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The Business Case to Build Physically Accessible Environments.



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The Conference Board of Canada

Preface

This research was conducted to examine the economic costs of inadequate accessibility in Canada. Using data from Statistics Canada and our own survey of Canadians with disabilities, we estimate the size of the population with physical disabilities that impair their mobility, vision, or hearing and project it to 2030. Using our model of the national economy, we estimate that improving physical accessibility would dramatically improve the labour force participation and consumer spending of Canadians with physical disabilities. Finally, we present case studies of businesses that have had success improving accessibility.

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EXECUTIVE SUMMARY

The Business Case to Build Physically Accessible Environments

At a Glance

- The number of Canadians living with a physical disability that impairs their mobility, vision, or hearing will rise from 2.9 million to 3.6 million over the next 13 years, nearly double the pace of the population as a whole.
- Real spending by this group will rise from 14 to 21 per cent of the total consumer market.
- Improvements to workplace access would allow 550,000 Canadians with disabilities to work more, increasing GDP by \$16.8 billion by 2030.
- Accessibility is more than just a legal standard or specification—it involves fostering a sense of inclusion so people with disabilities can flourish.

A prosperous Canada includes communities and workplaces where all Canadians can participate and thrive. But a large segment of the country's population continues to face challenges finding employment, accessing services, and enjoying leisure activities because they live with a physical disability. Improving physical accessibility in workplaces and the wider community would dramatically boost their labour force participation and consumer spending.

According to Statistics Canada, in 2012 there were 3.8 million Canadians living with a disability. Among these, 2.5 million had a mobility, hearing, or vision disability, or some combination of the three. We estimate that by 2017, this population had grown to 2.9 million, and because of the country's aging population, this number will continue to grow quickly. We expect the population with physical disabilities that impair their mobility, vision, or hearing will grow by 1.8 per cent a year between now and 2030, to reach 3.6 million. Meanwhile, total population growth in Canada will average less than 1 per cent a year over the same period.

The Conference Board of Canada calculated the effect that improvements in physical accessibility would have on labour force participation and consumer spending. We surveyed nearly 500 Canadians with physical disabilities to identify factors that are creating barriers for them and to assess what changes are necessary to improve their inclusion in the workforce. We also asked survey respondents how their spending and labour force participation decisions might change if barriers were reduced. Based on their responses, we calculated the economic benefits of increased accessibility to demonstrate that business decisions that are inclusive and embed considerations for accessibility can have a significant impact on the broader economy.

Our results revealed that many individuals who are currently unemployed or not in the labour force would be able to work if workspaces were

Improved workplace accessibility would lead to an increase in productive capacity and a permanently higher level of economic activity.

more accessible. Of those who are employed, almost three-quarters indicated that their condition is preventing them from working as much as they want to. Their responses to our survey suggest that reasonable investments in workplace access and management practices would allow many Canadians with disabilities to participate more fully in the workforce.

The message from our survey participants was loud and clear about the kinds of accommodations that employers, businesses, and other providers of services could make to improve access. Improving physical impediments, such as installing ramps and handrails, will make a significant difference. Just as important, however, are the attitudes of managers and co-workers. Survey respondents suggested that managers and employees need education and awareness about the distinction between technical accessibility and truly inclusive behaviours.

For our economic modelling, we assumed that over the coming decade, Canadian employers would make the investments to improve physical access and inclusive practices to better integrate people who have physical disabilities into the workforce. The extent to which labour market participation can be improved is based on our survey results. Overall, we estimate that by 2030 about 552,000 individuals—or 15 per cent of the total population with a physical disability that impairs their mobility, vision, or hearing—would be able to work more hours if workplaces were more accessible and inclusive. This would result in 301 million hours a year added to the workforce by 2030—representing about 1.3 per cent of the total annual Canadian work effort.

The impact of improved workplace accessibility for individuals with disabilities would be overwhelmingly positive and lead to an increase in productive capacity and a permanently higher level of economic activity. By the year 2030, Canada's real gross domestic product could be increased by \$16.8 billion. In that same year, the boost to labour income would facilitate a \$10-billion increase in consumer spending. The GDP and income gains would also generate revenue gains of about \$2.6 billion for the federal government and \$1.8 billion for provincial governments.

Businesses should take note: these results indicate there is market demand currently going unmet because of accessibility barriers.

People with disabilities make up a large and growing consumer group. If improved access to employment were to lift income and spending power, their share of consumer spending would increase further. Participants in our survey were clear about wanting better physical access to be able to shop, do business, and especially socialize in their communities. This presents a major opportunity for businesses and an imperative for agencies that provide services to citizens. It also proves the case that improving access for patrons with physical disabilities should be seen as an investment, not simply a cost.

Our findings suggest that the share of people with physical disabilities in the overall Canadian consumer market will rise sharply over the coming years. The consumer market for people with a physical disability that impairs their mobility, vision, or hearing currently makes up about \$165 billion, or 14.3 per cent of the total consumer market in Canada. By 2030, this share will swell to 21 per cent, with spending rising to \$316 billion annually (in real 2017 dollars).

Real consumer spending by Canadians with physical disabilities is projected to advance by 5.1 per cent per year between now and 2030—nearly three times the pace of overall consumer spending. The survey results also suggest that if access improves, people with physical disabilities will spend a greater share of income in restaurants and grocery stores and on entertainment, recreation and sport, and physical activities. Businesses should take note: these results indicate there is market demand currently going unmet because of accessibility barriers.

Accessibility is often thought of as structural changes to bricks and mortar. However, there are many ways for organizations to make their work environment more comfortable, more user-friendly, and easier to navigate. Simple, low-cost modifications can improve access without expensive renovations or new building. Undoubtedly, costs are lower and benefits more sustainable when accessibility is embedded into design considerations, but even structural renovations can return their investment over time. In practice, however, accessibility encompasses more than renovations. Accessibility is about good planning and design to create an environment that considers human diversity and inclusion.

This user-focused approach to planning and design can be a powerful way to create a truly accessible environment.

Today, companies are already planning for a growing market of people requiring greater accessibility—our case studies describe three examples of successes. Flavelle, a residential developer creating a universally inclusive community, is targeting older, affluent baby boomers by embedding accessibility early in the plan, undertaking extensive community consultation, and seeking expertise to help plan and design a truly inclusive built environment. Sodexo, a multinational food services company, considers accessibility the foundation of an inclusive work environment. Because Sodexo managers often work at client sites, they are ambassadors for the organization's values, communicating the business benefits of accessibility and gaining buy-in from customers and clients. Toronto–Dominion (TD) Bank's approach to accessibility is built on creating an environment that considers the needs and abilities of clients and customers. TD listens to employees about their needs and encourages its system technology team to enhance accommodation, something that generally requires only modest investments. It has discovered that assistive technologies can improve efficiency and productivity for all employees.

There is a powerful economic incentive for making businesses and institutions more physically accessible to people with disabilities. It is a virtuous cycle. Greater access to employment will deepen the labour pool and increase incomes. That, combined with the faster growth of Canada's population with physical disabilities, will give this group substantial and growing consumer clout. People with disabilities clearly want to spend those dollars in their communities—working, shopping, and enjoying leisure activities, just like everyone else.

CHAPTER 1

Introduction

Chapter Summary

- Many Canadians face challenges finding employment, accessing services, and enjoying leisure activities because they live with a disability.
- Lifting their labour market participation could add significantly to Canada's future pool of workers and to the quality of life of individuals with disabilities.
- Reasonable investments in workplace access and management practices would allow many Canadians with disabilities to participate more fully in the workforce.

Canada is missing out on contributions from a large segment of its population. Many Canadians face challenges finding employment, accessing services, and enjoying leisure activities because they live with physical disabilities.

Meanwhile, labour is set to become increasingly scarce in Canada as the population ages, making it ever more important to make the most of available labour resources. Lifting the labour market participation of people with a physical disability could add significantly to Canada's future pool of workers—and to the quality of life of individuals with disabilities.

The Conference Board of Canada conducted a survey of people with physical disabilities. Our survey results suggest reasonable investments in workplace access and management practices would allow many Canadians with physical disabilities to participate more fully in the workforce. If these investments were made, our economic modelling suggests the lift to the economy's productive capacity due to improved workplace accessibility would result in a permanent increase in real GDP of over \$16.8 billion by 2030. The boost to labour income, consumer spending, and government revenues would be sizable.

Clearly, there is a powerful economic incentive for making businesses and institutions more physically accessible to people with disabilities. It is a virtuous cycle. Greater access to employment would deepen the labour pool and increase incomes. That, combined with the faster growth of Canada's population with physical disabilities, will give this group substantial and growing consumer clout. People with disabilities clearly want to spend those dollars in their communities—working, shopping, and enjoying leisure activities, just like everyone else.

Defining Canada's Population With Physical Disabilities

In the numbers discussed in this report, our focus is on a segment of the population with a physical disability that impairs their mobility, vision,

or hearing. In our survey, we screened for individuals who indicated they found it “challenging to complete everyday activities because of a mobility-related condition (e.g., visual impairment, difficulty hearing, difficulty walking, chronic pain, or illness).”

Statistics Canada has previously surveyed Canadians with disabilities through its Canadian Survey on Disability, 2012, a national survey of the working-age population whose daily activities are limited because of health-related issues. Statistics Canada’s survey covers various types of physical disability, including flexibility, dexterity, mobility, hearing, and vision-related disabilities. Statistics Canada’s mobility disability category is defined as those who have difficulty walking on a flat surface for 15 minutes or have difficulty walking up or down a flight of stairs. This is a narrower definition than the one used in our own survey. Consequently, in our forecasts based on Statistics Canada’s data, our totals include people identified as having a hearing or vision disability.

CHAPTER 2

Population of Canadians With Physical Disabilities Set to Swell

Chapter Summary

- Of the 3.8 million Canadians reporting a disability in 2012, 2.6 million had a mobility-, hearing-, or vision-related condition.
- We estimate that this population had grown to 2.9 million in 2017, representing about 10 per cent of the country's population.
- The aging of Canada's population means the number of people with disabilities who would benefit from greater accessibility will continue to grow at about twice the rate of the overall population.
- The number of Canadians with a physical disability that impairs their mobility, vision, or hearing will increase from an estimated 2.9 million in 2017 to 3.6 million in 2030.
- There are more women than men with a physical disability that impairs their mobility, vision, or hearing, and this gap will grow through the forecast because the population is aging and, statistically, women outlive men.

According to Statistics Canada’s Canadian Survey on Disability, 3.8 million Canadians had some form of disability in 2012, ranging from pain to a flexibility restriction to a learning disability. Of these, 2,571,180 Canadians had a physical disability that impaired their mobility, vision, or hearing in 2012, representing 9.3 per cent of the country’s population.¹

Nearly 80 per cent of Canadians with a physical disability that impairs their mobility, vision, or hearing are over the age of 45, partly because the primary cause of limited mobility is arthritis, something that generally affects older age cohorts. For individuals in their prime working years (aged 25 to 64), 11.4 per cent reported having a disability of some sort, and many reported significant barriers that prevented them from fully participating in the labour market and community activities. Employment rates for Canadians with disabilities were roughly two-thirds those of the general population—and those that were employed tended to work a slightly shorter work week.

Reduced workforce participation, lower education attainment, and reported biases from employers result in lower income levels for people with disabilities. According to the 2012 Canadian Survey on Disability, 58.7 per cent relied on government support, while employment income was significantly lower for those with jobs. In 2010, median total income for those aged 15 to 64 with a disability was \$20,420, significantly lower than the \$31,160 for those without a disability. Women with disabilities reported significantly lower median incomes than men, and this gender gap is even more significant given that there are many more women with disabilities than men across all age cohorts.

The Canadian Survey on Disability provides demographic information that allows us to produce a relatively robust forecast of Canada’s population with physical disabilities over the coming decades.

¹ Statistics Canada, Canadian Survey on Disability, 2012. The survey is produced every five years. Results from the 2017 Canadian Survey on Disability were not available at the time of writing; they are due to be released in December 2018.

We assumed that the prevalence of physical disabilities by 10-year age and gender cohorts would be held constant at 2012 values. (Of course, it is possible that advances in health care and technology will reduce the prevalence of impairment.) The prevalence rates for 2012 were then applied to actual population data from 2013 to 2016 and to the Conference Board's detailed long-term demographic forecast for 2017 to 2030—a forecast that is produced every year as part of our *Canadian Long-Term Economic Outlook*. (Key assumptions about our demographic forecast are provided in [Appendix B](#).)

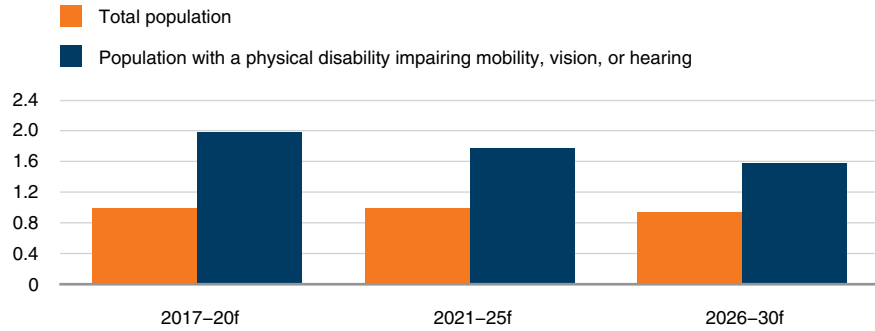
Results suggest that there are currently 2.9 million Canadians with a physical disability that impairs their mobility, vision, or hearing—an increase of 14 per cent, or 293,000 people, since 2012. The strong growth is explained by elevated prevalence rates among older cohorts applied to Canada's rapidly aging baby boomers. Over the next several years, population growth for people with a physical disability that impairs their mobility, vision, or hearing will continue at nearly twice the rate of the overall population. Indeed, one of the defining characteristics of Canada's long-term outlook is a steady deceleration in population growth brought about by a combination of an aging population and low fertility rates. Between now and 2030, total population growth will average less than 1 per cent a year. Meanwhile, we forecast that the population with a physical disability that impairs their mobility, vision, or hearing will grow at a much stronger 1.8 per cent a year, to reach 3.6 million by 2030. (See [Chart 1](#).)

Another distinctive characteristic of the population of people with a physical disability that impairs their mobility, vision, or hearing is that women outnumber men. That gap will grow through the forecast since the population is aging and, statistically, women outlive men. [Table 1](#) summarizes our projections of the distribution of Canadians with physical disabilities that affect mobility, hearing, or vision, today and in 2030, by age cohort and gender.

Chart 1

Rapid Growth Expected for Population of Canadians With Physical Disabilities That Impair Mobility, Vision, or Hearing

(percentage change, compound average annual rate)



f = forecast

Source: The Conference Board of Canada.

Table 1

Number of Canadians With a Physical Disability That Impairs Mobility, Vision, or Hearing

(000s)

Age	2017			2030		
	Women	Men	Total	Women	Men	Total
15 to 24	34.3	21.5	55.8	36.0	22.6	58.5
25 to 34	58.4	34.4	92.8	56.3	34.0	90.2
35 to 44	121.1	81.6	202.8	142.9	95.7	238.6
45 to 54	226.2	202.8	429.0	240.5	209.2	449.7
55 to 64	390.1	305.7	695.8	368.5	285.2	653.8
65 to 74	364.2	266.9	631.1	504.1	377.5	881.6
75 and over	451.3	303.8	755.1	707.0	515.2	1,222.2
Total	1,645.5	1,217.0	2,862.5	2,055.5	1,539.3	3,594.8

Shaded area represents forecast data.

Source: The Conference Board of Canada.

CHAPTER 3

Workplace Upgrades and Management Practices Can Help

Chapter Summary

- Both Statistic Canada's Canadian Survey on Disability and our own survey clearly demonstrate the significant impact that a lack of accessibility has on people's ability to fully participate in the labour force.
- Physical accessibility integrates physical accommodations such as ergonomic workstations and accessible building features, as well as a sense of inclusion that lets those with disabilities interact easily with co-workers, access all the same facilities, and perform the same functions.
- More than 46 per cent of survey respondents believed accessibility improvements would allow them to increase the number of hours they work.
- If workplaces were more accessible, about 552,000 individuals with a physical disability that impairs their mobility, vision, or hearing would be able to work or work more hours per week, adding 1.3 per cent to the total annual Canadian work effort by 2030.

Labour is set to become increasingly scarce in Canada as the population ages, making it ever more important to make the most of available labour resources. As demonstrated in the previous section, the labour market outcomes of people with disabilities are well below those of the general population. Lifting their labour market participation could add significantly to Canada’s future pool of workers and to the quality of life of individuals with disabilities.

To better understand the barriers to fuller participation in the labour market, to physical access to goods and services, and to social interaction generally, we conducted a large survey of individuals who report that they have physical disabilities.¹ The Conference Board survey results focused on 497 individuals who identified as having “moderate” (66 per cent) or “major” (33 per cent) physical disabilities, excluding those with mild disabilities. The sample was roughly split by gender and was regionally representative. In our sampling, we screened for individuals who indicated that they found it “challenging to complete everyday activities because of a mobility-related condition (e.g., visual impairment, difficulty hearing, difficulty walking, chronic pain, or illness).” This is a broader definition than the one used to define the population of people with mobility challenges for Statistics Canada’s Canadian Survey on Disability, 2012.

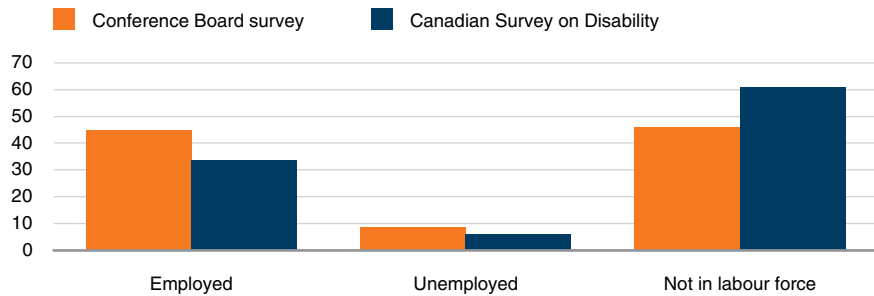
This chapter focuses on the survey results as they pertain to labour market access and asks questions that help us gain insights into what is preventing people with disabilities from more fully participating in the workforce. The survey results helped to guide our analysis of the potential for increasing workforce participation and to quantify the economic impacts and income gains associated with enabling people with disabilities to more easily participate in the workforce.

¹ The survey was administered by Leger from February 15 to 24, 2017. The initial sample included 501 responses.

Our survey participants were younger than those in Statistics Canada’s survey, with two-thirds under the age of 55. Our survey respondents were also more educated—57 per cent had a college degree or higher, similar to the Canadian population. We would therefore expect our sample to be better placed to participate in the labour market than the Statistics Canada reference group. Nonetheless, the majority of respondents reported that they faced significant barriers to fully participating in the labour market.

Just under half of our respondents were employed—more than the 34 per cent of people aged 16–64 with mobility disabilities employed in the Statistics Canada survey. Nevertheless, this is well below the 74 per cent employment rate in 2012 for Canada’s working-age population without disabilities. **Chart 2** compares some of the labour market outcomes revealed in the two surveys.

Chart 2
Surveys of Individuals With a Physical Disability: Results Compared
 (per cent)



Note: For consistency with the Conference Board survey, data here from the Canadian Survey on Disability, 2012, exclude people with mild disabilities.
 Sources: The Conference Board of Canada; Statistics Canada.

Respondents from our survey also reported the following:

- Whether employed or unemployed, roughly 60 per cent said their disability prevented them from finding employment that allows them to use their skills, abilities, and training.

For both men and women in our sample, there is a sizable gap between their average hours worked per week and those of the Canadian population.

- Of the 216 who indicated they were retired or out of the labour market, 76 per cent said their disability prevented them from finding work to the extent that they would like.
- Of those who were unemployed, 80 per cent said the disability prevented them from finding employment.
- While physical modifications were identified as important, accommodative management practices—modified or different duties, permitting telework, and more flexible work hours—were mentioned most frequently by respondents.

Both the Canadian Survey on Disability and the Conference Board survey clearly demonstrate the significant impact that lack of accessibility has on people's ability to fully participate in the labour force. Both also demonstrate the greater challenges for women.

There were marked differences in the labour market experience of men and women in our sample. First, despite similar educational attainment, male survey respondents were more likely to be employed than their female counterparts—about 50 per cent of men indicated they had a job versus 42 per cent for women. Second, the nature of the employment is different for men and women:

- Nearly four out of every five male survey respondents who had a job were working full-time, while women were almost evenly split between full-time and part-time work.
- Almost one-quarter of the women in our sample indicated they were not looking for work, compared with just 9 per cent for men.

Given the differences in employment outcomes between men and women, it is unsurprising that the men in our sample worked more hours on an average weekly basis than the women. And for both men and women in our sample, there is a sizable gap between their average hours worked per week and those of the Canadian population as a whole. In our sample, respondents reported working 25 per cent fewer hours a week than the overall population. Our study doesn't probe why labour market experiences are so different for men and women. However, these findings are of particular concern given that women form a disproportionate share of the population with physical disabilities.

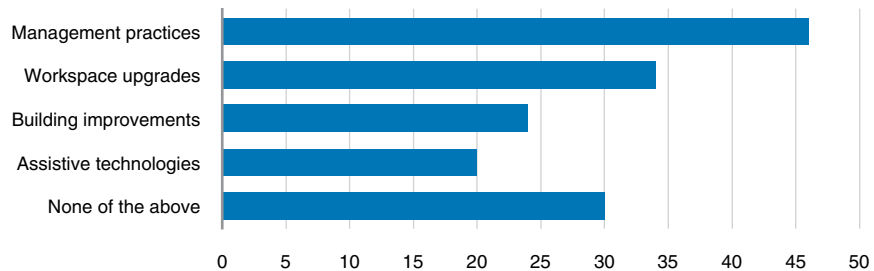
Potential economic gains from improving accessibility can occur only if Canada identifies and minimizes the current barriers facing people with disabilities. Our survey, therefore, asked respondents to select, from a list, workplace modifications that would allow them to take on the kind of role in the workforce they would like.

Notably, while physical modifications were identified as important, what stood out is that more accommodative management practices—modified or different duties, permitting telework, and more flexible work hours—were mentioned most frequently. (See [Chart 3](#).) With such an importance placed on supportive managers and accommodative management practices, organizations are increasingly looking to managers to be ambassadors for mobilizing accessibility. See the Sodexo case study in [Chapter 7](#) for examples of accommodative management practices.

Chart 3

Workplace Modifications That Would Improve Workforce Participation

(percentage of survey respondents)



Source: The Conference Board of Canada.

In addition, 34 per cent felt that simple workspace upgrades (ergonomic aids such as special chairs and back supports) would improve their ability to enter the labour market or work increased hours. As well, 24 per cent of respondents said building improvements—handrails, ramps, widened doorways and hallways, adapted/accessible parking, elevators, or washrooms—would improve their labour market outcomes.

Accessibility is about creating a space that allows people to perform their roles and interact with colleagues easily, comfortably, and with dignity.

Finally, 20 per cent said access to existing assistive technologies would make a difference.

But 30 per cent of respondents indicated that none of the physical workspace upgrades listed in our survey would allow them to take on their desired workforce role, likely reflecting both individuals who were operating comfortably in the workforce and those who did not envision being part of the workforce.

To ensure that accessibility barriers not listed in our survey did not go unmeasured, survey respondents were asked in an open-ended question to describe what they felt were “key features of a truly accessible workplace.” What they told us was that physical accessibility is more than meeting legal standards or specifications. And it often has nothing to do with material accommodations at all. Rather, it is about creating a space that allows them to perform their roles and interact with colleagues easily, comfortably, and with dignity. Such an environment integrates:

- **Physical accommodations** such as ergonomic workstations and environments that help those with disabilities integrate with co-workers;
- **Accessible building features**, for example, wheelchair accessibility, widened doorways, handrails, and appropriate washroom design;
- **A sense of inclusion** that lets those with disabilities interact easily with co-workers, access all the same facilities, and perform the same functions.

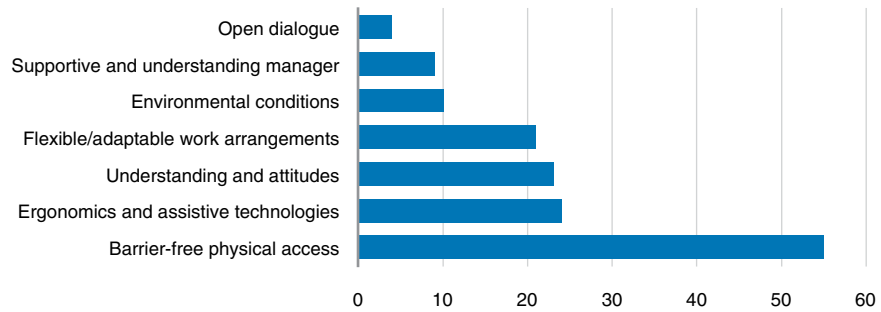
We grouped the responses of 202 survey participants who took the time to tell us in their own words what they thought were the key features of a truly accessible workplace. (See [Chart 4](#).) Physical modifications are undoubtedly important and identified by 55 per cent. However, collectively, other non-material considerations were just as important. These include attitudes, flexibility, and good management practices.

Our survey results suggest that reasonable investments in management practices and workplace access would allow many Canadians with disabilities to participate more fully in the workforce. To quantify this, we further asked our survey respondents how many more hours they might work per week if these investments were made.

Chart 4

Features of a Truly Accessible Workplace

(percentage of survey respondents)



Source: The Conference Board of Canada.

Two groups were identified whose disabilities prevent them from working to the extent that they would like. The first group includes those who are currently working and would like to work more but are unable to do so because their facilities and workspaces are not sufficiently accessible. The second group includes individuals who are currently unemployed or out of the labour force because they are unable to physically access places of employment. (The lack of accessible transportation was excluded as a barrier to accessing employment opportunities so that we could focus exclusively on barriers associated with the workplace itself.)

Of those who were employed, almost three-quarters of respondents indicated their condition was preventing them from working to the extent they desired. Of these individuals, more than 65 per cent believed that accessibility improvements would allow them to increase the number of hours they work, with possible increases ranging from just a few hours a week to over 25 hours per week. In fact, more than 10 per cent of respondents limited by their condition indicated they would be able to work more than 25 additional hours per week with accessibility improvements. (See [Chart 5](#).)

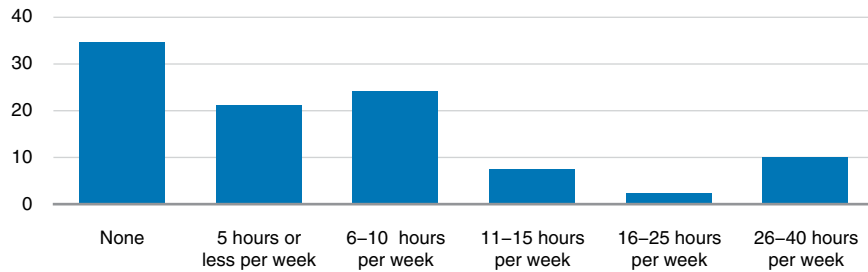
Our survey results also suggest that many individuals who are currently unemployed or out of the labour force would be able to work if investments were made to ensure facilities and workspaces were more accessible. From this group, roughly 57 per cent felt they

would be able to return to work. Of these, about 38 per cent would be able to work several hours per week, and nearly 19 per cent expected that they could work 11 or more hours per week. (See [Chart 6.](#))

Chart 5

Accessibility Improvements Would Allow Employed Canadians With Physical Disabilities to Work Additional Hours

(percentage of employed survey respondents who could work additional hours, by additional hours per week)

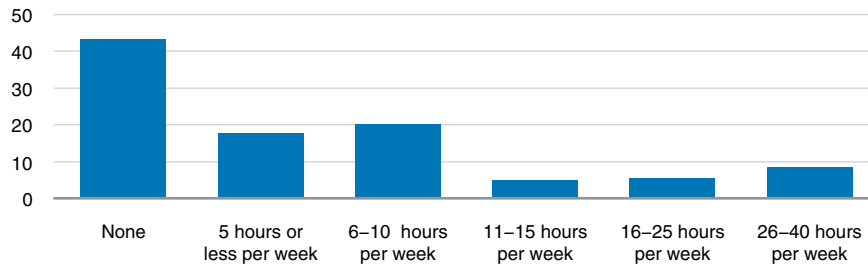


Source: The Conference Board of Canada.

Chart 6

Accessibility Improvements Would Allow Unemployed Canadians With Physical Disabilities to Work

(percentage of unemployed survey respondents who could work, by potential hours per week)



Source: The Conference Board of Canada.

For our analysis, we assumed that over the coming decade, Canadian employers would invest in improvements to physical access and inclusive practices to better integrate Canadians with disabilities into the workforce. Under such a scenario, our survey responses provide

a reasonable basis for calculating the increased participation and work hours of Canadians with physical disabilities. (For a more detailed discussion of the methodology used to calculate the increase in potential hours associated with accessibility upgrades, please see [Appendix B.](#))

Overall, we estimate that in 2030 about 552,000 more individuals—or 20 per cent of the total population with a physical disability that impairs their mobility, vision, or hearing—would be able to work or work more hours if workplaces were more accessible. Based on the increase in work hours that survey respondents provided, this would result in 301 million additional hours being added annually to the workforce in 2030—adding about 1.3 per cent to the total annual Canadian work effort.

CHAPTER 4

Economic Impact of Improved Accessibility

Chapter Summary

- Making facilities and workspaces more accessible would allow more people with disabilities to work. And many who are already employed would be able to work more.
- By 2030, the lift to the economy's productive capacity due to improved workplace accessibility would result in a permanent increase in real GDP of over \$16.8 billion.
- The boost to labour income would lift real personal disposable income by \$10.6 billion, facilitating a \$10-billion increase in consumer spending.
- These real GDP and income gains would also generate real revenue gains of \$2.5 billion for the federal government and \$1.9 billion for provincial governments.

Information collected from our survey of Canadians with physical disabilities suggests that most could more actively participate in the labour market if reasonable investments in improving workplace access were made. This chapter examines how improved labour market participation could affect Canada's economy based on expectations for improved participation. Better access would help lift economic activity and government revenues and likely reduce the cost of some social programs.

Over the medium to long term (five to 25 years), projections for real gross domestic product are primarily driven by the country's underlying economic capacity as measured by its potential output. Potential output measures the highest level of economic activity that an economy can reach without surpassing its capacity limits or igniting inflation and is determined by potential employment, productivity, and capital availability. (For a more detailed discussion of the methodology used to generate potential output projections, please see [Appendix B.](#))

An increase in the labour market participation of individuals with disabilities would affect the economy's potential output through the effect it would have on potential employment. Potential employment is an estimate of the total workforce hours that are available to contribute to economic activity. If investments were made to ensure facilities and workspaces were more accessible, more people with disabilities would be able to work. And many who are already employed would be able to work more. Both effects would lift potential hours worked and thus potential employment. This would result in an increase to Canada's productive capacity and a permanently higher level of economic activity.

Although it is not possible to suddenly improve accessibility, it is possible to aspire to make changes that will see improved access and improved labour market participation for Canadians with disabilities over a long-term horizon. To assess the potential long-term economic impacts of improving accessibility, we used our estimates of the number of

Canadians with a physical disability that impairs their mobility, vision, or hearing over the forecast horizon, as described in [Chapter 2](#).

To estimate the economic impact of improved accessibility, we relied on the Conference Board's model of the Canadian economy. The results describe the net economic benefit of improving accessibility and adding the estimated work hours to Canada's productive capacity.

The impact of improved accessibility would be overwhelmingly positive. By the year 2030, the lift to the economy's productive capacity would have resulted in a permanent increase in real GDP of \$16.8 billion. (Unless otherwise noted, all dollar figures are presented in real or inflation-adjusted terms, in constant 2017 dollars. This allows spending, income, revenue, and GDP estimates to be comparable over a long-term horizon.)

Given that the lift to economic activity would be due to an increase in labour availability, it is not surprising that more than three-quarters of the gain would be reflected in a lift to real labour income of more than \$13.5 billion. The boost to labour income would lift real personal disposable income by \$10.6 billion, facilitating a \$10-billion increase in consumer spending. The resulting increase in the economy's productive capacity would lead to a permanently higher level of economic activity. (See [Table 2](#).)

Table 2
Economic Impacts of Improved Workforce Access

	Impact in 2030
Real GDP (2017 \$ millions)	16,777
Labour income (2017 \$ millions)	13,478
Labour income as a share of the increase in GDP (per cent)	105
Real personal disposable income (2017 \$ millions)	10,608
Real consumer spending (2017 \$ millions)	9,986
Federal government revenues (2017 \$ millions)	2,547
Provincial government revenues (2017 \$ millions)	1,852

Source: The Conference Board of Canada.

These real GDP and income gains would also generate significant additional revenues for federal and provincial governments. Over the long term, improving labour force participation among Canadians with physical disabilities would generate real revenue gains of \$2.5 billion for the federal government and \$1.9 billion for provincial governments.

CHAPTER 5

Canadians With Physical Disabilities—A Major Consumer Market

Chapter Summary

- The consumer market for people with a physical disability that impairs their mobility, vision, or hearing could grow from 14 per cent of the total consumer market in Canada in 2017 (about \$165 billion) to 21 per cent in 2030 (\$316 billion in real 2017 dollars).
- Although spending on restaurants, retail, and entertainment currently makes up a small share of their monthly expenditures, survey respondents would spend more on these if they were more accessible.
- Strong demand for entertainment, recreation, and participation in sport and other physical activities is currently going unmet because of accessibility barriers.

Canada's economy is currently facing the growing challenges of an aging population and slow economic growth. The cresting wave of retiring baby boomers has already made it difficult for many organizations to maintain and grow their workforce. Over 240,000 people retired in Canada in 2016, nearly double the pace of net job creation over the prior few years—and this trend will continue to accelerate over the coming decade.

Increasing retirements will lead to slowing growth in the supply of labour, economic potential, income, and government revenues. At the same time, an aging population will continue to pressure public sector social programs and health care budgets.

People with physical disabilities are a large and growing consumer group. Their share of consumption will grow as Canada's population ages, given the association between age and the onset of disability. Moreover, if improved access to employment lifts income and spending power, the market share of people with physical disabilities will increase further. This is a group of Canadians with expanding spending clout.

The Internet has improved access to goods and services for all, including those with physical disabilities. However, participants in our survey were very clear that they desire better physical access to shop, do business, and especially socialize in their communities. This presents a major opportunity for businesses and an imperative for agencies that provide services to citizens. It also proves the case that improving access to patrons with physical disabilities should be seen as an investment, not simply a cost.

In this chapter, we estimate the potential spending power of people with a physical disability that impairs their mobility, vision, or hearing as a consumer group. We also share the perceptions of people with disabilities about the types of barriers they face in their everyday lives. And we report on how they believe their spending patterns would

It is possible that the accessibility-challenged consumer market will grow at an even faster pace than our results suggest.

change and what they would choose to spend their time and money on if physical access to goods and services improved.

To illustrate the increasingly important role that people with physical disabilities will play in the overall consumer market, we estimated the total income expected to be generated by people with physical disabilities. To do so, we relied on responses to our survey to calculate the average per capita annual income for each age cohort of respondents. Because our sample is more educated than we would expect based on the Canadian Survey on Disability, it is reasonable to ask whether our sample's income characteristics are inflated. As we do not have income data corresponding to the Canadian Survey on Disability, we cannot verify or adjust for this. The reader should keep this in mind when reviewing the numbers below.

The average incomes were assumed to apply to the year 2017. After 2017, average incomes were assumed to grow at the same rate as our projections for per capita labour income in the Canadian economy. We then multiplied the per capita income values for each cohort by the projected number of individuals in that cohort with a physical disability that impairs their mobility, vision, or hearing for each year from 2018 to 2030. This allowed us to account for income discrepancies across cohorts and for changes in the age structure of the population with physical disabilities. We then summed the total earnings across cohorts and added the increased income from higher labour force participation from our economic impact assessment. This provided a long-term estimate of the total income of Canadians with physical disabilities.

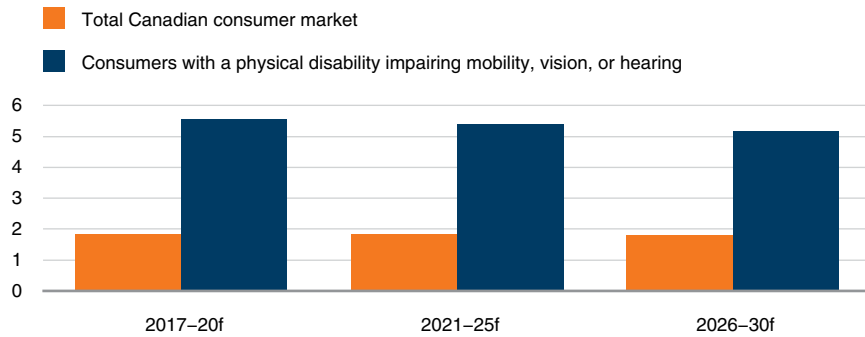
As a final step, we assumed that individuals with physical disabilities will allocate the same share of their labour income to consumption that the broader Canadian population does. This is a conservative assumption: given that individuals with physical disabilities tend to be older than the Canadian population as a whole, they may save a smaller portion of their incomes. As a result, it is possible that the market of consumers with physical disabilities will grow at an even faster pace than our results suggest below.

The results indicate that the amount of income earned by people with a physical disability that impairs their mobility, vision, or hearing will grow significantly faster than income earned by Canadians as a whole. Income growth will decelerate for both groups in the years leading up to 2030 because of an aging population and low fertility rates, but growth will trend downward alongside growth in the overall population. But because the number of Canadians with physical disabilities will grow faster than the general population in the coming years, their total income will also grow more quickly. The increased income from our scenario of higher labour force participation rates would add to the income gains by Canadians with physical disabilities. Notably, growth over the next few years will significantly outpace Canada’s overall consumer spending. (See [Chart 7](#).)

Chart 7

Spending Growth by Consumers With a Physical Disability That Impairs Mobility, Vision, or Hearing to Outpace Overall Canadian Market

(percentage change, compound average annual rate, annual consumer spending)



f = forecast

Source: The Conference Board of Canada.

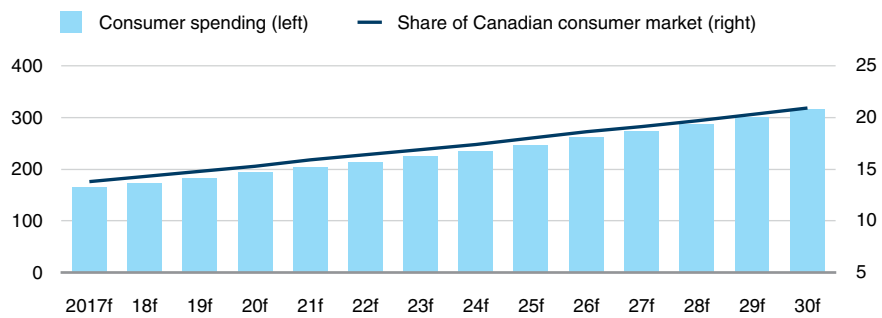
Because Canadians with physical disabilities are expected to experience significantly higher income growth than the general population under our scenario of improved access to employment, their share of the overall Canadian consumer market will rise over the coming years. The consumer market for people with a physical disability that impairs their

mobility, vision, or hearing amounted to about \$165 billion in annual spending in 2017, or 14 per cent of the total consumer market in Canada. By 2030, this share could grow to 21 per cent, with Canadians with a physical disability spending \$316 billion annually. (See [Chart 8](#).)

Chart 8

Growing Clout of Canadians With a Physical Disability That Impairs Mobility, Vision, or Hearing

(spending, 2017 \$ billions; market share, per cent)



f = forecast
 Source: The Conference Board of Canada.

Spending Patterns of People With Physical Disabilities

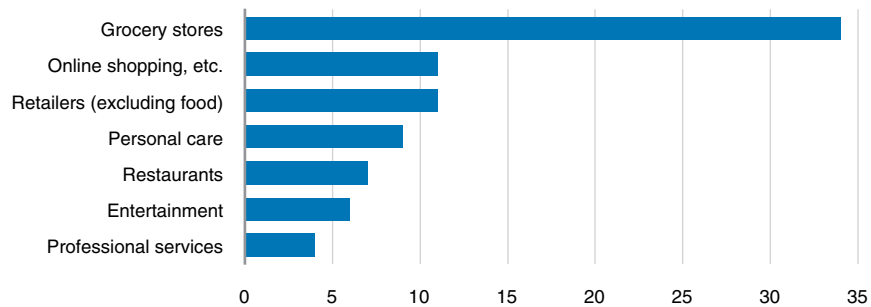
Given the spending power of people with physical disabilities, and the fact that their share of the consumer market will grow over time, businesses must be aware of the current limitations that exist in serving that market and how they can tap into the market in the future by making accessibility improvements. See the case study on Flavelle OceanFront Developments in [Chapter 7](#).

Forty-three per cent of survey respondents with moderate or severe physical disabilities indicated that their condition currently limits their ability to purchase items outside their homes. Many of these individuals believed that improvements in accessibility would make a difference in their ability to interact in their communities and spend their money as desired.

The results of our survey reveal important trends in the spending patterns of Canadians with physical disabilities and suggest investment in greater accessibility would have a positive impact in several areas.

Chart 9 summarizes the current composition of the expenditures of Canadians with a physical disability that impairs their mobility, vision, or hearing. Respondents tend to spend the largest portion of their disposable income (33.9 per cent) at grocery stores. Online shopping makes up 11.5 per cent of their spending—a significantly higher share than the 2.7 per cent share seen economy wide. Our respondents spend the smallest share of their disposable income at restaurants, on other entertainment (e.g., movie theatres, museums, and attending live performance events), and on professional services (e.g., legal services, financial services, accounting services).

Chart 9
Consumption Spending of Canadians With a Physical Disability That Impairs Mobility, Vision, or Hearing
 (share of disposable income by category, per cent)



Source: The Conference Board of Canada.

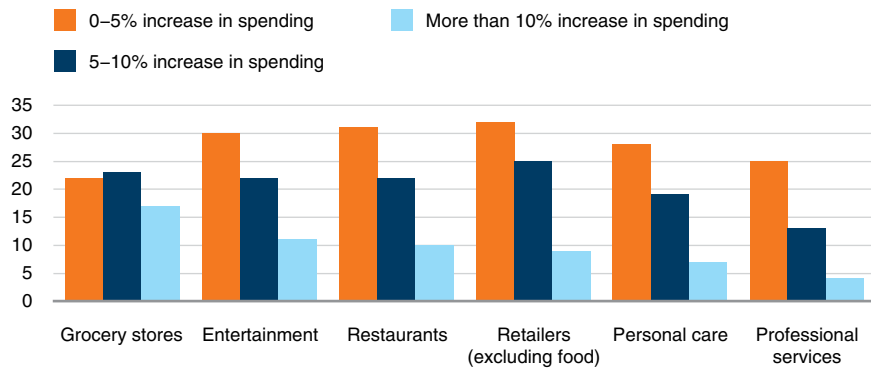
Although spending on restaurants, retail, and entertainment currently makes up a small share of their monthly expenditures, it appears that our sample of Canadians with physical disabilities would like to spend more on these if they were made more accessible. About two-thirds of survey respondents indicated they would increase the share of their disposable income spent on outside entertainment and at restaurants if physical

accessibility were improved. For both categories, over 10 per cent of respondents said they would increase their monthly spending by 10 per cent or more. (See [Chart 10](#).)

Chart 10

Improving Access Likely to Change Spending Patterns for Canadians With a Physical Disability That Impairs Mobility, Vision, or Hearing

(percentage who would increase spending)



Source: The Conference Board of Canada.

Physical upgrades would even have a major impact on spending in grocery stores, where respondents already spend the largest share of their income: 62 per cent of survey respondents said they would increase their monthly spending at grocery stores if accessibility were improved, with 17 per cent indicating they would spend an additional 10 per cent or more. Only 28 per cent of those whose condition limits their ability to purchase items they desire outside their home said that accessibility improvements would have no effect on their spending patterns.

Survey respondents were also asked in an open-ended question what they would like to do in their leisure time, if activities were more accessible. Overwhelmingly, the answer was entertainment, recreation, and participating in sport and other physical activities. This indicates that there is market demand currently going unmet because of accessibility barriers. With the number of Canadians with a physical disability that impairs their mobility, vision, or hearing projected to advance at nearly

twice the rate of the general population between now and 2030, this is a growing market segment with strong growth potential—businesses and community sports and recreational organizations need to make sure they can benefit from this growing demand by making their goods and services available to those with physical disabilities.

CHAPTER 6

How Can Canada Improve Access?

Chapter Summary

- Universal design is an approach to creating built environments that can be accessed to the greatest extent possible, considering the full range of diverse characteristics among all users who will interact and engage in the space.
- Including elements of universal design requires investment over time and commitment from organizational leaders.
- Accessibility and inclusion should be part of overall organizational strategy. When inclusive values are incorporated into strategy and policy, accessibility becomes more intentional and carries through to plans and action.

Universal design is an approach to creating built environments that can be accessed to the greatest extent possible, considering the full range of diverse characteristics among all users who will interact and engage in the space.¹ Simple lack of awareness means that Canadians have a limited understanding of the principles of universal design and access—incorporating ease of use and accessibility to the widest population possible into planning and design.

There are many ways for an organization to make its work environment more comfortable, more user-friendly, and easier to navigate. A range of simple, low-cost modifications can improve accessibility without expensive renovations or new building. Undoubtedly, costs are lower and benefits more sustainable when accessibility is embedded into design considerations. But even structural renovations can return their investment over time. Below we explore a range of ideas, tools, and approaches that organizations can consider to make their workplace more accessible.

Beyond the Building Code— Universal Design

Improving accessibility is often thought of as making structural changes to bricks and mortar. However, in practice, accessibility encompasses more than renovations. Accessibility is about good planning and design to create an environment that considers human diversity and inclusion. This user-focused approach to planning and design can be a powerful way to create a truly accessible environment. Universal design encompasses four main aspects:

¹ Canadian Human Rights Commission, *International Best Practices in Universal Design: A Global Review*.

- **Adopting a human-centred approach:** Universal design considers the full range of diverse characteristics among all users who will interact and engage in the space.
- **Going beyond safety to accessibility:** While building codes provide basic safety standards, most do not account for the full range of needs that arise from differences in human abilities and characteristics. Universal design goes beyond safety to consider design elements that will enable full participation based on a spectrum of human abilities and needs.
- **Maximizing user experience:** Universal design is not a list of standard specifications. Rather, it is an approach to design that maximizes the experiences of all users. Any design features that enhance access or use by some people should not hinder or diminish the user experience for others.
- **Striving for inclusion:** Universal design strives to make buildings, facilities, and tools more socially inclusive and user-friendly.²

For a more detailed primer on the components of universal design, see [Appendix A](#), “Accessibility Audit 101: A Primer on Universal Design.”

Applying Universal Design to Create More Inclusive Spaces

Including elements of universal design requires investment over time and commitment from organizational leaders. Below are some tips and considerations that have helped organizations get started.

Make Incremental Changes

Rather than trying to do everything at once, small and incremental changes can be a good first step. Testing new technologies, designs, and prototypes will help identify what works best for a particular organization.³ TD Bank has taken this approach with accommodations and has successfully tested and implemented simple technological

² Ibid.

³ Martin and Florida, “Why Invest in Design? Insights From Industry Leaders.”

solutions that benefit its entire workforce at an average cost of only \$180 per accommodation. (See the case study on TD Bank in [Chapter 7](#).)

Involve Users

Engaging with users, customers, and employees can help to show if, and how, design modifications will help. Consulting people with a diverse range of characteristics, abilities, and needs helps to gain a holistic perspective on how different users interact with their environments. Through a better understanding of users, organizations will be better prepared to anticipate and respond to their needs.

Anticipate and Plan for Accommodations

Although universal design aims to create an environment that is socially inclusive and accessible for people with all levels of ability, it does not replace the need for accommodations. There must still be a process to ensure that individuals can obtain accommodations if the design does not enable their access.

Collaborate

A range of stakeholders with different expertise and interests—such as people leaders, facility managers, planners, architects, and disability consultants—should be involved in designing and building more inclusive spaces. When organizations operate in silos, planning suffers.

Know the Standards

When considering investments in physical space, it's important to consult Canadian and international standards. Some elements of physical space are not obvious. Standards can help organizations assess how best to invest and what elements will be key for their space. For example, obstructions or protrusions can be dangerous for individuals who have visual impairments and rely on a white cane or guide dog for mobility. In Canada, protrusions are not permissible in the pedestrian path of travel.⁴

⁴ Canadian Human Rights Commission, *International Best Practices in Universal Design: A Global Review*.

Or, when designing access routes, it's important to bear in mind that Canadian standards stipulate that ground surfaces should not be heavily patterned.⁵

Key Business Benefits of Universal Design

It is good for everyone: Physical space affects the entire workforce, so good design benefits everyone.

It provides a competitive edge: Design is playing an increasingly vital role in innovation, competitiveness, and the determination of economic value.⁶

It's sustainable: Investments in universal design might appear to be the costlier option, but returns can be higher and more sustainable.

Embedding Accessibility Into Organizational Strategy and Values

Accessibility and inclusion should be part of overall organizational strategy. When inclusive values are incorporated into strategy and policy, accessibility becomes more intentional and carries through to plans and action.

Respect

Respect for the feelings and needs of people with disabilities should be a foundation for making changes to improve accessibility. Survey respondents told us that a work environment where all people are respected contributes to their overall perception of accessibility and truly inclusive spaces.

5 Ibid.

6 Martin and Florida, "Why Invest in Design? Insights From Industry Leaders."

Acceptance

Acceptance and tolerance for difference are key elements of an inclusive work environment. As one respondent told us, a truly accessible workplace is one where “people are warm and welcoming, people do not judge me ... a workplace where everyone supports one another.”

Empathy

A work environment where employers and co-workers understand the feelings, challenges, and abilities of one another fosters a sense of inclusion. Perceived empathy helps people with physical disabilities feel that they belong. One survey participant explained that it would make a difference “if the people can realize that there is some effort in trying to be somewhat normal.” Another said that “an understanding boss who will go the extra mile to keep you in your job” is what helps them manage their disability and career.

Comfort

A comfortable work environment is a key enabler for employees to perform work tasks and excel to the best of their abilities. Think about ease of movement and the ability to navigate all parts of the building. One survey respondent highlighted the importance of comfort by explaining that, for them, accessibility is having “a place where you can work in comfort and the employer will attempt to make the workplace area as specific to your needs as required.”

Dignity

People with physical disabilities want to feel like a respected member of their team while performing daily work. For people with physical disabilities, being able to perform routine tasks with dignity is an integral part of a truly inclusive workplace. One survey respondent explained that they would like to “feel normal at work ... to be allowed to work alone or independently.”

Leveraging Information and Resources

The journey toward accessibility will differ from organization to organization. Expertise is not essential. Understanding how to access accurate and relevant information will provide guidance on identifying what is feasible and right for an organization's facilities and employees.

Ask, Listen, and Collect Information

To make informed choices, organizations need information about accessibility. They should seek out help, resources, and information. Listening to advice and becoming informed can increase overall awareness and contribute to more thoughtful and better developed approaches to accessibility and inclusion.

You Don't Know What You Don't Know

Often organizations do not know how to address accessibility-related issues. They may be unfamiliar with the range of elements in their workplace that affect mobility and inclusion, or of the diversity of human needs that they must cater to. There are several sources of information that decision-makers can leverage, including employees, community organizations, and accessibility experts and consultants.

Go to the Source

Asking employees is the best way to learn about their needs and discuss required changes.

Conduct Appropriate Research

By targeting research on options that can make a space more accessible, comfortable, and navigable, organizations often find it is not necessary to make large investments.

Leverage Expertise of Community Partners

Community partners can be powerful resources for organizations that do not have their own accommodations team and want to implement new accessibility practices.

Build Relationships

Reaching out to accessibility advocates and champions with expertise in the field of accessibility and accessible design, as well as working with experts, professionals, and specialists, can expand an organization's knowledge and expertise about different types of accommodations.

As we discuss in [Chapter 7](#), some businesses are already looking to tap into the growing market of Canadians with physical disabilities, and their results reflect clear business benefits.

Want to Ramp Up Quickly? Three Simple and Low-Cost Accommodations

Clutter: Removing clutter from workspaces makes it easier for everyone to move around. This is a low-cost upgrade that many organizations can implement quickly.

Open spaces: Many organizations are already moving toward more open work environments. More open office space allows employees with physical disabilities to move around with comfort. With a little more thought, organizations can ensure revamped spaces are both collaborative and accessible without incurring additional costs.

Low-cost technologies: Ergonomically designed keyboards and mice and software such as voice recognition typing can make technology accessible for employees with physical disabilities. These technologies also help employees with repetitive strain injuries, wrist injuries, or other injuries.

CHAPTER 7

Benefits to Business: Case Studies of Companies That Have Improved Accessibility

Chapter Summary

- Flavelle, a residential developer, is targeting older, affluent baby boomers as a key market segment by embedding accessibility early in its development plan, undertaking extensive community consultation, and seeking expertise to help plan and design an inclusive building environment.
- At Sodexo, a multinational food services company, managers who work at client sites are ambassadors for the organization's values, communicating the business benefits of accessibility and gaining buy-in from customers and clients.
- Toronto–Dominion Bank listens to employees about their needs and encourages its system technology team to enhance accommodation, which often requires only modest investments.

Flavelle OceanFront Development: Planning for Inclusion Makes Business Sense

Flavelle OceanFront Development is the owner of a 34-acre waterfront property surrounded by ocean on three sides in Port Moody, British Columbia. Flavelle plans to turn the space, which is currently designated as an industrial-use site, into a mixed-use community. Flavelle is in the beginning stages of planning and is committed to designing and building a community that is accessible and inclusive for all.

Accessible Design: A Key Selling Point

For Bruce Gibson, a developer on the project team, designing a community where anyone can live is a focal point of the marketing strategy. Accessible design will be an important selling point.

In particular, Flavelle realizes that older, affluent baby boomers are a large and growing market segment. Many baby boomers are downsizing from single-family dwellings to homes where they can more easily age in place, delaying the time when they might need to move to a facility that offers care. To appeal to these baby boomers, the buildings and open spaces must be accessible for people with limited or decreasing mobility. Better design will offer a competitive advantage.

A Community for Everyone

The overall project envisions a community that is universally inclusive for all people.

- Flavelle undertook extensive community consultation. The project team had over 1,700 conversations with the public through information sessions, event kiosks, site tours, and canvassing.
- Public consultation with accessibility experts, advocates, and people with disabilities brought the issue of accessibility to the forefront.

You Don't Always Know What You Don't Know

The Flavelle team quickly realized that they needed more information to help plan and design truly inclusive built environments. To get informed, they added an accessibility consultant who:

- helped deepen the project team's understanding and raise awareness of some key accessibility issues by sharing expertise;
- provided input on aspects of the Flavelle plan to incorporate enhanced accessibility by explaining how people with various levels of ability might or might not be able to interact with the built environment;
- changed the overall mindset of the project team and the way they considered inclusion; it became something that was embedded into all planning and design processes.

Seamless Accessibility—From the Inside Out

Designing accessible spaces from a user experience perspective involves considering public spaces as well as the building itself.

Outdoors, two nature attractions were directly affected and changed because of planning that embedded accessibility.

- **Trail system:** A beautiful trail on the property would be a highlight and selling point for the community. However, some people with a physical disability would not be able to walk on the trail in its current state of design. Consequently, the team is adapting the plans to ensure that it will be accessible for everyone.
- **Oceanfront edge:** Part of the trail leads right up to the water's edge. Since one of the project goals is environmental sustainability, a commitment to building an environmentally sustainable trail directly affects what material the trail is made of, and this in turn has an impact on accessibility. As a result, the project team has committed to finding a balance that will consider both universal access and environmental sustainability.

Indoors, accommodations are being designed to be seamless, with no distinction between features for able-bodied individuals and individuals with physical disabilities. The following features have been incorporated

Thinking about accessibility and inclusion at the planning stage has allowed Flavelle to incorporate universal access into its entire planning process.

into all condo floor plans to ensure that all units would be accessible to people with all levels of mobility:

- Light switches were moved down and outlets up. This doesn't cost more when it is part of the plan and enables those who use wheelchairs to have access.
- The bathrooms are designed so that grab bars can easily be installed when needed. This involves placing an extra piece of wood in the wall to make it easier for grab bars to be installed later at less cost than a typical retrofit.

Keys to Success

Embed inclusion into the plan: Thinking about accessibility and inclusion right at the planning stage has allowed Flavelle to incorporate universal access into its entire planning process at very little additional cost. Planning ahead has enhanced market appeal and will lead to cost savings.

Consult stakeholders: Public consultation has been key for gaining buy-in from all stakeholders involved and has helped Flavelle learn about how to cater to the needs of its diverse target market.

Seek accessibility expertise: Leveraging the knowledge and expertise of accessibility champions and an accessibility consultant has helped Flavelle to embed accessibility into the property design process.

Sodexo: Quality of Life Is for Customers and Employees

Sodexo is a multinational food services and facilities management company headquartered in France. It has 420,000 employees representing 130 nationalities in 80 countries. With such a global reach, diversity and inclusion is a cornerstone of the organization's culture and an overarching consideration in its workplace planning and client strategies.

An open mindset and respect for all employees has been the impetus for modifications made to meet the needs of employees with disabilities.

Managers Are Ambassadors for Accessibility

Sodexo considers accessibility to be an important principle and foundation for an inclusive work environment. Accessibility and workplace design can be tricky for Sodexo because its employees are often working at client sites where they do not have a lot of control over the design of the physical work environment. Managers are the linchpin for creating and promoting accessible work environments:

- At client work sites, managers are ambassadors for the organization's values. They communicate the business benefits of accessibility and are instrumental for gaining buy-in from customers and clients.
- Managers are responsible for embodying the organization's commitment to diversity and inclusion by translating these values into practices and implementing accessible policies.
- Managers ensure inclusion by reaching out, having open communication, and treating everyone respectfully.

Investment in Individuals

An open mindset and respect for all employees has been the impetus for modifications made to meet the needs of employees with disabilities. The following principles help guide managers to create truly accessible work environments:

- Invest in training.
- Seek employee involvement in the accommodation process before any modifications are implemented.
- Communicate from the beginning to allow managers to gain an understanding of their employees' needs.
- Understand employees' needs before taking any action. This often results in modifications that are inexpensive and easy to implement. For example, conversations with employees with hearing disabilities revealed communications challenges in the fast-paced kitchen environment. Notepaper isn't always handy. So, rolls of paper towel are kept near work stations so that team members can write notes to colleagues with hearing challenges if needed. Also, printed training material was created to support training for deaf employees.

The Bottom Line: Accessibility Makes Business Sense

Sodexo's approach to accessibility has boosted employee morale and retention. Based on employee surveys:

- Employees with disabilities are more likely to follow safety directions and protocols than able-bodied employees. This debunks a myth or fear that hiring employees with disabilities will lead to higher accident rates and worker's compensation costs.
- Employees with disabilities had higher morale, satisfaction, and engagement scores. Retention rates were higher, resulting in savings on recruiting and training costs.

This mindset has also resulted in noticeable financial impacts. As Sean Callaghan, a manager at Sodexo, explains, "At first it started as doing the right thing, but, over time, we noticed that it was making a difference to operational expenses and the bottom line as well.

"It's not just a win-win; it's a win-win-win—for the employer, customers, and the employee."

Toronto–Dominion Bank: Banking on TD's Commitment to Accessible Employment

Toronto–Dominion Bank is one of Canada's five largest banks. TD's 80,000 employees serve about 25 million customers worldwide, offering a range of financial products and services. TD's workforce reflects the diverse communities that it serves, so catering to a diversity of needs is embedded in its culture.

The TD Approach

TD's approach to accessibility is built on creating an environment that considers the needs and abilities of all users—both clients and customers. The systems and processes that TD has in place allow accessibility to be seamlessly embedded in all parts of the business.

Employees with longer tenure who happen to have physical disabilities are a valuable resource for training and mentoring new employees.

Key processes and programs that promote accessible work environments include the following:

- **Accommodation process:** The accommodation process begins before potential employees even join the company. TD engages and listens to potential employees to learn about their abilities, challenges, and needs. The goal is to ensure that any accommodations are made ahead of time to make the start of employment a seamless transition.
- **Assistive technology program:** TD's system technology team works closely with people leaders to provide innovative and useful tools. The program tests new technology and partners with employees to ensure that they are comfortable with their accommodation. Bert Floyd, the program's manager, explains that the most often requested accommodations are adapted mice and keyboards, which are inexpensive and widely useful, both for people with physical disabilities and for people with repetitive strain injuries. In fact, the average cost for an accommodation at TD is around \$180.

Business Benefits

TD has experienced the business benefits of its inclusion mindset broadly across the organization. A study of its call centres found the following:

- **Better-than-average retention:** Retention rates of people with disabilities are higher than for the general workforce.
- **Mentors:** Employees with longer tenure who happen to have physical disabilities are a valuable resource for training and mentoring new employees.
- **Reduced training costs:** There is a steep learning curve at TD's call centre, so adapting facilities to make them more accessible for employees with disabilities has reduced training costs.

Keys to Success

Plan: Planning ahead ensures that TD can offer the appropriate accommodation for someone joining the organization. All new employees

are asked if they require any accommodation so it can be arranged before the first day on the job.

Leverage community partners: Working with community organizations and groups that specialize in specific disabilities ensures that TD has the right information to make educated decisions about design, policies, and accommodations.

Train and engage: Education provides support to managers and peers so they better understand the functional needs of an individual with a disability and how they can provide support.

Accommodations are not necessarily costly: By working with employees to understand the functional requirements of a role, it is possible to come up with innovative solutions that are not necessarily expensive.

Accommodations are not just for employees with disabilities: Assistive technologies such as voice recognition software can improve efficiency and productivity for all employees. It is a worthwhile investment to learn more about available technologies.

CHAPTER 8

Conclusion

Chapter Summary

- Reasonable investments in workplace accessibility could lift Canada's economic potential significantly and permanently—providing benefits to households and also to business and government revenues.
- In addition to physical features or design, attitudes and mindsets within the workplace have a critical impact on creating accessible environments.

Our research has shown that substantial potential economic gains can be realized if current accessibility issues can be addressed. With reasonable investments in workplace accessibility, Canada’s economic potential could be significantly and permanently lifted—providing benefits to households but also to business and government revenues. Moreover, organizations need to be aware of the growing size of the consumer market represented by people with physical disabilities—its growth will significantly outpace that of the overall consumer market.

The suggestions provided by our survey respondents provide a good starting point for the type of changes that can be implemented. With a little more thought and investment in accessibility, Canada could open many doors for individuals and benefit its economy in the process. Of equal importance as physical features and design are the attitudes and mindset within the workplace, which have a critical impact on creating accessible environments. This is the difference between technically accessible work environments and ones that are truly inclusive. At the firm level, inclusive businesses foster environments where employers and co-workers understand, appreciate, and leverage differences.

The findings should be a wake-up call to governments and businesses of all sizes: improving accessibility is good not just from an inclusion lens but will also boost their bottom-line performance.

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APPENDIX A

Accessibility Audit 101: A Primer on Universal Design

The following is excerpted in part from the webinar “Accessibility Audit 101: Increasing Access for People With Physical Disabilities” presented by Jenny Blome, Manager of Accessibility Services for the Rick Hansen Foundation, on May 31, 2017.

Universal design is a concept developed in the mid-1980s by Ronald Mace. It is about designing products and environments “to be usable by all people, to the greatest extent possible, without the need for adaptation of specialized design.”¹

Jenny Blome, Manager of Accessibility Services for the Rick Hansen Foundation, describes universal design as simply meaning that a design works for everyone.

“The effect of universal design is to expand current design parameters to be inclusive of a broader range of users, regardless of their age or size or those who have any particular physical, sensory, mental health, or intellectual ability or disability,” Blome says. “It calls for wider doors and shorter reach requirements; it makes it safer and easier for a broader range of users and it makes adaption to accommodate future assistive devices/technologies easier and much less expensive.”

Universal design takes into consideration the myriad ways individuals interact with their environments. From an organizational perspective, adopting some well-proven universal design techniques will help many

¹ Mace and others, “The Principles of Universal Design.”

individuals in a variety of situations. It may help skilled workers who are aging to extend their careers. It will also facilitate access to a largely untapped pool of people with disabilities who are trained, able, and seeking potential employers with inclusive work environments.

Outward signals of inclusive design send an important message to prospective employees and customers alike that needs will be accommodated in a sensitive and intuitive manner that supports individuals' dignity and independence.

Rick Hansen Foundation offers an Accessibility Certification Program that has been developed in partnership with the Canadian Standards Association. The foundation breaks down the built environment into eight key areas: vehicular access; exterior approach and entrance; interior circulation; interior services and environment; sanitary facilities; signage, wayfinding, and communications; emergency systems; and additional uses of space.

Vehicular Access

Including Passenger Zone and Public Transit

Consider the number of accessible spaces and design with ample width for wheelchair transfer.

Tip: Ensure that the parking spot is flat and there is a curb ramp leading to the pedestrian pathway. Public transit stops should have safe, practical links to facilities. Lighting, shelter, seating, and gentle grades on pathways are important. Don't hesitate to inform your local municipality about concerns.

Exterior Approach and Entrance

Including Pathways, Ramps, Stairs, Entrance, and Dog Relief Area

Pathways should slope gently and have regular rest areas. They should be well lit and have multiple access points. The grade of the

slope should be no more than 5 per cent. Ramps and stairs should have contrasting handrails, which can be fully grasped, and a firm, slip-resistant surface. Stairs should also have high contrast, non-slip nosing, and tactile warning strips. Entrance ways should have architectural features that distinguish them from the rest of the building, as well as tactile, sensory cues for people with visual difficulties.

Tip: Service dogs are becoming more common and assist people with a broad range of disabilities. Consider a dog relief area that is 3.5 metres square or more, with signage and transfer space on one side to accommodate a wheeled mobility device.

Interior Circulation

Including Doors, Internal Passageways, Stairs, and Elevators

Power doors should have sufficient opening time, with a smooth floor, and be operable with one hand, with minimal force required and limited requirement to grasp or twist. For hallways, consider width, contrasting colours, illumination, colour tiling, and other signposts. Steps should have uniform riser heights; the risers should be closed, with no more than 10 steps between landings. Handrails should be on both sides and continue beyond the last stair to the landing. Elevator floors should be light coloured and contrast with the walls. Controls should be on the side because it is difficult to turn a chair. Consider the height and accessibility of the controls.

Tip: For more technical specifications, see the Canadian Standards Association's guidelines on accessible design for the built environment.

Interior Services and Environment

Including Lobby, Reception, and Waiting Areas, Service Counters, and General Utility Areas

Consider the logical arrangements of routes, signage, and services to facilitate movement in a busy space. Floor finishes should be firm but

without glare. Main service areas and counters should be uniformly accessible. There should be a range of seating types with and without arms to facilitate transfer. Consider sound dampening, illumination, location of washrooms, height of counters, and opportunities for “no touch” amenities.

Tip: Small, segregated cut-outs in service areas for wheelchair users are not recommended—especially where they are off to the side. They often get used as repositories for product display and other storage and can have the unintended effect of segregating rather than integrating people with mobility impairments.

Sanitary Facilities

Including Washrooms and Showers

Facilities should have non-slip flooring and power outlets and accessories at an accessible height. Ensure there are appropriately located grab bars and back rests on toilet seats in accessible stalls, and consider emergency call buttons.

Tip: Consider adult change benches in washrooms and showers so people can travel confidently.

Signage, Wayfinding, and Communications

Including General and Room Signage, Directories, and Communications

For wayfinding, use colour and texture, floor surface, illumination, and other ways of helping people navigate. Room signage should be on the latch side and not on the door and should include bold letters and universal symbols with Braille on the bottom of the sign.

Tip: Consider installing accessible listening devices in reception areas, meeting rooms, and auditoriums.

Emergency Systems

Including Emergencies, Fire Alarms, and Evacuation Procedures

Clearly identify emergency exit refuge areas for people with disabilities. Incorporate visual fire alarms in public spaces; it's also important to include consideration of people with low vision in your emergency planning.

Tip: Emergency evacuation devices that can facilitate a rapid exit are readily available on the market.

Additional Uses of Space

Including Workstations, Meeting Rooms, and Other Special Activity Areas

Ensure that there is enough room for people to move around comfortably. Consider the space between tables when chairs are pulled out so that people can navigate a busy meeting room. Ensure there is room for companion aides. Special features in your building must also accommodate people with disabilities, such as variable-height desks and a mixture of chairs in meeting rooms. Ensure that features like playgrounds have had an access review.

Tip: Be aware of the potential users of any space and distinct types of activities when designing all aspects of the built environment.

APPENDIX B

Methodology

To assess the economic impact of adding additional workers with physical disabilities into the workforce, we first created a baseline population projection until 2030. Based on this projection, we created a detailed estimate of Canada's potential output. This allowed us to paint a picture of Canada's economy over the next 15 years. We then estimated how Canada's potential output could change if more workers with physical disabilities were able to enter the workforce.

Projecting Canada's Population Over the Long Term

We relied on Statistics Canada's demographic model to create our baseline population projection. The projection was based on several key assumptions about demographic factors.

The national fertility rate has been relatively steady over the past decade, rising from 1.46 live births per woman of child-bearing age in 2001 to 1.56 in 2011. Given that many of the key factors affecting the fertility rate are unlikely to change over the next few decades, we assumed the fertility rate will stay at its current level.

Technological, social, and economic advancements over the last 80 years have raised overall life expectancy considerably. Prior to the 1930s, men and women had roughly the same life expectancy, at about 60 years. Over the following 50 years, life expectancy for Canadians rose to nearly 80 years. The latest available data indicate that average life expectancy at birth in 2007–09 had climbed to 83.3 years for women and 78.8 years for men. Additionally, life expectancy for those aged 65 was 18.5 more years for males and 21.6 for females. Over the next

two decades, assuming continued medical advances and economic prosperity, life expectancy in Canada is expected to continue to rise. Consequently, we assume a continued downward trend in death rates.

The natural increase in the population (births minus deaths) is expected to continue to shrink over the forecast. Despite the downward trend in death rates, the natural increase is expected to fall from about 126,700 in 2017 to about 64,500 in 2030. Consequently, net immigration, which is the number of new arrivals minus the number of people leaving the country, will increasingly be the key component of Canada's future population growth. Net immigration is expected to rise from about 253,000 in 2017 to about 273,000 in 2030.

Estimating Canada's Long-Term Potential Output

The Conference Board of Canada estimates Canada's potential output using a Cobb-Douglas production function, which estimates the economy's production capacity base on potential employment, the stock of productive capital, and productivity.

The capital stock is determined simply as the capital stock at the end of the last period, plus projections of new investment, less depreciation. Productivity or technological change is a measure of the efficiency with which capital and labour mix to produce output. Historically, total factor productivity has been defined as the gain in output growth that is not accounted for by improvements and growth in labour and capital. Over the forecast period, it is assumed to grow at its historical average rate.

Potential employment is a measure of the available work effort, assuming that everyone who wants to work is able to do so. The first step in estimating potential employment is to estimate the potential labour force, which is forecast by projecting labour participation rates, by age and gender. This is combined with demographic projections, a forecast of the natural unemployment rate, and potential average hours worked to estimate Canada's level of potential employment. The natural unemployment rate is the lowest level of unemployment that can

be sustained in the economy without creating inflation. It is estimated over time, based on various factors, such as the generosity of the employment insurance program and other social programs. Potential average hours worked are estimated over time, based on past trends and the changing age structure of the labour force.

Because of the aging population, growth in the potential labour force growth will not keep pace with population growth over the forecast. Strong population gains in the 65-and-over age group will overshadow growth in the 15-to-64 age group. This will cause the overall labour participation rate to decline gradually, as baby boomers move progressively into older age cohorts. People aged 60 and over have lower labour force attachment, due largely to the effects of health problems and retirement. Even though we assume labour participation rates among older cohorts will increase over the forecast horizon, this will not be enough to offset the rising number of retirements. Therefore, as a growing proportion of the Canadian population moves into the 65-and-over cohort, the overall labour force participation rate will fall abruptly.

Not only do older cohorts have lower participation rates, but they are also much more likely to work part-time hours, further reducing potential labour supply. For example, the average employed male in the 55-to-64 age cohort worked an average of 36.3 hours per week in 2013. For an employed male in the 65-and-over cohort, that number fell to 30.1 hours. Lower participation rates and fewer hours worked will be offset somewhat by continued declines in the natural rate of unemployment, driven by the increase in the average age of the labour force. Since older workers are not as likely to quit their jobs to look for other work, the average number of unemployed workers between jobs (frictional unemployment) will decrease as the average age of the labour force rises.

Estimating the Increase in Labour Market Participation and the Economic Impacts From Higher Labour Supply

To estimate the permanent boost in economic capacity from improved accessibility for Canadians with a physical disability that impairs their mobility, vision, or hearing, we first calculated the increase in potential hours worked based on responses to our survey. We then used our model of the Canadian economy to determine how the boost to the labour force would affect the economy.

Impact on Hours Worked

The impact on labour market participation has two distinct elements: higher participation for those currently working and participation of those currently not working.

Impact on the Population of Employed Canadians With a Physical Disability That Impairs Mobility, Vision, or Hearing

Using the responses to our survey, we determined the number of working people with a physical disability that impairs their mobility, vision, or hearing for each 10-year cohort (i.e., from 15–24 to 65 and over). The next step was to determine which share of these workers would work more—and how much more—if accessibility was improved. The survey responses allowed us to identify the number of people in each age cohort who indicated that their condition was preventing them from working to the extent that they desired and that they would be able to work more if facilities upgrades were implemented. This number was then divided by the total population in each cohort with a physical disability that impairs their mobility, vision, or hearing to derive the share in each cohort that could work more.

The next part of the analysis was to determine how much more respondents would work in each of the cohorts. Based on the survey responses, we calculated each cohort's average number of additional hours worked if accessibility were improved. Because all survey

respondents were asked to select a range, rather than a specific number of additional hours, we assumed that each respondent worked the midpoint of the range they chose. For example, a survey respondent who indicated they would work between 10 and 15 additional hours on average per week would be assumed to work 12.5 hours, while a survey respondent who indicated they would work five or fewer additional hours on average per week would be assumed to work an additional 2.5 hours.

With the information on how many people with a physical disability that impairs their mobility, vision, or hearing would increase their hours worked, and by how much, we calculated the increase in total hours worked. The share by cohort calculated above was applied to our projection for the population with a physical disability that impairs their mobility, vision, or hearing over the forecast to derive how many people would work more in each year. These figures were multiplied by the average increase in hours worked for each cohort to derive the total increase in hours worked by cohort. (See Equation 1.)

Equation 1

$$\begin{aligned} \text{Increase in hours} &= \text{employed population with mobility, vision, or hearing} \\ &\quad \text{disability} \times \text{share that would work more}_i \times \text{average} \\ &\quad \text{increase in hours} \\ &= 15\text{--}24; 25\text{--}34; 35\text{--}44; 45\text{--}54; 55\text{--}64; 65+ \text{ (Eq 1)} \end{aligned}$$

The total economy-wide increase in hours, from those assumed to be employed, was then calculated as the sum of increases in hours across all age cohorts.

Impact on the Population of Unemployed Canadians With Physical Disabilities

The methodology for determining the increase in hours worked for those currently not employed was identical to that for those currently employed. First, based on the responses to our survey, we determined the number of non-working people (i.e., unemployed, retired, and people out of the labour force) with a physical disability that impairs their mobility, vision, or hearing for each 10-year cohort aged 15–24 up to 65 and over). We then identified which share of those individuals would work if accessibility

were improved and, on average, how many hours they would work. The total hours worked by cohort through accessibility improvements then became the product of the unemployed population with a mobility, vision, or hearing disability, the share who would work, and the average number of hours they would work. The total number of additional hours was added across all cohorts for an estimate of the total number of additional hours that would be worked by those not currently employed.

Economic Impact of Additional Hours Worked

The total number of additional hours worked for those currently employed was added to the additional hours expected from those currently not employed to derive the total increase in hours attributable to improving accessibility. The Conference Board of Canada used its forecasting model of the Canadian economy to create a baseline economic outlook. Then the additional hours that would be worked thanks to accessibility improvements were added to our estimates of potential employment. The model was re-simulated, and a new forecast was produced to include the higher hours worked. The difference between this forecast and the original baseline forecast represents our economic impact of improving accessibility.

APPENDIX C

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