch a new branch of the digital technology sector, the School for Advanced Digital Technology, which will have its campus in the downtown core and will train 1,500 technology employees over the next five years. In 2019, Calgary start-ups raised more than \$136 million in venture capital. There are currently more than 270 technology start-ups in the city.¹¹⁴

Real estate - offices

The weak performance of the energy sector in recent years has prompted companies to leave the downtown area. Between 2016 and the first quarter of 2020, the vacancy rate climbed from 12.2 per cent to 19.5 per cent (Table 39). Prior to 2018, the downtown area experienced a strong wave of new office construction, but demand did not follow. The number of square feet of office space per downtown resident is about four times that of the other city centres under study.

Declining demand has led to a reduction in the value of downtown towers of approximately \$14 billion since 2015.¹¹⁵ This means that the tax that the city can collect on the towers has also fallen, by hundreds of millions of dollars.

Table 39: Real estate snapshot - offices, downtown Calgary, 2016-2020

	2016	2017	2018	2019	2020
Stock (square feet)	57,296,593	59,029,473	60,987,029	60,925,225	61,408,389
Vacancy rate	12.20%	17.50%	18.70%	16.70%	19.50%
Under construction (square feet)	4,192,971	2,489,805	483,164	483,164	0
Average gross rent (per square foot)	\$41.82	\$35.73	\$33.85	\$30.23	\$30.21

Source: CoStar, 2020.

Note: Data as of the first quarter for each year. Data include all classes of buildings. CoStar's geographic delineation partially differs from that of Statistics Canada and CMHC.

Commercial function

According to Statistics Canada, there are 360 retail businesses in the downtown core. The city's main commercial artery, 17 Avenue, is home to over 400 fashion stores, restaurants, bars, coffee shops and green spaces. The Victoria Park neighbourhood, currently under revitalization, has over 350 businesses.¹¹⁶ The main downtown shopping centre, the Core Shopping Centre, has approximately 160 retailers.¹¹⁷ Several other shopping centres are located elsewhere in the city. Downtown Calgary stands out with the highest ratio of stores per 1,000 residents, at 9.9. However, it has the second-lowest ratio of locations per worker, at 2.6.

114. CBC, 2020. Let's face reality about Calgary's potential as a tech hub.
Link: <https://www.cbc.ca/news/canada/calgary/road-ahead-calgary-potential-tech-hub-1.5804193>.

115. CBC, 2020. Calgary, already bloodied, now requires more help than other cities.
Link: <https://www.cbc.ca/news/canada/calgary/road-ahead-calgary-post-covid-aid-1.5549965>.

116. Life in Calgary. Link: <https://www.lifeincalgary.ca/recreation/shopping>.

117. The CORE Shopping Center. Link: <https://www.coreshopping.ca/stores>.

Commercial real estate

Downtown Calgary has a number of areas with a significant commercial offering. The average price per square foot of \$20.11 (table 40) is well below the average for the other downtowns studied. However, the rate of construction is higher, indicating the vitality of the downtown area.

Table 40: Commercial real estate snapshot, downtown Calgary, 2016-2020

	2016	2017	2018	2019	2020
Stock (square feet)	5,083,906	5,083,906	5,077,604	5,283,020	5,281,838
Vacancy rate	3.40%	6.30%	5.60%	5.60%	4.80%
Under construction (square feet)	-	90,000	375,416	179,247	194,508
Average gross rent (per square foot)	\$31.25	\$26.93	\$25.07	\$19.89	\$20.11

Source: CoStar, 2020.

Note: Data as of the first quarter for each year. Data include all classes of buildings. CoStar's geographic delineation partially differs from that of Statistics Canada and CMHC.

Restaurants and bars

Calgary's culinary scene and nightlife are strong. For example, the top 13th and 14th restaurants in the country, as ranked by *Canada's 100 Best*, are situated downtown.¹¹⁸ In contrast, the inner city has the fewest number of restaurants per 1,000 workers, at 2.9. The ratio of restaurants per resident, however, ranks second, at 11.2. Calgary also has several local produce markets, but none are located in the downtown core.

Avenue 17 SW is the main street; it is home to several restaurants, cafes and pubs. Recent redevelopment work has focused on green space and pedestrian and bicycle traffic.¹¹⁹

Tourism, Culture and Entertainment Function

Calgary attracted nearly 7.4 million tourists in 2019, generating more than \$2.5 million in economic spin-offs¹²⁰. According to 2017 data, the business segment accounted for approximately 12% of travellers who stayed at least one night.¹²¹ Before the recent oil price slump, about one-quarter of visits stemmed from business travel.¹²²

Regarding the hotel supply, the number of rooms available in the city centre has increased steadily in recent years, despite the decline in demand. The number of rooms has risen from 15,059 in 2018 to 16,066 in 2019, resulting in a lower occupancy rate of 64.2% in 2019 compared with 67.1% in 2018.¹²³ Disposable income per available room also dropped from almost \$115 in mid-2018 to about \$107 in mid-2019.

According to the City of Calgary, major arts and cultural events in the downtown core generate more than \$13.5 million in direct visitor spending and organizational operating expenditures. These events contribute to the vibrancy and traffic downtown.¹²⁴

118. Canada's 100 Best, 2020. Link: <https://canadas100best.com/best-restaurants-2020-by-region/#1590173645972-d8b08b31-6ba7>.

119. City of Calgary. West 17 Avenue and 37 Street Main Streets construction. Link: <https://www.calgary.ca/pda/pd/main-streets/west-17ave-37st.html>.

120. Tourism Calgary, 2019. 2019 Annual Report. Link to the report: <https://www.visitcalgary.com/sites/default/files/2020-05/FINAL-2019-Annual-Report-Tourism-Calgary-WEB.pdf>.

121. Open Alberta. Domestic Tourism in Calgary and Area Tourism Region 2017. Link to the report: <https://open.alberta.ca/dataset/86405640-1486-4332-ba21-89df5b5dd452/resource/704f3f97-c9e-474c-ad30-161d1304495b/download/edtt-domestic-tourism-cagary-and-area-tourism-region-2017.pdf>.

122. CBC, 2018. More travellers are visiting Calgary for fun, says tourism bureau. Link: <https://www.cbc.ca/news/canada/calgary/tourism-calgary-annual-report-2017-1.4678293#:~:text=Tourism%20Calgary%20released%20its%20annual,increase%20of%203.7%20per%20cent>.

123. CBRE Research Canada, 2019. National Market Report 2019, Trends in the Canadian Hotel Industry. Link: <https://tourismtalk.ca/wp-content/uploads/2019/12/CBRE-Hotels-Trends-NMR-October-2019.pdf>.

124. City of Calgary. Downtown Strategy. Link: <https://www.calgary.ca/pda/pd/downtown-strategy/downtown-strategy.html>.

In 2021, the construction of the new \$550 million Event Centre in Victoria Park is part of the downtown revitalization strategy. The centre will replace the Saddledome, the stadium where the Calgary Flames currently play hockey. The new stadium will also host shows and other types of entertainment.

The Arts Commons is Calgary's artistic and cultural hub, featuring several performance venues, theatres, art galleries and offices. The city is planning to expand this cultural centre by approximately 440,000 square feet to include three new theatres with a total of 1,650 seats. In addition, a second phase of renovations will be carried out, to modernize the existing facilities.

The BMO Centre is the largest conference centre in the city, with 270,000 square feet of space. Presently, the facilities currently host more large trade shows than regular conferences due to the lack of meeting space. An expansion project that plans to nearly double the space will need to address this limitation, and make the centre competitive with those in Vancouver and Toronto.

Finally, the Telus Conference Centre, also located in the downtown core, attracts more than 150,000 attendees annually to over 260 conferences.

Educational function

Downtown Calgary does not have a main university campus. However, the University of Calgary, which is located northwest of the downtown core, does have over 33,000 students. The University of Lethbridge also has a downtown campus with approximately 600 students.

As mentioned above, the Southern Alberta Institute of Technology (SAIT) recently announced the launch of a new downtown campus, the School for Advanced Digital Technology, which will train 1,500 technology employees over the next five years.

Transportation and Transit Function

Calgary has an extensive bus network, with more than 1,100 vehicles on 160 routes. In addition, the city recently completed the expansion of its light rail network to 44 stations; it now totals more than 56 km of routes. WalkScore gives Calgary a low score of 49.5 out of 100.

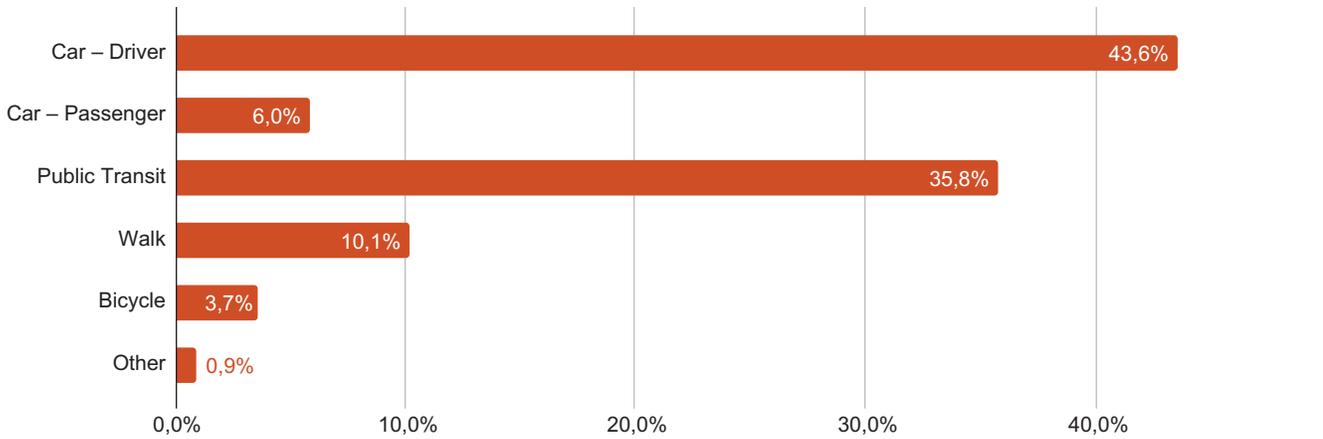
The primary mode of transportation to work in the downtown core is the automobile, although the gap between the types of transportation has narrowed considerably in recent years. According to 2016 Census data, only 15.5 per cent of Calgary CMA residents used public transit to get to work.

This proportion increases to about 36% among workers in the downtown core (see figure 35 below). Of all the downtowns studied, the Calgary CMA has the second highest car dependency, behind only Edmonton.

In addition, a diminishing proportion of the Calgary workforce works or lives downtown. Because the public transit system emphasizes commuting toward the city centre, residents in the rest of the city are less attracted to the service. Calgary Transit has concluded that expansion of the light rail system is the main solution to limit the number of transfers and increase the number of workers who have a station close to their homes. This will allow the system to compete with the flexibility of the car.¹²⁵

125. <https://www.cbc.ca/news/canada/calgary/calgary-free-transit-richard-white-1.5381141>.

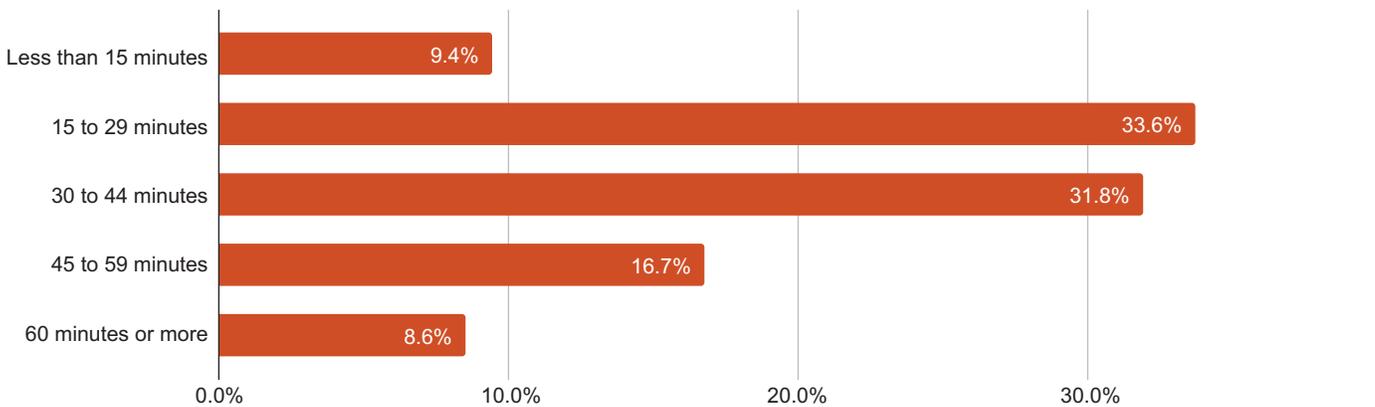
Figure 35: Primary mode of commuting to work, downtown, 2016



Source: Statistics Canada, 2016 Census

Workers in Calgary’s inner city have the second lowest proportion of people whose commute to work is 30 minutes or longer, at 57.1 per cent (figure 36). The proportion who commutes to work for an hour or more is also the second lowest after Edmonton. This could be explained by the easier access to the city centre by car, as also reflected in the high modal share of cars described above.

Figure 36: Commuting time from home to work, workers in downtown Calgary, 2016



Source: Statistics Canada, 2016 Census

A pilot electric scooter service was launched in 2018 and ended in October 2020. This service was used for more than 1.7 million trips during the period of operation. The City is currently evaluating whether or not to extend the service.¹²⁶

Finally, Calgary International Airport serves nearly 18 million passengers annually.¹²⁷ This number grew by 3.5 per cent between 2018 and 2019, despite the downturn in the oil sector. The CMA’s per capita passenger ratio is the highest in the country, at 11.9 in 2019, demonstrating strong demand for these services in the region.

126. CBC, 2019. If we want to increase transit use in Calgary, better is more important than cheaper. Link: <https://www.cbc.ca/news/canada/calgary/calgary-free-transit-richard-white-1.5381141>.

127. Calgary International Airport.

Vancouver

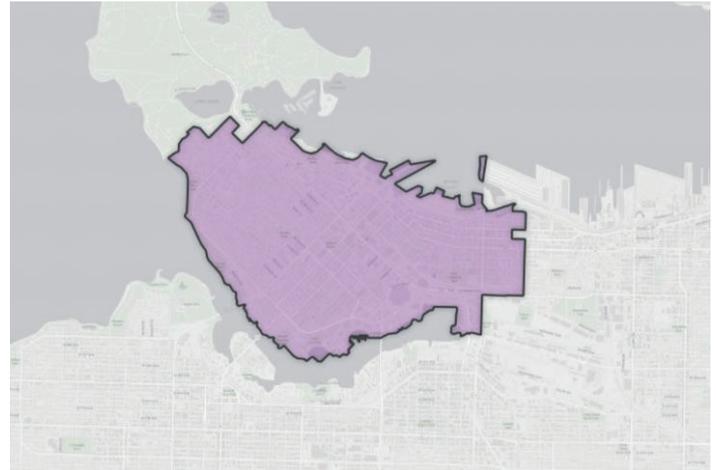
Geographic definition

Downtown Vancouver is located on a peninsula bordered on the west by Stanley Park, on the north by Burrard Inlet, on the east by Jackson Avenue and on the south by False Creek.

Neighbourhoods:

- **West End, to the west:** A neighbourhood with a strong residential area, together with several beaches and the Davie Street shopping area. This neighbourhood also includes Davie Village.
- **Waterfront/Coal Harbour, to the north:** Centred around the former Port of Vancouver, this neighbourhood but has recently been revitalized with residential and office buildings.
- **The central core:** This district includes the financial district, where most of the large office towers are located.
- **Gastown, in the centre-east:** A trendy artistic and touristic district, with several fashion and decor stores, art galleries, restaurants and bars, along with professionals' offices and apartments.
- **Yaletown, to the south:** This formerly industrial neighbourhood is now a hybrid district with a strong residential presence and several shops and restaurants.
- **Chinatown and Japantown, to the east:** Two juxtaposed neighbourhoods with a strong Asian presence.

Downtown Vancouver



Source: Statistics Canada.

Residential function

Downtown Vancouver is banking on its hybrid offer by taking advantage of its special location, two maritime coasts and a large park. The downtown business centre is close to Vancouver's former industrial port, where most of the large office towers are located. However, access to the water on the north side is cut off by an extensive transportation network, mainly rail. The city has issued an action plan to reconnect the downtown to its waterfront, called the Central Waterfront Hub Framework, but this plan is still at the design stage.

Several high-density residential neighbourhoods are part of the downtown geography, including the West End and Davie Village, which are graced with two beaches and proximity to Stanley Park to the west. These vibrant neighbourhoods have undergone an earlier wave of revitalization. Yaletown is also highly residential, but also features many small offices and retailers; it lies just south of the business centre. With several residential developments on the False Creek waterfront, this neighbourhood has the highest average household income in the downtown core.

Demography

In 2016, there were 108,560 people living in 67,910 households in downtown Vancouver, representing 17.2 per cent of the city's total population. Downtown Vancouver has a very high population density, similar to that of Toronto. It also has one of the most culturally diverse populations: immigrants make up of over 37.7 per cent of the population (table 41).

The downtown area has a young population, often consisting of one-person households, reflecting the presence of young professionals. Household incomes are in the middle range, as is the proportion of owner households. In contrast, there is an unequal distribution of household income, although less marked than in Toronto and Montréal.

Table 41: Demographic Portrait of City of Vancouver and Downtown Vancouver Residents, 2016

Demographic characteristics	City	Downtown
Population	631,486	108,560
Population density per square kilometre	5,493.6	17,464.6
Proportion of the population between 15 and 64 years of age	73.4%	81.5%
Proportion of one-person households	38.8%	55.3%
Proportion of owner households	46.9%	31.4%
Median annual gross household income*	\$65,327	\$56,229
Average annual gross household income*	\$93,947	\$71,241
Unemployment rate	5.6%	5.5%
Proportion of 25-64 year olds with a university certificate, diploma	56.0%	62.9%
Proportion of immigrants	41.6%	37.7%

Source: Statistics Canada, 2016 Census data.

* In 2015 dollars.

Residential real estate

According to CMHC, there were more than 1,000 new residential housing starts per year since 2016 (Table 42). This slowed in 2019, with just under 900 completions, or slightly over 3.0 per cent of housing starts in the Greater Vancouver area. Rents, in contrast, have risen very rapidly in the past 10 years, reflecting a very tight market and a keen interest among foreign investors, a problem that specific regulations have tried to address in recent years. The vacancy rate, which hovered around zero in 2016, increased slightly until 2019. It remains one of the lowest in the country.

Table 42: Residential real estate snapshot, downtown Vancouver, 2015-2019

	2015	2016	2017	2018	2019
New home market					
Construction of new units	281	817	1 126	918	932
Stock of unsold new buildings	3	1	-	47	167
Rental market					
Average monthly rent	\$1,366	\$1,476	\$1,549	\$1,651	\$1,738
Annual change in rents	5.8%	8.5%	5.0%	6.6%	5.3%
Vacancy rate	0.6%	0.5%	1.3%	1.2%	1.4%

Source: CMHC; PwC analysis.

Note: The geographic boundary excludes the east coast of the Downtown Peninsula, a neighbourhood that CMHC refers to as English Bay.

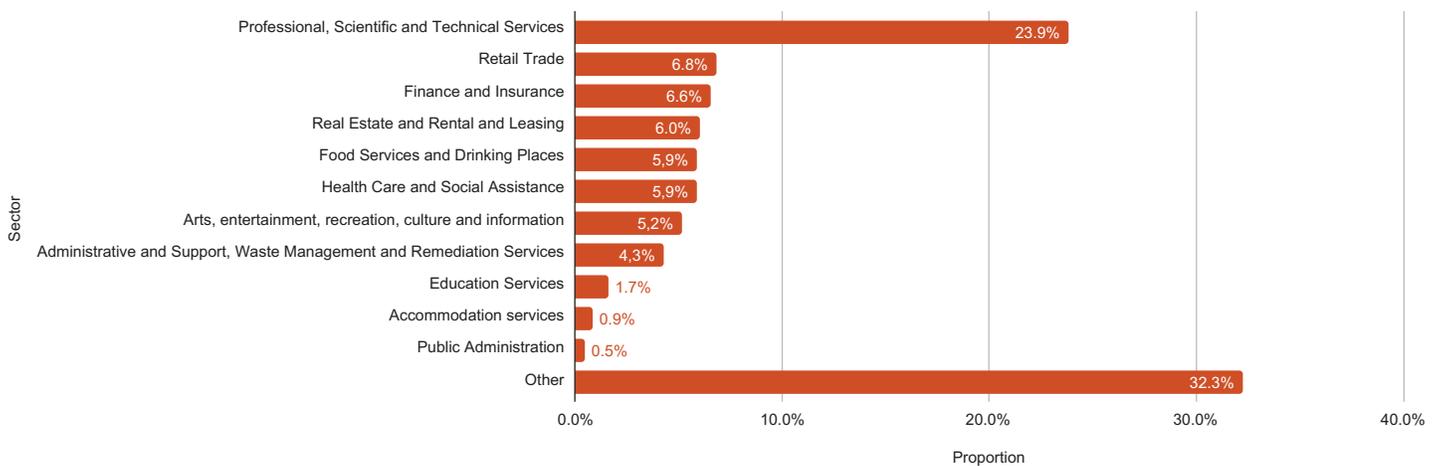
Economic function

There are more than 13,670 businesses in the downtown area in 2020, most of which are located in the business district. This represents 12.2 per cent of all businesses in the Greater Vancouver CMA. The businesses are largely in the professional services sector, at 23.9 per cent, which is typical of a large business centre.

The breakdown of companies by sector is typical of large city centres, with a high proportion coming from the professional services, retail, finance and restaurant sectors (figure 37). In terms of employment, Vancouver's inner city stands out from other downtowns because of its concentration in the accommodation and food services sector and the arts, recreation, and culture sector, at 13.0 per cent and 8.9 per cent, respectively (figure 38). The following section describes the commercial offer in more detail. In general, Vancouver is known for its multicultural culinary offer and its arts sector.

In terms of GDP, Vancouver's downtown generated over \$17.4 billion in 2016, representing 12.6 per cent of the CMA's GDP and 7.1 per cent of the provincial GDP. These proportions are comparable to those of downtown Toronto, although the total value of the Vancouver downtown is about one-third of that of downtown Toronto.

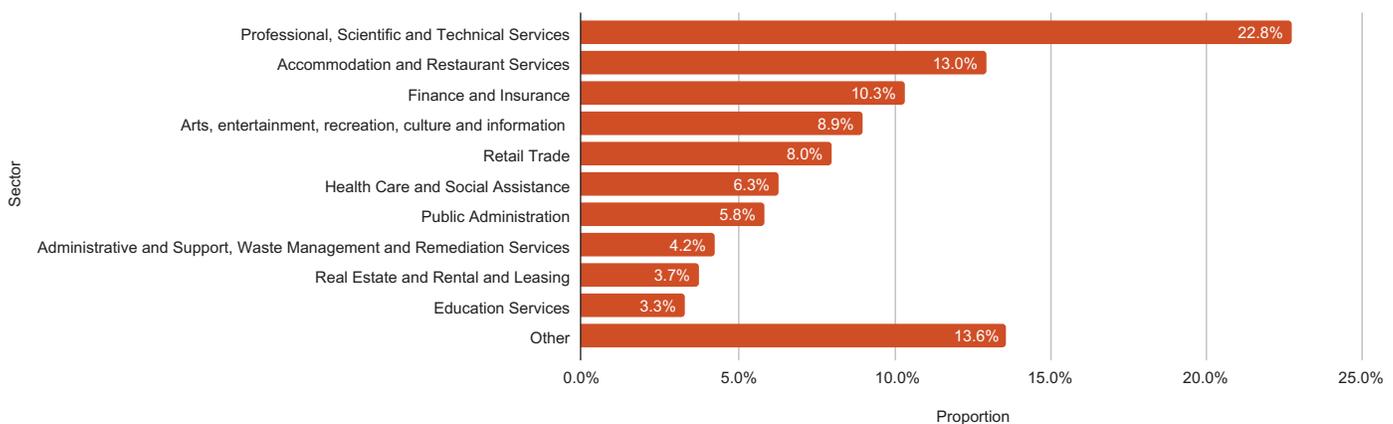
Figure 37: Proportion of businesses by sector, downtown Vancouver, 2020



Source: Statistics Canada, 2020; PwC analysis.

Note: The number of businesses is the number of physical locations of any business, organization, or other corporation that has at least one employee, and either (1) has a workforce for which it submits remittances to Canada Revenue Agency, (2) has an annual revenue of more than \$30,000, or (3) is considered a corporation under federal or provincial law and has completed a corporate income tax form within the last three years.

Figure 38: Proportion of employment by sector, downtown Vancouver, 2016



Source: Statistics Canada, 2016 Census

Real estate - offices

The real estate market for office space in downtown Vancouver is very concentrated and tight (table 43). It has the second highest price per square foot after downtown Toronto. The low vacancy rate and the high rate of new construction reflect the healthy economy of the region, which supports strong demand.

Table 43: Real estate snapshot - offices, downtown Vancouver, 2016-2020

	2016	2017	2018	2019	2020
Stock (square feet)	32,948,741	32,978,245	33,389,602	33,583,189	33,365,736
Vacancy rate	6.60%	4.90%	4.90%	3.90%	2.60%
Under construction (square feet)	604,481	474,818	830,318	4,175,362	3,869,694
Average gross rent (per square foot)	\$48.66	\$47.92	\$47.72	\$49.57	\$48.24

Source: CoStar, 2020.

Note: Data as of the first quarter for each year. Data include all classes of buildings. CoStar's geographic delineation partially differs from that of Statistics Canada and CMHC.

Hubs and industrial agglomerations

Downtown Vancouver has several central offices of global technology companies such as Microsoft, Amazon, Sony Pictures, Cisco Systems, and Slack, a company founded in Vancouver that was recently sold to Salesforce for more than US\$27 billion. Proximity to the University of British Columbia, which ranks third among the top computer science schools according to QS in 2020, provides a good talent base in this area.

Commercial function

Downtown Vancouver has 933 retail locations, ranking first in terms of locations per 1,000 workers with a ratio of 5.7, but at the average in terms of the ratio per 1,000 inhabitants (8.6). Robson Street is the main shopping street in the downtown core. More than 50 per cent of the businesses on this street are in the retail sector. Gastown and Chinatown also have a strong commercial and culinary presence. The main downtown shopping centre, the Pacific Centre, is smaller than those in the other downtowns studied. At less than 650,000 square feet, it is almost half the size of Ottawa's Rideau Centre. As in many other large cities, major commercial developments have emerged in recent years in the metropolitan area, including two in Burnaby and Richmond.

Commercial real estate

Downtown Vancouver has a large inventory of commercial space, with nearly 7.8 million square feet (table 44). The low vacancy rate combined with the most expensive price per square foot in the country and a low construction rate notably reflect a market that has reached a level of development close to full capacity.

Table 44: Commercial real estate snapshot, downtown Vancouver, 2016-2020

	2016	2017	2018	2019	2020
Stock (square feet)	7,658,554	7,676,934	7,747,391	7,720,542	7,765,542
Vacancy rate	4.80%	3.10%	2.70%	2.00% cent	3.20%
Under construction (square feet)	8,000	108,422	53,000	125,038	80,038
Average gross rent (per square foot)	\$42.63	\$39.36	\$50.22	\$56.89	\$65.48

Source: CoStar, 2020.

Note: Data as of the first quarter for each year. Data include all classes of buildings. CoStar's geographic delineation partially differs from that of Statistics Canada and CMHC.

Restaurants and bars

Statistics Canada counts approximately 810 restaurants in the downtown core, which represents the highest ratio of restaurants per 1,000 workers among the six city centres studied, at 4.9. The ratio of restaurants per 1,000 residents, at 7.4, is close to the average. Robson Street is one of the main streets in Vancouver for restaurants; nearly one-quarter of the businesses on that street provide food and/or lodging. Granville Street is also known for its range of restaurants and bars. The city's restaurant sector benefits from its proximity to the ocean, a vast expanse of forest and a rich terroir, giving it direct access to many fresh seasonal and local products, including seafood and fresh fish. Vancouver hosts Canada's largest culinary festival, the *Dine Out Vancouver Festival*, attracting some of the best chefs from around the world.

Tourism, culture and entertainment function

Downtown Vancouver attracts more than 11 million tourists annually, generating more than \$14 billion in tourism expenditures, supporting approximately 161,500 tourism-related jobs in the region. The Port of Vancouver serves approximately 530,000 passengers annually on more than 280 cruises.

The downtown peninsula has 69 hotels and 12,597 rooms. The occupancy rate in 2019 remained around 81 per cent, an increase of three percentage points since 2017.

Tripadvisor lists nearly 550 attractions in the city centre. For example, the National Hockey League (NHL) team the Vancouver Canucks plays at the Rogers Arena located downtown. The BC Whitecaps FC (soccer) and the BC Lions (football) both play downtown as well, at BC Place. The Vancouver Convention Centre, which hosts over 500 events annually, is also located in the city centre.

Many unique places and attractions are also downtown, including two beaches, the Steam Clock in the Gastown district, and several cathedrals, art galleries and theatres. Notable events include the Vancouver International Film Festival and the International Jazz Festival.

Educational function

Downtown Vancouver hosts a few small campuses, including University Canada West, which has 2,000 students, and a few buildings belonging to Simon Fraser University. In contrast, the student population in the City of Vancouver is estimated at almost 95,000, including more than 60,000 students at the University of British Columbia (UBC). Simon Fraser is known for its programs in geography, archaeology, anthropology and other related subjects. UBC has been named number one in the world for its library and information studies program, and is among the top 10 in the world for exercise science and geography.

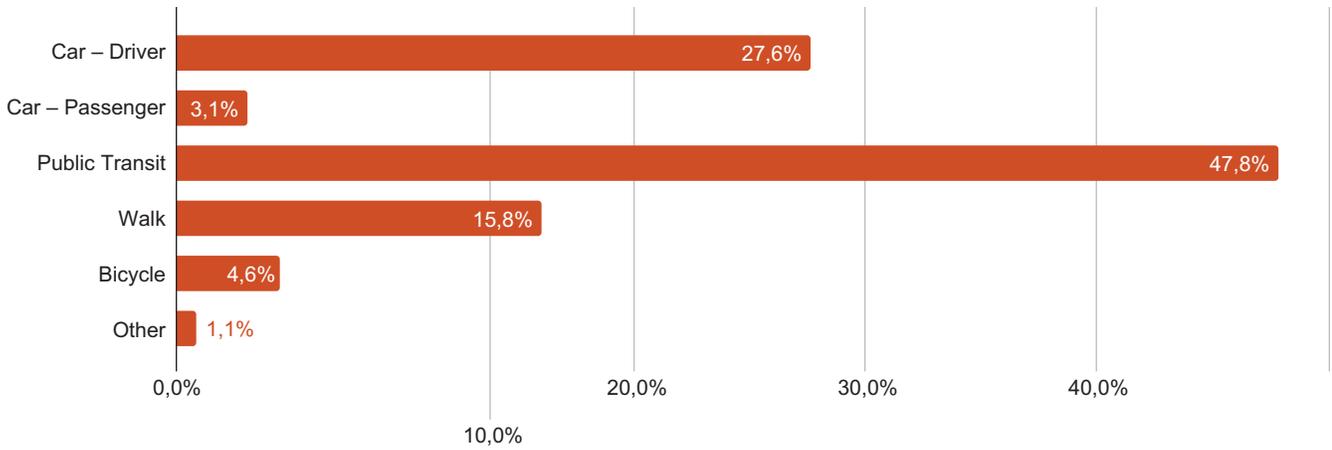
Transport and transit function

The City of Vancouver is served by several public transit modes: SkyTrain light rail, which connects downtown with the suburbs and the airport, the SeaBus ferry, which connects downtown and North Vancouver, the West Coast Express train, which connects Mission and downtown during rush hour, and an extensive bus network. These transport modes, operated by TransLink, serve an average of 1.2 million rides per day, or 745,000 trips. Usage increased by 3.7 per cent between 2018 and 2019, and by 18 per cent between 2016 and 2018.¹²⁸ There are also several bicycle paths that run through the downtown area. *WalkScore* gives Vancouver a score of 74.4 out of 100, describing it as excellent.

In 2016, workers in the inner city had the highest proportion of walkers and cyclists commuting to work compared with the other downtowns studied, 15.8 per cent and 4.6 per cent use respectively (figure 39). However, despite very high residential (17,400 inhabitants/km²) and employment (26,300 workers/km²) densities, car use remains important for inner-city residents, at 27.6 per cent.

128. TransLink, 2019. TransLink 2019 Accountability Report. Link: <https://view.publitas.com/translink/2019-accountability-report/page/30-31>.

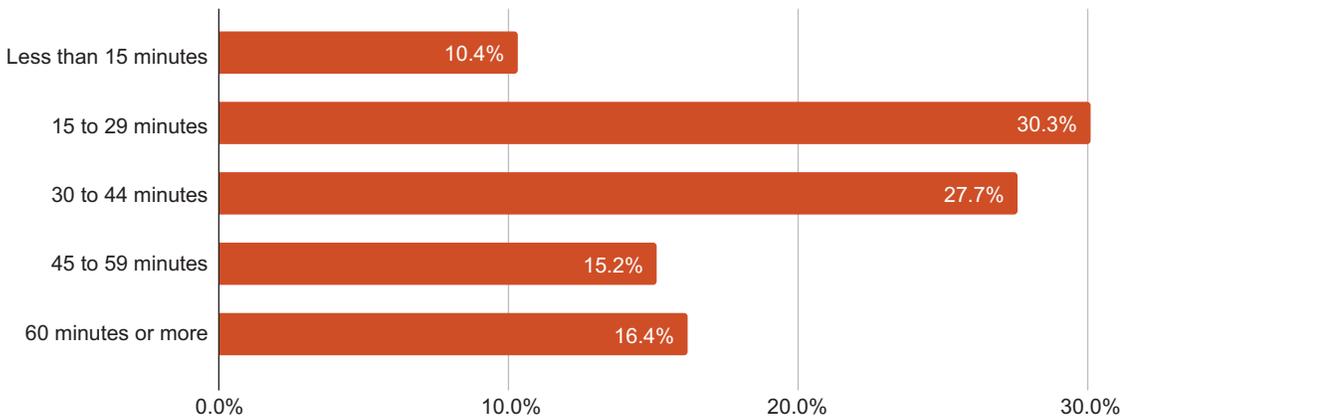
Figure 39: Primary mode of commuting to work, downtown workers, 2016



Source: Statistics Canada, 2016 Census

Workers in downtown Vancouver have an average commuting time, with about 59.3 per cent spending more than 30 minutes in their transportation to work (Figure 40).

Figure 40: Commuting time from home to work, workers in downtown Vancouver, 2016

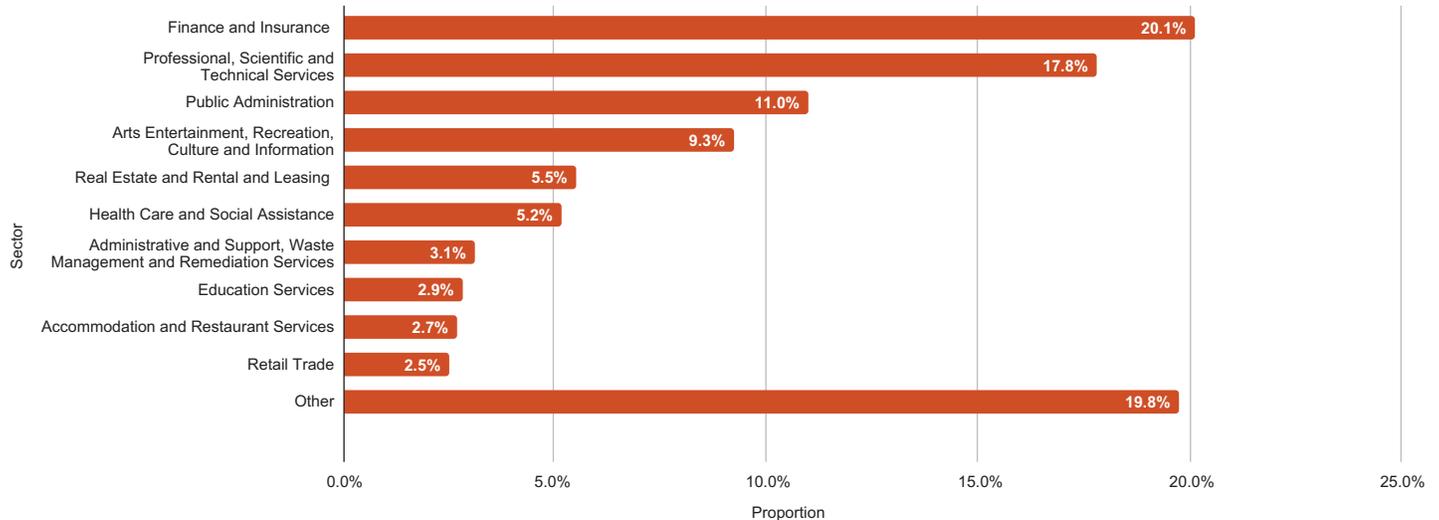


Source: Statistics Canada, 2016 Census

Finally, Vancouver International Airport serves more than 22 million passengers annually, and is the second busiest airport after Toronto. The CMA's passenger per capita ratio is very high, at 8.3, and is comparable to that of Toronto.

Appendix B: Proportion of GDP by Sector

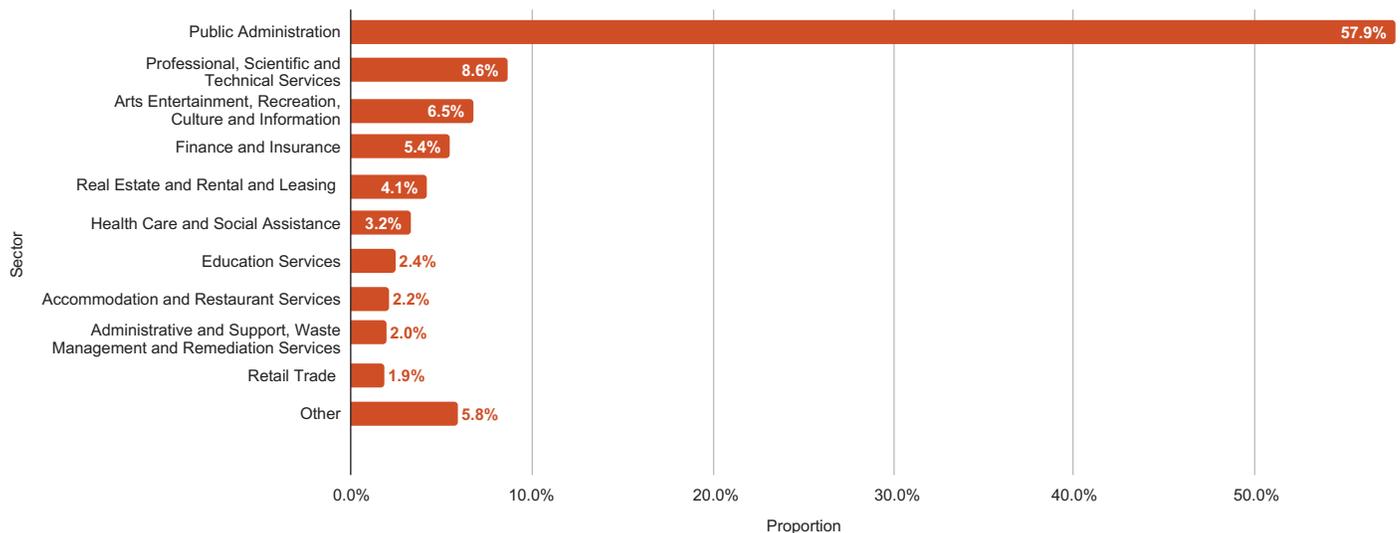
Proportion of GDP by sector, downtown Montréal, 2016



Source: Statistics Canada; PwC analysis.

Note: The GDP presented is an estimate based on productivity and average hours worked by sector, for each province. The key assumption is that inner-city specific economic activity is well represented by these provincial indicators.

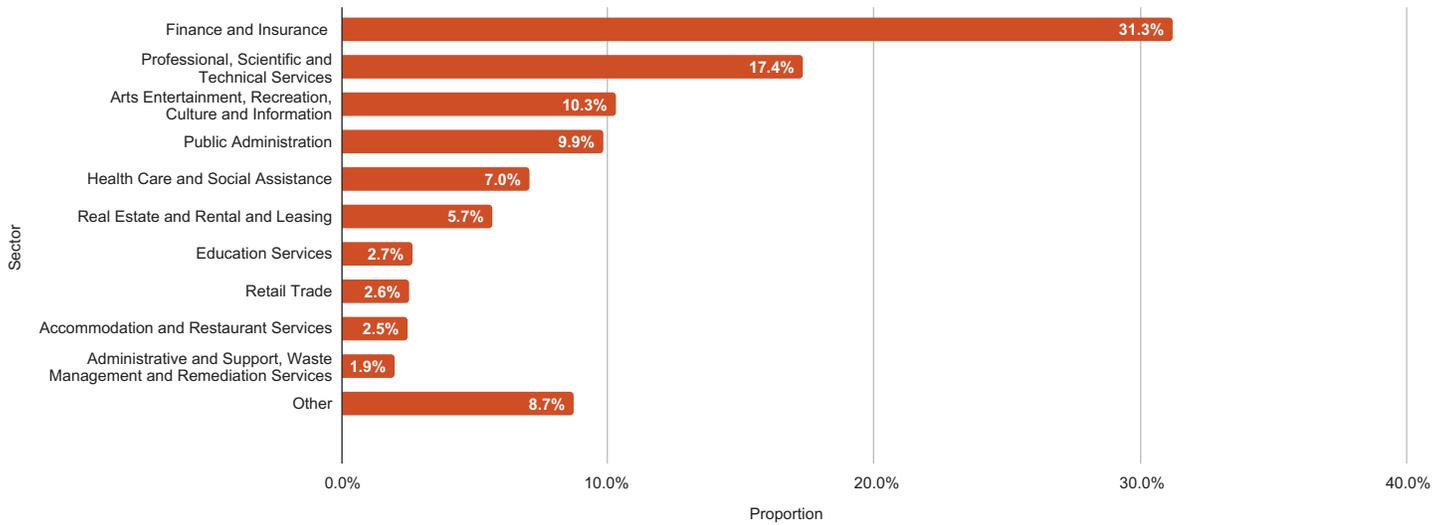
Proportion of GDP by sector, downtown Ottawa, 2016



Source: Statistics Canada; PwC analysis.

Note: The GDP presented is an estimate based on productivity and average hours worked by sector, for each province. The key assumption is that inner-city specific economic activity is well represented by these provincial indicators.

Proportion of GDP by sector, downtown Toronto, 2016

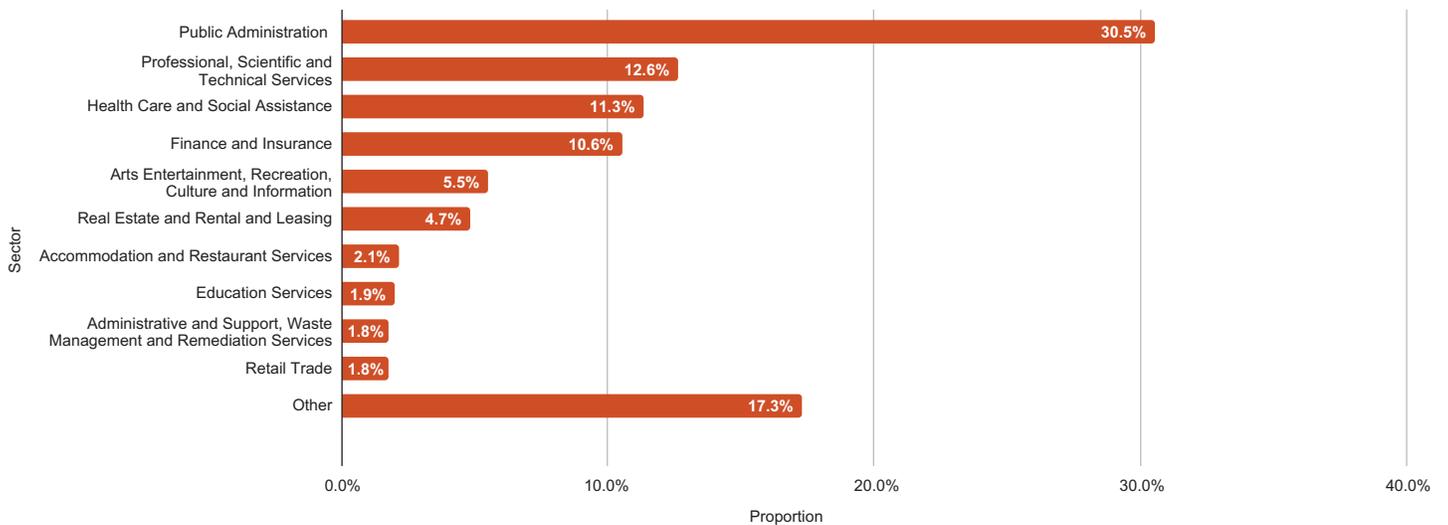


Source: Statistics Canada; PwC analysis.

Note: The GDP presented is an estimate based on productivity and average hours worked by sector, for each province.

The key assumption is that inner-city specific economic activity is well represented by these provincial indicators.

Proportion of GDP by sector, downtown Edmonton, 2016

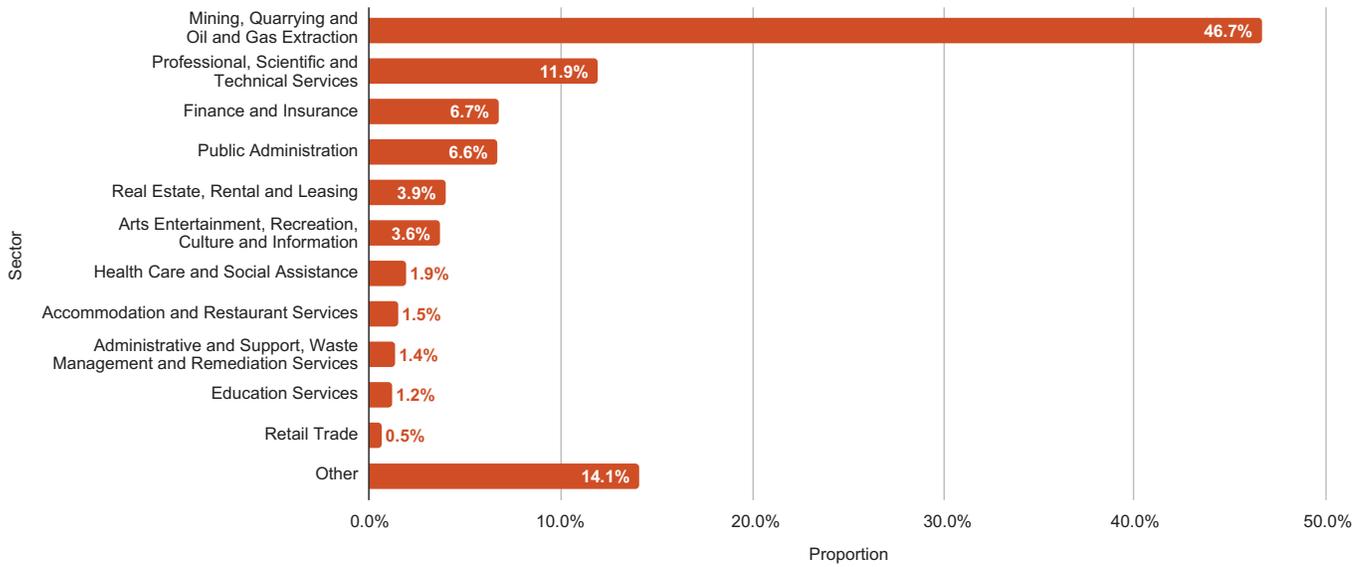


Source: Statistics Canada; PwC analysis.

Note: The GDP presented is an estimate based on productivity and average hours worked by sector, for each province.

The key assumption is that inner-city specific economic activity is well represented by these provincial indicators.

Proportion of GDP by sector, downtown Calgary, 2016

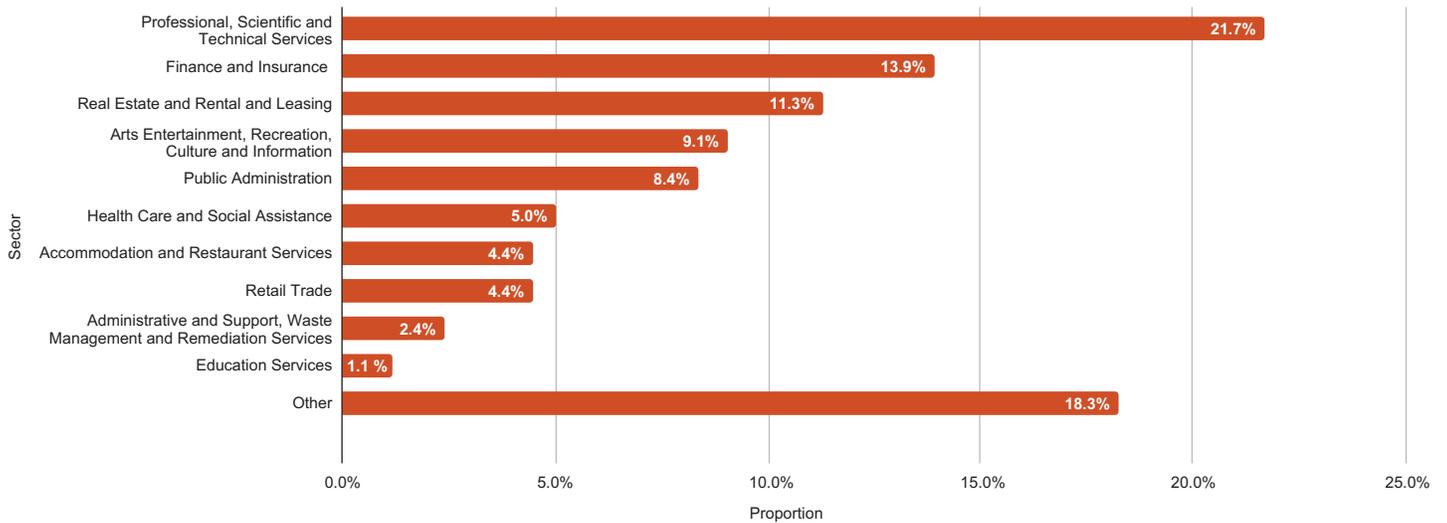


Source: Statistics Canada; PwC analysis.

Note: The GDP presented is an estimate based on productivity and average hours worked by sector, for each province.

The key assumption is that inner-city specific economic activity is well represented by these provincial indicators.

Proportion of GDP by sector, downtown Vancouver, 2016



Source: Statistics Canada; PwC analysis.

Note: The GDP presented is an estimate based on productivity and average hours worked by sector, for each province.

The key assumption is that inner-city specific economic activity is well represented by these provincial indicators.

Appendix C: Federal Proposals

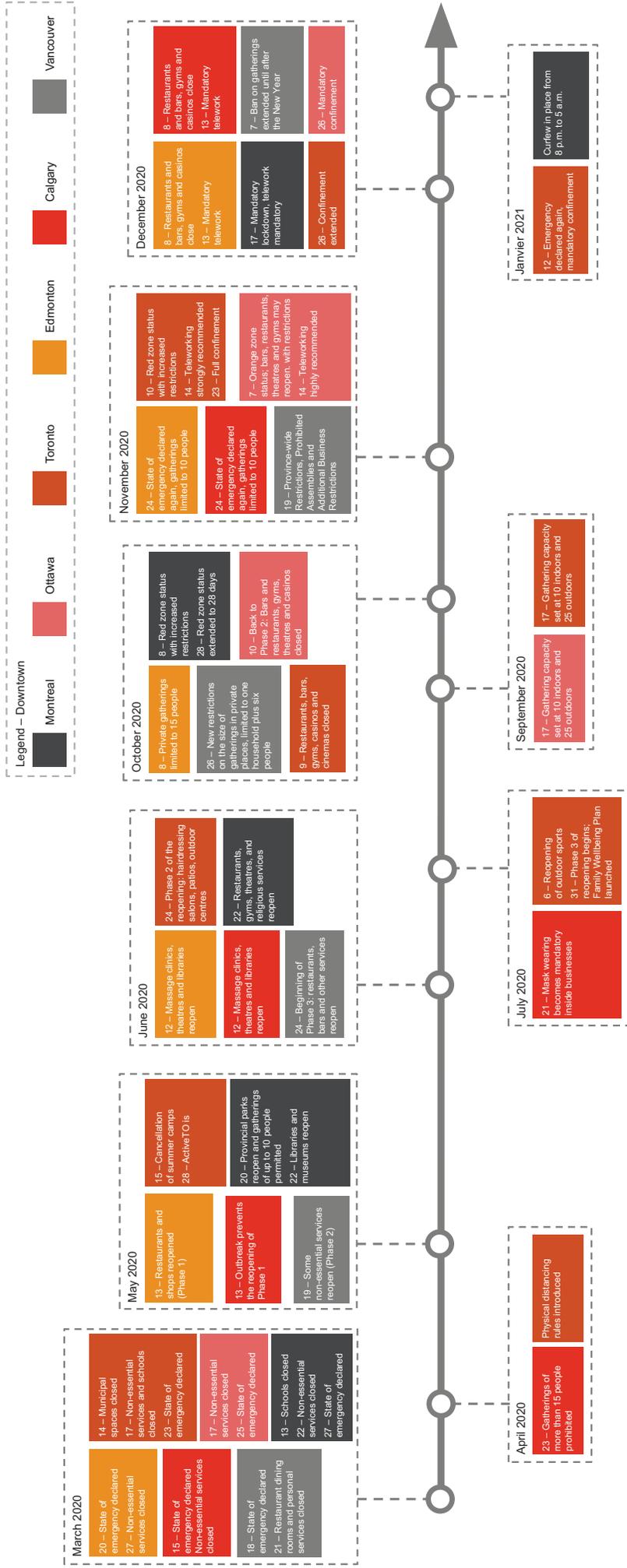
Among the proposals put forward in this report, some have been identified by considering the role the federal government could play in their implementation.

Proposal	Objectives pursued	Role of the federal government
Proposal 1: Reinvent downtown areas	Preserve the economic role of city centres as places of employment and business, innovation, and international influence, offering attractive living environments for a mixed population (workers, retirees, families and disadvantaged households).	<ul style="list-style-type: none"> • Provide financial support • Develop a national strategy for social housing in city centres
Proposal 2: Build a resilience strategy that will help inner cities adapt to future challenges	Cities will increasingly face significant challenges in the coming years, which will likely become more complex with the acceleration of technological, climate and demographic changes. Cities thus need to better understand the impact of stress during a shock and put in place strategies to mitigate these impacts in a preventative manner.	<ul style="list-style-type: none"> • Coordinate and promote research efforts in the identification of risks and the means envisioned to enhance cities' resilience to risks.
Proposal 3: Accelerate the implementation of the smart city	In support of the resilience strategy, cities need to accelerate their digitization. The deployment of smart city infrastructure is an important resilience factor. Better data collection will enable city leaders to prepare for future episodes.	<ul style="list-style-type: none"> • Provide financial support • Develop a legislative framework that balances public goods and data privacy. • Support the deployment of the 5G network, in phase with ecological transition
Proposal 4: Strengthen the role of higher education institutions	<p>Universities and colleges are important vectors of economic growth that will have a role to play in the revitalization of inner cities. They are sources of human capital development: Through their educational function, they contribute to the development of highly skilled workers. The presence of these workers is often one of the factors mentioned by companies (national and foreign) when choosing where to open a location.</p> <p>Further, through their research activities, universities promote the development of innovations that have an impact on businesses. Major research centres are essential to create technology clusters that attract companies. They are pivotal to the implementation of the smart city. As a result, high-productivity technology companies tend to cluster around universities to take advantage of the rich flow of ideas and skilled workers.</p>	<ul style="list-style-type: none"> • Provide financial support to university research centres, incubators and accelerators.

Proposal	Objectives pursued	Role of the federal government
<p>Proposal 5: Give big cities more autonomy over their budgets.</p>	<p>The COVID-19 crisis has shed light on the financial pressures cities face. Despite being the source of economic development, cities are facing mounting pressures in terms of service delivery, while having to deal with declining revenues. Canadian cities will need new and sustainable sources of revenue to fund the full range of services they provide, such as transit systems that meet communities' transportation needs and support inner-city businesses.</p>	<ul style="list-style-type: none"> ● Increase direct transfers by recognizing the economic contribution of city centres. ● Support and participate in the creation of a downtown action committee. ● Recognize city centres as "superclusters" and develop a financial support and guidance program that recognizes their economic contribution, job creation and social inclusion.
<p>Proposal 6: Ensure support for sectors that are sustainable in the long term and need help to survive beyond the crisis.</p>	<p>Hotels, cultural institutions, shops, restaurants, and bars in the city centres suffered an extreme shock due to the health measures. Preserving the commercial, cultural and tourist functions of city centres is important because these functions are part of downtowns' DNA, and instrumental to their vitality, attractiveness and international influence. In the short term, it is important to limit the damage through a territorial strategy specific to city centres, to ensure that these ecosystems will be strong enough to participate in the post-crisis recovery. Strategic thinking on sectors perceived as sustainable over the long term is needed in order to set priorities for future investments.</p>	<ul style="list-style-type: none"> ● Work with cities to identify sectors to be supported over a long enough horizon to ensure recovery. ● Adapt programs to reflect the reality of doing business in the downtown core.
<p>Proposal 7: Encourage visitors to return to the downtown core via public transit and active transport.</p>	<p>This proposal essentially aims to reposition public transit and active transport as safe and efficient options for accessing city centres before citizen behaviour crystallizes around car use.</p>	<ul style="list-style-type: none"> ● Although the federal government does not seem to have a direct role to play in the deployment of this proposal, it can participate in the development of health protocols and in a concerted communication effort.

Appendix D: Major Events Related to COVID-19

Key events related to COVID-19



Appendix E: Limitations of Use

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10. PwC's compensation is not contingent on any action or event resulting from the use of the Report.

About us

At PwC Canada, more than 7,850 partners and staff provide quality assurance, tax, advisory and transaction services across the country. PwC Canada is a member of the PwC global network, which includes more than 276,000 employees in 158 countries.

To learn more, visit our website at www.pwc.com/ca.

Our Purpose, Vision and Values

PwC Canada's culture rests on two important pillars: our purpose and our vision.

Our purpose is to build trust in society and solve important problems. Our purpose is what guides our decisions and shapes our conversations.

Our vision is "creating leaders, inspiring people, bringing perspectives together to achieve what matters most". Our vision reflects who we are and what we want to be.

To deliver on our purpose and vision, we rely on our values: Act with integrity, make a difference, care, work together and reimagine the possible. Our values are what we have in common and define how we behave and work with our clients, communities and each other.

New world. New skills.

The speed of technological change and the lack of skilled personnel are creating an ever-increasing mismatch between workers' current skills and those required in this new world. There is an urgent need for organizations, governments, educators and citizens to work together to address this growing problem. PwC Canada is committed to investing \$150 million over the next three years to upskill its 7,850 staff so they are ready for the future and can share their knowledge to better serve clients and communities. In addition to upskilling its own people, PwC Canada is also committed to developing the skills of not-for-profit organizations and one million people across the country to help them maximize their potential.

To learn more, visit www.pwc.com/ca/newworldnewskills.

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