









Serving Bruce Grey Huron Perth



EXECUTIVE SUMMARY

With the onset of COVID-19, remote work began to gain traction across Canada. Remote work (telework), a working style that allows employees to work outside of their usual place of work, offers a range of benefits to both employers and employees, including financial savings and increased job flexibility. However, remote work is not possible or desirable for all occupations. Thus, the objective of this report is to understand how remote work might affect the Four County Region's labour force. To do this, telework ability, business preferences, and employee preferences are analyzed at the provincial and local levels where possible. Additionally, this report examines the potential effects of remote work on job vacancies and commuter trends.

Overall, these findings suggest that, for the Four County Region, remote work may not be the radical change many predicted at the onset of COVID-19. This is largely due to the relatively low proportion of occupations in the region that can be entirely teleworked as well as employers' hesitance to adopt telework practices. Additionally, the majority of Four County's vacant positions are in occupations that cannot be teleworked due to their physical nature. However, it is necessary to emphasize that the value of telework in the Four County region is not in the number of jobs that can be teleworked, but the opportunity it provides employers. Moving forward, employers can utilize fully remote or hybrid remote work models to access a larger labour pool and make positions more desirable for current and future employees. This may be especially useful for employers looking to fill specialized positions that can be teleworked. Therefore, while not leading to significant change, remote work is likely to be a beneficial tool for employers, providing new opportunities for Four County's labour market.

KEY FINDINGS

- Most jobs cannot be worked entirely remotely. This is due to the physical nature of many jobs, and the need to work with specific technology, people, or products.
- It is estimated that 30.7% of Four County residents work in occupations that have the ability to be entirely teleworked. In comparison, 46.3% of Ontarians work in occupations that have the ability to be entirely teleworked. This difference is due to the Four County Region having a lower number of residents employed in jobs that can be teleworked.
- There are significant differences in the ability to telework between various industries. Within the
 Educational services and Finance and insurance industries, 79.3% and 73.2% of jobs in Four
 County can be worked entirely remotely. At the other end of the spectrum, only 12.3% of jobs
 in Agriculture, forestry, fishing, and hunting can be worked remotely. Within most industries,
 Four County has a lower proportion of jobs that can be teleworked compared to Ontario.

- In Ontario, some industries, such as Finance and Insurance and Public administration have nearly met their estimated ability to telework. However, other industries, such as Educational services and Professional, scientific, and technical services have large gaps between the estimated proportion of jobs able to be teleworked and those actually being teleworked. This suggests that, although some industries have a large proportion of jobs able to be teleworked, the remote work model may not be efficient or desirable for many workplaces.
- As of May 2021 (Q2 2021), only 2.3% of Four County employers reported being likely to
 offer the possibility of teleworking to more employees. This number fell from the previous
 survey iteration (Q1 2021), wherein 14.1% of employers were likely to offer the possibility of
 teleworking. In Ontario, 12.4% of employers were likely to offer the possibility of teleworking.
 At the provincial level, significant differences were observed in businesses by industry and
 size. Future research is needed to determine whether these trends are also present in the Four
 County Region.
- Between Q1 2019 and Q1 2021, there was an average of 4,666 job vacancies per quarter in the Four County Region. Of these, on average, only 246 are in occupations that have the ability to be teleworked. Although remote work may not be preferable, it does offer employers an additional way to fill some employment vacancies.
- By embracing remote work, employers in the Four County Region are able to expand their labour pool and attract talent from external geographies.
- Of the 12,990 workers commuting into the Four County Region (in-commuters), 29.8% work in occupations that have the ability to be entirely teleworked. Furthermore, the 1,590 incommuters who travel distances of 50km+ one-way for work may especially benefit from remote work options.
- Of the 16,265 Four County residents who commute out of the region for work (out-commuters), 34.4% of them hold occupations that have the ability to be entirely teleworked. This is slightly higher than that of in-commuters due to the higher number of out-commuters working in professional occupations. Additionally, the 2,855 out-commuters who travel a median commuting distance of 50km+ one-way to work may be especially interested in their workplace allowing some form of remote work.

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1.0 ABILITY TO WORK REMOTELY

Remote work (telework), a working style that allows employees to work outside of their usual place of work, offers a range of benefits to both employers and employees, including financial savings and increased job flexibility. Simply put, not every job can be worked remotely. Due to the requirements of many occupations, it is necessary for workers to be physically present in the workplace. For example, a firefighter

Simply put, not every job can be worked remotely.

cannot do any of their necessary tasks remotely. In comparison, a financial manager is likely able to complete all tasks remotely, using various online tools for video conferencing, data storage, and e-signature signing. Additionally, there are a large number of jobs that, while not able to be worked entirely remotely, may include various tasks that can be completed outside of the office. Thus, many workplaces may become interested in creating a hybrid model that involves employees dividing their time in and outside of their usual workplace. However, there are currently no ways to measure the potential number of workplaces that could incorporate a hybrid model. Furthermore, a hybrid model would require less significant changes to the workplace and the overall economy compared to a fully remote workplace. Because of this, this paper focuses on determining the jobs that can be entirely teleworked.

1.1 ABILITY TO WORK REMOTELY BY FOUR-DIGIT NOC

30.7% of Four County residents hold jobs that have the ability to be worked entirely remotely.

By applying a methodology developed by Dingel and Neiman (2020) and converted to a Canadian context by Gallacher and Hossain (2020), it is estimated that 30.7% of Four County residents hold jobs that have the ability to be worked entirely remotely. In comparison, 46.3% of Ontarians have the ability to work their jobs entirely remotely.

To obtain these estimates, each occupation (four-digit National Occupation Classification (NOC)) was assigned a value of 0 to 1, with

0 meaning the occupation cannot be worked entirely remotely and 1 meaning the occupation can be worked entirely remotely.² As displayed in Table 1, Senior government managers and officials have a remote work index of 1. This means that 100.0% of these jobs have the ability to be worked entirely remotely. In comparison, Senior managers – trade, broadcasting and other services have a remote work index of 0.6. This means that 60.0% of these jobs have the ability to be entirely teleworked.

By using the remote work index and Four County's employment numbers, the potential for remote work can be calculated.

¹ This estimate is derived using Census 2016 Place of Residence data at the four-digit NOC level.

² Dingel & Neiman, 2020; Gallacher & Hossain, 2020. Values in between 0 and 1 are due to inconsistencies in the American and Canadian occupation classification databases (O*NET and NOC). See Technical Notes for detailed explanation of the methodology used.

TABLE 1. ABILITY TO WORK REMOTELY BY OCCUPATION (4-DIGIT NOC)

| Occupation (4-Digit NOC) | Remote Work Index |
|---|----------------------|
| 0012 Senior government managers and officials | 1 |
| 0015 Senior managers - trade, broadcasting and other services, n.e.c. | 0.6 |
| 0111 Financial managers | 1 |
| 0112 Human resources managers | 1 |
| 0113 Purchasing managers | 1 |
| 0114 Other administrative services managers | 1 |
| 0121 Insurance, real estate and financial brokerage managers | 1 |
| 0422 School principals and administrators of elementary and secondary education | 0.5 |
| 0431 Commissioned police officers | 0 |
| 0513 Recreation, sports and fitness program and service directors | 0 |
| 0621 Retail and wholesale trade managers | 1 |
| 0631 Restaurant and food service managers | 0 |
| 0632 Accommodation service managers | 0 |
| 0651 Managers in customer and personal services, n.e.c. | 0 |
| 0731 Managers in transportation | 0.75 |
| 4312 Firefighters | 0 |

Source: Dingel & Neiman, 2020; Gallacher & Hossain, 2020.

Note: This table provides a list of sample occupations. Full table can be found in the appendix.

1.2 ABILITY TO WORK REMOTELY BY TWO-DIGIT NOC

Based on the four-digit NOC Remote Work Index and relative employment numbers, Table 2 depicts the proportion of two-digit occupations that have the ability to be worked entirely remotely.³ For most two-digit occupations, Ontario has a higher proportion of jobs with the ability to be worked entirely remotely. This is due to a larger number of residents employed in teleworkable occupations at the four-digit level compared to the Four County Region.

TABLE 2. ABILITY TO WORK REMOTELY BY OCCUPATION (2-DIGIT NOC), WEIGHTED AVERAGE FOR FOUR COUNTY

| Occupation (2-Digit NOC) | | Jobs with the emote Work |
|---|---------|--------------------------|
| | Ontario | Four County |
| 00 Senior management occupations | 91.2% | 90.7% |
| 01-05 Specialized middle management occupations | 94.3% | 89.1% |
| 06 Middle management occupations in retail and wholesale trade and customer services | 72.1% | 72.7% |
| 07-09 Middle management occupations in trades, transportation, production and utilities | 34.3% | 11.2% |
| 11 Professional occupations in business and finance | 100.0% | 100.0% |
| 12 Administrative and financial supervisors and administrative occupations | 87.4% | 90.5% |
| 13 Finance, insurance and related business administrative occupations | 100.0% | 100.0% |
| 14 Office support occupations | 75.0% | 74.9% |
| 15 Distribution, tracking and scheduling co-ordination occupations | 29.3% | 26.9% |
| 21 Professional occupations in natural and applied sciences | 86.7% | 76.1% |
| 22 Technical occupations related to natural and applied sciences | 47.8% | 36.1% |
| 30 Professional occupations in nursing | 0.0% | 0.0% |

³ In order to apply the remote work index at the two-digit occupation level, weighted averages were used to take into account the proportion of employment in the four-digit occupations within each two-digit occupation. Employment numbers were retrieved from the Census 2016 Place of Residence data at the four-digit NOC level.

| Occupation (2-Digit NOC) | | Jobs with the emote Work |
|--|---------|--------------------------|
| | Ontario | Four County |
| 31 Professional occupations in health | 5.9% | 6.1% |
| 32 Technical occupations in health | 1.1% | 0.9% |
| 34 Assisting occupations in support of health services | 1.9% | 1.4% |
| 40 Professional occupations in education services | 99.4% | 99.7% |
| 41 Professional occupations in law and social, community and government services | 78.3% | 73.4% |
| 42 Paraprofessional occupations in legal, social, community and education services | 75.2% | 69.2% |
| 43 Occupations in front-line public protection services | 0.0% | 0.0% |
| 44 Care providers and educational, legal and public protection support occupations | 69.2% | 61.3% |
| 51 Professional occupations in art and culture | 60.4% | 56.9% |
| 52 Technical occupations in art, culture, recreation and sport | 53.8% | 43.1% |
| 62 Retail sales supervisors and specialized sales occupations | 60.9% | 59.8% |
| 63 Service supervisors and specialized service occupations | 5.6% | 3.9% |
| 64 Sales representatives and salespersons - wholesale and retail trade | 14.0% | 8.4% |
| 65 Service representatives and other customer and personal services occupations | 46.4% | 40.5% |
| 66 Sales support occupations | 10.5% | 9.2% |
| 67 Service support and other service occupations, n.e.c. | 2.4% | 1.9% |
| 72 Industrial, electrical and construction trades | 2.7% | 2.2% |
| 73 Maintenance and equipment operation trades | 0.0% | 0.0% |
| 74 Other installers, repairers and servicers and material handlers | 2.3% | 2.6% |

| Occupation (2-Digit NOC) | Proportion of Ability to Re | Jobs with the emote Work |
|---|--------------------------------|--------------------------|
| | Ontario | Four County |
| 75 Transport and heavy equipment operation and related maintenance occupations | 2.3% | 0.5% |
| 76 Trades helpers, construction labourers and related occupations | 0.0% | 0.0% |
| 82 Supervisors and technical occupations in natural resources, agriculture and related production | 15.1% | 17.4% |
| 84 Workers in natural resources, agriculture and related production | 0.0% | 0.0% |
| 86 Harvesting, landscaping and natural resources labourers | 0.0% | 0.0% |
| 92 Processing, manufacturing and utilities supervisors and central control operators | 0.0% | 0.0% |
| 94 Processing and manufacturing machine operators and related production workers | 5.5% | 4.0% |
| 95 Assemblers in manufacturing | 0.0% | 0.0% |
| 96 Labourers in processing, manufacturing and utilities | 0.0% | 0.0% |

Source: Dingel & Neiman, 2020; Gallacher & Hossain, 2020; Author's calculations.

1.3 ABILITY TO TELEWORK BY INDUSTRY

Furthermore, by using the two-digit remote work index, the proportion of jobs with the ability to remote work can be calculated for each industry. At the industry level, there are significant differences in the proportion of jobs that can be worked remotely. While 79.3% of jobs in Educational services have the ability to be worked entirely remotely, the same is true for only 12.3% of jobs in Agriculture, forestry, fishing, and hunting. Additionally, there are large differences between Ontario and Four County. 24.4% of the Agriculture, forestry, fishing, and hunting industry can be worked remotely in Ontario compared to only 12.3% in Four County. Again, this is due to larger proportions of workers employed in remote workable occupations, such as management and finance-related occupations.

Overall, this indicates that, within Four County, businesses in the Educational services and Finance and insurance industries have the highest chance of being affected by the telework model. Because these industries have the highest proportion of jobs that can be entirely teleworked, significant changes may occur in these workplaces, including the downsizing of offices/facilities and an increased focus on online software and security. However, together, these industries represent only 8.8% of employed residents.⁴

In comparison, Four County's businesses in the Agriculture, forestry, fishing, and hunting and Manufacturing industries will likely remain relatively unchanged. Aside from a few senior management positions possibly being able to work remotely, it is likely that most workers will continue to be expected in the workplace. This is significant because these two industries represent 24.0% of employed residents.⁵ Other industries with high employment in Four County include Retail trade and Healthcare, both of which have some ability for remote work although it is likely not enough to cause radical changes within these industries.

^{4.} Derived from Census 2016 POR data.

⁵ Derived from Census 2016 POR data.

TABLE 3. TELEWORK CAPACITY BY INDUSTRY, ONTARIO AND FOUR COUNTY

| Industry | | Jobs with the emote Work |
|--|---------|--------------------------|
| | Ontario | Four County |
| 11 Agriculture, forestry, fishing and hunting | 24.4% | 12.3% |
| 21 Mining, quarrying, and oil and gas extraction | 30.2% | 14.2% |
| 22 Utilities | 43.3% | 27.4% |
| 23 Construction | 29.9% | 19.2% |
| 31-33 Manufacturing | 24.7% | 13.9% |
| 41 Wholesale trade | 47.6% | 34.4% |
| 44-45 Retail trade | 31.4% | 26.7% |
| 48-49 Transportation and warehousing | 28.1% | 17.3% |
| 51 Information and cultural industries | 63.8% | 50.4% |
| 52 Finance and insurance | 80.4% | 73.2% |
| 53 Real estate and rental and leasing | 61.0% | 57.3% |
| 54 Professional, scientific and technical services | 76.2% | 65.8% |
| 55 Management of companies and enterprises | 76.3% | 59.4% |
| 56 Administrative and support, waste management and remediation services | 39.9% | 28.0% |
| 61 Educational services | 82.5% | 79.3% |
| 62 Health care and social assistance | 35.1% | 30.0% |
| 71 Arts, entertainment and recreation | 45.0% | 38.5% |
| 72 Accommodation and food services | 25.7% | 22.5% |
| 81 Other services (except public administration) | 40.8% | 28.8% |
| 91 Public administration | 58.9% | 44.0% |

Source: Dingel & Neiman, 2020; Gallacher & Hossain, 2020; Author's calculations.

2.0 REALIZED TELEWORK POTENTIAL

In the last week of March 2020, Statistics Canada reported that 39.1% of Canadians were teleworking,⁶ exceeding the estimated proportion of 38.9%.⁷ However, with time and the loosening of COVID-19 restrictions, the number of teleworkers has decreased.

While data on the number of employees teleworking is not available for the Four County Region, some insights can be drawn from the data available at the provincial level. According to the Labour Force Survey Supplement, as of February 2021, 27.9% of Ontarians were teleworking. Compared to the estimated 46.3% of Ontarians who hold occupations that have the ability to be worked entirely remotely, this data suggests that there may be barriers limiting the continued practice of remote work.

Interestingly, the gap between the number of jobs being teleworked and the estimated proportion of jobs able to be teleworked is more prevalent in certain industries. For example, both the Finance and insurance industry and the Public administration industry have nearly reached the estimated proportion of jobs able to be teleworked. In comparison, there are large gaps between the estimated proportion of jobs able to be teleworked and those being teleworked in Professional, scientific, and technical services, Healthcare and social assistance, and Trades, transportation, and warehousing. Overall, the most notable difference is in the Educational services industry, wherein only 33.4% of employed workers are teleworking compared to an estimated 82.5% that are able to. It is important to note that, during the survey period, schools in Ontario were open for in-person learning. Before and after this survey period, classes were being held online rather than in-person. If surveyed at a different time, this number would have likely been closer to the estimated telework capacity. However, these stark differences suggest that, for some industries, even if remote work is possible, it may not be a desirable work style.

⁶ Statistics Canada. (April, 17, 2020). Canadian Perspectives Survey Series 1: COVID-19 and working from home, 2020. Retrieved from https://www150.statcan.gc.ca/n1/daily-quotidien/200417/dq200417a-eng.htm

⁷ Deng, Z., Morissette, R. & Messacar, D. (2020). Running the economy remotely: Potential for working from home during and after COVID-19. Statistics Canada. Retrieved from https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00026-eng.htm

TABLE 4. TELEWORK ABILITY AND UPTAKE, BY INDUSTRY, ONTARIO, FEBRUARY 2021

| Industry | Total Employed | Total Teleworkers | Total Teleworkers as % of Total Employed | Proportion of Jobs Able to be Teleworked ⁸ |
|--|----------------|-------------------|--|---|
| Total | 7,100,300 | 198,0000 | 27.9% | 46.3% |
| Goods-producing industries ⁹ | 1,424,300 | 181,000 | 12.7% | 26.8% |
| Trades, transportation and warehousing ¹⁰ | 1,362,400 | 200,000 | 14.7% | 34.1% |
| Finance and insurance | 466,500 | 374,000 | 80.2% | 80.4% |
| Professional, scientific and technical services | 704,600 | 364,000 | 51.7% | 76.2% |
| Educational services | 572,600 | 191,000 | 33.4% | 82.5% |
| Health care and social assistance | 897,700 | 123,000 | 13.7% | 35.1% |
| Public administration | 383,800 | 222,000 | 57.8% | 58.9% |
| Other ¹¹ | 1,288,400 | 326,000 | 25.3% | 40.8% |

Source: Statistics Canada, Labour Force Survey and Labour Force Survey Supplement, February, 2021; Statistics Canada, Table 14-10-0355-01; Statistics Canada 2016 Census; Author's calculations.

Derived using 2016 Census data.

Goods-producing industries combines NAICS 11-13. Trades, transportation and warehousing combines NAICS 41-49.

Other industry combines NAICS 51, 53, 55, 56, 71, 72, 81.

2.1 NEW AND PRE-PANDEMIC TELEWORKERS

As of February 2021, 27.9% (1,981,000) of Ontarian workers were working remotely. 18.2% of Ontarian workers were new teleworkers and 9.7% reported teleworking since before the pandemic (pre-pandemic teleworkers).

In February 2021, the Four County region had a labour force of 153,300. Assuming that Four County has the same proportion of teleworkers compared to Ontario, the region would have 42,729 total teleworkers, with 14,904 of them being pre-pandemic teleworkers. However, according to 2016 Census data, 19,400 Four County residents reported working from home (13.2%). This was much higher than the 7.3% of Ontarians who reported working from home.

19,400 Four County residents reported working from home (13.2%). This was much higher than the 7.3% of Ontarians who reported working from home.

Even though the Four County region experienced higher numbers of residents working from home in 2016, it is important to recognize that this is not synonymous with teleworking. While some of the occupations being worked from home could likely be worked from anywhere, such as Authors and writers (5121), other occupations such as Managers in agriculture (0821) require external conditions to be met, such as living on a farm, in order to work from home.

Table 5 displays the percentage of the workforce in Ontario and Four County who reported working from home in 2016. Compared to Ontario, Four County experienced higher rates of workers working from home in industries that have a high ability to be teleworked, such as Management of companies and enterprises, Professional, scientific and technical services, and Finance and insurance. Although this is not an accurate measurement of residents who were teleworking before the pandemic, the data may suggest that the ability to telework was already being utilized in certain industries. However, in order to better understand the prevalence of pre-pandemic teleworking in Four County, primary data collection is necessary, especially for the industries that have a high telework capacity.

TABLE 5. PERCENTAGE OF WORKFORCE WORKING FROM HOME BY INDUSTRY, ONTARIO AND FOUR COUNTY REGION, 2016

| Industry | % of Workfo | rce Working Home |
|---|-------------|---------------------|
| madsay | Ontario | Four County |
| Total - Industry - North American Industry Classification System (NAICS) 2012 | 8.2% | 14.9% |
| 11 Agriculture, forestry, fishing and hunting | 49.2% | 68.3% |
| 21 Mining, quarrying, and oil and gas extraction | 3.0% | 1.5% |
| 22 Utilities | 1.8% | 1.3% |
| 23 Construction | 11.4% | 13.8% |
| 31-33 Manufacturing | 2.9% | 4.2% |
| 41 Wholesale trade | 9.5% | 9.8% |
| 44-45 Retail trade | 3.7% | 4.3% |
| 48-49 Transportation and warehousing | 4.9% | 8.9% |
| 51 Information and cultural industries | 12.8% | 17.7% |
| 52 Finance and insurance | 7.8% | 11.2% |
| 53 Real estate and rental and leasing | 24.4% | 27.0% |
| 54 Professional, scientific and technical services | 22.7% | 30.6% |
| 55 Management of companies and enterprises | 6.9% | 33.3% |
| 56 Administrative and support, waste management and remediation services | 11.4% | 20.7% |
| 61 Educational services | 4.4% | 5.3% |
| 62 Health care and social assistance | 5.2% | 5.7% |
| 71 Arts, entertainment and recreation | 14.7% | 16.4% |
| 72 Accommodation and food services | 1.9% | 4.0% |
| 81 Other services (except public administration) | 11.7% | 21.3% |
| 91 Public administration | 1.5% | 3.4% |

Source: Statistics Canada, 2016 Census, Table: 98-400-X2016320; 2016 Census (Custom tabulation).

3.0 EMPLOYER TELEWORK PREFERENCES

2.3% of employers in the Four County region reported being likely to offer the possibility of teleworking to more employees.

As of May 2021 (Q2 2021), 2.3% of employers in the Four County region reported being likely to offer the possibility of teleworking to more employees. This was a significant decrease from the 14.1% of employers who had reported being in favour of offering the possibility of teleworking in the first quarter of 2021. Interestingly, the percentage of employers unlikely to consider offering the possibility of telework remained relatively unchanged, with a greater proportion instead selecting not relevant. It is unclear why businesses may select not relevant.

TABLE 6. LIKELIHOOD OF TELEWORKING MEASURE BEING PERMANENTLY ADOPTED, FOUR COUNTY REGION, Q1 AND Q2 2021

| | Q1 2021 | | | |
|---|---------|----------|---------|--------------|
| Measure Permanently Adopted | Likely | Unlikely | Neither | Not Relevant |
| Offer more employees the possibility of teleworking | 14.1% | 35.0% | 4.1% | 46.7% |
| Require more employees to telework | 4.8% | 34.6% | 9.9% | 50.8% |
| Require employees to return to on-site work | 22.7% | 16.2% | 6.8% | 54.3% |
| | Q2 2021 | | | |
| Offer more employees the possibility of teleworking | 2.3% | 35.3% | 3.3% | 59.1% |
| Require more employees to telework | 0.9% | 37.1% | 0.9% | 61.0% |
| Require employees to return to on-site work | 23.0% | 5.3% | 2.1% | 69.6% |

Source: Statistics Canada, Business Conditions Survey, Q1 and Q2 2021 (Custom tabulation); Author's calculations.

In comparison, 12.4% of Ontario's employers reported being likely to offer the possibility of teleworking to more employees. As displayed in Table 7, the number of employers likely to offer the possibility of teleworking decreased by 8.6 percentage points from Q1 2021 to Q2 2021. Similar to Four County, support for teleworking practices appear to be decreasing among Ontarian employers.

12.4% of Onlario's employers reported being likely to offer the possibility of teleworking to more employees.

TABLE 7. LIKELIHOOD OF TELEWORKING MEASURE BEING PERMANENTLY ADOPTED, ONTARIO, Q1 AND Q2 2021

| | Q1 2021 | | | |
|---|---------|----------|---------|--------------|
| Measure Permanently Adopted | Likely | Unlikely | Neither | Not Relevant |
| Offer more employees the possibility of teleworking | 21.0% | 20.8% | 7.1% | 52.0% |
| Require more employees to telework | 8.4% | 28.9% | 8.2% | 54.5% |
| Require employees to return to on-site work | 32.2% | 12.3% | 9.8% | 45.7% |
| | Q2 2021 | | | |
| Offer more employees the possibility of teleworking | 12.4% | 28.1% | 7.5% | 52.0% |
| Require more employees to telework | 6.0% | 35.5% | 5.3% | 53.2% |
| Require employees to return to on-site work | 31.1% | 10.1% | 8.5% | 50.4% |

Source: Statistics Canada, Business Conditions Survey, Q1 and Q2 2021; Author's calculations.

3.1 EMPLOYER TELEWORK PREFERENCES BY INDUSTRY

Recent (Q2 2021) provincial data suggests that businesses in the Finance and insurance industry, Information and cultural industry, and Mining, quarrying, and oil and gas extraction industry are most likely to allow employees the possibility of teleworking. In comparison, businesses in Agriculture, forestry, fishing and hunting, Accommodation and food services, and Retail trade are the least likely to allow employees the possibility of teleworking. Interestingly, when asked if businesses would require more employees to work remotely, the Information and cultural industry and the Mining, quarrying, and oil and gas extraction industry had the most favourable responses, with 22.4% and 20.7% citing that it is likely. Only 8.0% of businesses in the Finance and insurance industry reported that they were likely to require more employees to telework. This suggests that certain industries perceive remote work as a more favourable style of work.

Additionally, compared to the first quarter iteration (Q1 2021), the second quarter iteration (Q2 2021) demonstrates changing employer preferences in various industries. Most notably, there was a significant decrease of businesses reporting an interest in allowing teleworking possibilities. Although 76.2% of Ontario's Professional, scientific, and technical services industry is estimated to have the ability to work remotely, between the two survey iterations, the percentage of businesses likely to offer employees the possibility of teleworking decreased from 55.6% to 19.3%. Within this industry, there was also a significant decline (10.1 percentage points) in the number of businesses that reported being likely to require more employees to work remotely. However, interestingly the proportion of unlikely responses did not increase. Instead, significant increases were seen in the "not relevant" option. This suggests that employers may be becoming less confident in their business's potential for teleworking, thus concluding that it is not an option for their employees. A similar trend is prevalent within the Health care and social assistance industry, where the percentage of businesses likely to offer teleworking opportunities decreased by 17.5 percentage points while the percentage of businesses indicating a lack of relevance increased by 19.1 percentage points.

In contrast, industries that are considered to have a lower telework capacity, such as Agriculture, forestry, fishing and hunting, Construction, and Retail trade, appear to demonstrate increased confidence regarding the future of teleworking. For example, the percentage of businesses in the Construction industry that selected "not relevant" decreased by 12.2%. Instead, the proportion of businesses who responded that they are likely to offer teleworking possibilities increased by 5.3% while those unlikely to offer teleworking decreased by 8.1%.

TABLE 8. LIKELIHOOD OF BUSINESSES TO OFFER EMPLOYEES THE POSSIBILITY OF TELEWORKING, ONTARIO, Q2 2021

| Industry (NAICS) | Unlikely (%) | Likely (%) | Neither (%) | Not Relevant (%) |
|--|--------------|------------|-------------|---------------------|
| North American Industry Classification System (NAICS), all industries | 28.1 | 12.4 | 7.5 | 52 |
| Agriculture, forestry, fishing and hunting | 30.3 | 2.2 | 1.2 | 66.3 |
| Mining, quarrying, and oil and gas extraction | 23.2 | 20.7 | 12.5 | 43.5 |
| Construction | 32.6 | 8.8 | 5 | 53.7 |
| Manufacturing | 38.1 | 6.7 | 8.1 | 47.1 |
| Wholesale trade | 28.2 | 26 | 11.7 | 34 |
| Retail trade | 34.7 | 4.5 | 5.5 | 55.3 |
| Transportation and warehousing | 18.5 | 7.1 | 6.4 | 68.1 |
| Information and cultural industries | 13.4 | 25.6 | 9.4 | 51.6 |
| Finance and insurance | 31.1 | 28 | 9.4 | 31.5 |
| Real estate and rental and leasing | 33 | 16.2 | 7.4 | 43.5 |
| Professional, scientific and technical services | 15.3 | 19.3 | 14.8 | 50.5 |
| Administrative and support, waste management and remediation services | 29.3 | 8.4 | 3.7 | 58.6 |
| Health care and social assistance | 30.8 | 13.3 | 9.2 | 46.7 |
| Arts, entertainment and recreation | 24.1 | 10.2 | 8.6 | 57.1 |
| Accommodation and food services | 43.4 | 2.7 | 0.5 | 53.4 |
| Other services (except public administration) | 22.1 | 15.8 | 5.4 | 56.8 |

Source: Statistics Canada, Business Conditions Survey: Table 33-10-0355-01.

TABLE 9. LIKELIHOOD OF BUSINESSES TO REQUIRE EMPLOYEES TO TELEWORK, ONTARIO, Q2 2021

| Industry (NAICS) | Unlikely (%) | Likely (%) | Neither (%) | Not Relevant (%) |
|--|--------------|------------|-------------|---------------------|
| North American Industry Classification System (NAICS), all industries | 35.5 | 6 | 5.3 | 53.2 |
| Agriculture, forestry, fishing and hunting | 29.6 | 1.8 | 2 | 66.5 |
| Mining, quarrying, and oil and gas extraction | 24.2 | 20.9 | 10.7 | 44.2 |
| Construction | 38.4 | 3.5 | 4.3 | 53.8 |
| Manufacturing | 45.1 | 2.4 | 4.2 | 48.2 |
| Wholesale trade | 34.9 | 16.3 | 10.7 | 38 |
| Retail trade | 38 | 3.5 | 4.8 | 53.6 |
| Transportation and warehousing | 24.8 | 2.6 | 4.3 | 68.4 |
| Information and cultural industries | 28.4 | 22.4 | 8.5 | 40.7 |
| Finance and insurance | 46.1 | 8 | 6 | 39.9 |
| Real estate and rental and leasing | 44 | 6.9 | 7.2 | 41.8 |
| Professional, scientific and technical services | 27.9 | 10.1 | 11.1 | 50.9 |
| Administrative and support, waste management and remediation services | 28.8 | 6.7 | 6.1 | 58.4 |
| Health care and social assistance | 37.8 | 7.6 | 1.6 | 53 |
| Arts, entertainment and recreation | 31 | 3.1 | 6.5 | 59.5 |
| Accommodation and food services | 45.4 | 0.3 | 0.6 | 53.6 |
| Other services (except public administration) | 33.8 | 3.6 | 2.4 | 60.2 |

Source: Statistics Canada, Business Conditions Survey: Table 33-10-0355-01.

Due to small sample sizes, employer preferences by industry could not be obtained at the local level. Therefore, an examination of the number of businesses by industry was referred to in order to understand how these survey results may impact the Four County region. By combining business preferences for Ontario (Business Conditions survey) with business numbers for the Four County region, it is estimated that approximately 12.4% of businesses are likely to offer employees the possibility of teleworking. However, as mentioned in Section 3.0, only 2.3% of all Four County businesses reported being likely to offer employees the possibility of teleworking.

This difference may exist for a variety of reasons, including the small sample size used for Four County data collection, a lower proportion of occupations that have the ability to be worked remotely, and difference in employer preferences due to factors such as workplace culture and broadband infrastructure. Thus, there is an opportunity for the Four County Region to conduct an indepth study on the preferences of local businesses.

TABLE 10. BUSINESS COUNT AND EMPLOYER TELEWORK PREFERENCES BY INDUSTRY, ONTARIO AND FOUR COUNTY

| Industry (NAICS) | % of Businesses Likely to Offer Employees Possibility of Telework | Number of Businesses with Employees | | |
|--|---|--|-------------|--|
| | (Ontario) | Ontario | Four County | |
| 11 Agriculture, forestry, fishing and hunting | 2.2% | 8,836 | 1,266 | |
| 21 Mining, quarrying, and oil and gas extraction | 20.7% | 759 | 31 | |
| 23 Construction | 8.8% | 50,180 | 1,635 | |
| 31-33 Manufacturing | 6.7% | 20,198 | 586 | |
| 41 Wholesale trade | 26% | 21,159 | 428 | |
| 44-45 Retail trade | 4.5% | 51,020 | 1,426 | |
| 48-49 Transportation and warehousing | 7.1% | 31,490 | 369 | |
| 51 Information and cultural industries | 25.6% | 7,611 | 122 | |
| 52 Finance and insurance | 28% | 17,428 | 397 | |
| 53 Real estate and rental leasing | 16.2% | 20,880 | 402 | |

| Industry (NAICS) | % of Businesses Likely to Offer Employees | Number of Businesses with Employees | | |
|--|--|--|-------------|--|
| | Possibility of Telework (Ontario) | Ontario | Four County | |
| 54 Professional, scientific and technical services | 19.3% | 65,577 | 799 | |
| 56 Administrative and support, waste management and remediation services | 8.4% | 20,435 | 391 | |
| 62 Health care and social assistance | 13.3% | 46,949 | 867 | |
| 71 Arts, entertainment and recreation | 10.2% | 6,384 | 317 | |
| 72 Accommodation and food services | 2.7% | 30,521 | 706 | |
| 81 Other services (except public administration) | 15.8% | 40,115 | 993 | |
| % of Total Businesses Likely to Offer Employees Possibility of Telework | | 12.4% | 10.6% | |

Source: Statistics Canada, Business Conditions Survey (Custom tabulation); Statistics Canada, Canadian Business Counts Table: 33-10-0304-01 and Custom tabulation (December 2020).

3.2 EMPLOYER TELEWORK PREFERENCES BY SIZE

Small businesses (1-4 employees) were more likely (12.4%) to offer the possibility of teleworking

At the provincial level (Ontario), generally, the larger a business is, the more likely it is to consider teleworking options. 33.5% of business with 100+ employees are likely to offer more employees the possibility of teleworking or working remotely compared to 15.2% of businesses with 20-99 employees. Interestingly, very small businesses (1-4 employees) were more likely (12.4%) to offer the possibility of teleworking compared to businesses with 5-19 employees (9.8%). However, between Q1 and Q2 2021, the likelihood of businesses with 1-4 employees offering the possibility of remote work declined from 23.0% to 12.4%.

TABLE 11. LIKELIHOOD OF BUSINESSES TO OFFER EMPLOYEES THE POSSIBILITY OF TELEWORKING, ONTARIO, Q2 2021

| Business or organization size (with Employment) | Unlikely (%) | Likely (%) | Neither (%) | Not Relevant (%) |
|---|--------------|------------|-------------|---------------------|
| 1 to 4 employees | 22.9 | 12.4 | 5.5 | 59.2 |
| 5 to 19 employees | 34.2 | 9.8 | 8.7 | 47.3 |
| 20 to 99 employees | 37.4 | 15.2 | 14.8 | 32.7 |
| 100 or more employees | 35.8 | 33.5 | 11.3 | 19.3 |

Source: Statistics Canada, Business Conditions Survey: Table 33-10-0355-01.

Regarding the likelihood of businesses to require more employees to telework, trends were relatively similar to those discussed previously. However, the number of businesses with 100+ employees that reported being likely to require employees to telework increased from 16.2% to 19.1%.

TABLE 12. LIKELIHOOD OF BUSINESSES TO REQUIRE EMPLOYEES TO TELEWORK, ONTARIO, Q2 2021

| Business or Organization Size | Unlikely (%) | Likely (%) | Neither (%) | Not Relevant (%) |
|----------------------------------|--------------|------------|-------------|---------------------|
| 1 to 4 employees | 30.3 | 6 | 3.8 | 59.8 |
| 5 to 19 employees | 40.3 | 4.7 | 5.7 | 49.4 |
| 20 to 99 employees | 48.1 | 6.5 | 11.2 | 34.2 |
| 100 or more employees | 46.5 | 19.1 | 12 | 22.4 |

Source: Statistics Canada, Business Conditions Survey: Table 33-10-0355-01.

Again, due to small sample sizes, employer preferences by business size could not be obtained at the local level. Therefore, business composition was referred to in order to understand how these survey results may impact the Four County region. Assuming that employer preferences would be the same as in Ontario, approximately 12.2% of businesses in Four County would be likely to offer employees the possibility to telework. However, this is quite different than the 2.3% of all Four County businesses that reported being likely to offer employees the possibility of teleworking according to the Q2 2021 Business Conditions Survey. Again, this reaffirms the need for primary data collection, with special attention to large employers (100+) that are generally more likely to consider teleworking.

TABLE 13. BUSINESS COUNT AND EMPLOYER TELEWORK PREFERENCES BY SIZE OF BUSINESS, ONTARIO AND FOUR COUNTY

| Size of Business/Organization | % of Businesses Likely to Offer Employees Possibility of Telework | Number of Bu Emplo | |
|--|---|-----------------------|-------------|
| | (Ontario) | Ontario | Four County |
| 1 to 4 employees | 12.4% | 283,205 | 6,197 |
| 5 to 19 employees | 9.8% | 136,783 | 3,744 |
| 20 to 99 employees | 15.2% | 50,812 | 1,108 |
| 100 or more employees | 33.5% | 10,129 | 193 |
| % of Total Businesses Likely to Offer Employees Possibility of Telework | | 12.4% | 12.2% |

Source: Statistics Canada, Business Conditions Survey (Custom tabulation); Statistics Canada, Canadian Business Counts Table: 33-10-0304-01 and Custom tabulation (December 2020).

4.0 EMPLOYEE TELEWORK PREFERENCES

In contrast to employer telework preferences, employees appear to prefer the possibility of teleworking. In February 2021, 81.2% of new teleworkers in Ontario reported wanting to work at least half of their hours from home in the future. Overall, age, educational attainment, and sex had relatively little impact on current workers' desire to continue teleworking at least half of their hours. Industry also had relatively little impact on new teleworkers preference to continue teleworked, with the exception of employees working in the Educational services industry, wherein only 59.0% reported wanting to work at least

In February 2021, 81.2% of new teleworkers in Ontario reported wanting to work at least half of their hours from home in the future.

half their hours at home. This was reflected in the Canada-wide data, wherein only 46.1% of teachers reported want to work at least half of their hours at home compared to 81.7% of non-teachers.¹²

While these results seem to suggest that the majority of workers would prefer to continue teleworking at least half of their hours, it is important to understand how this sample may compare to all workers in the region. This data was derived from those who are new teleworkers. In Ontario, this group represents only 18.2% of workers. Therefore, the provincial survey results offer insight into the preferences of only a small group of workers. Future research is needed to both understand the preferences of the entire labour force as well as determine more specific preferences within the Four County region.

5.0 OPPORTUNITIES

5.1 TELEWORK AND JOB VACANCIES

Between Q1 2019 and Q1 2021, there was an average of 4,666 job vacancies per quarter in the Four County Region. NOC 6: Sales and service occupations repeatedly has the highest number of vacancies, accounting for an average of 32.9% of total vacancies each quarter. Large numbers of vacancies are also evident within NOC 7: Trades, transport and equipment operators and related occupations followed by NOC 3: Health occupations and NOC 9: Occupations in manufacturing and utilities.

¹² Mehdi, T. & Morissette, R. (April 1, 2021). Working from home: Productivity and preferences. Statistics Canada. Retrieved from https://www150.statcan.gc.ca/n1/pub/45-28-0001/2021001/article/00012-eng.htm

TABLE 14. VACANCIES BY 1-DIGIT OCCUPATION, Q1-Q4, 2019-2021

| National Occupational Classification (1-Digit NOC) | Q1 2019 | Q2 2019 | Q3 2019 | Q4 2019 | Q1 2020 | Q4 2020 | Q1 2021 |
|---|------------|------------|------------|------------|------------|------------|------------|
| Total, all occupations | 5,010 | 5,130 | 5,400 | 4,185 | 4,185 | 4,540 | 4,215 |
| 0 Management occupations | 145 | 220 | 155 | 330 | 150 | | 110 |
| 1 Business, finance and administration occupations | 225 | 295 | 205 | 180 | 335 | 160 | 285 |
| 2 Natural and applied sciences and related occupations | 90 | 115 | 105 | 135 | 80 | 125 | 140 |
| 3 Health occupations | 455 | 440 | 370 | 320 | 365 | 610 | 685 |
| 4 Occupations in education, law and social, community and government services | 115 | 105 | 210 | 140 | 155 | 285 | 225 |
| 5 Occupations in art, culture, recreation and sport | 175 | 35 | | 10 | 120 | | 35 |
| 6 Sales and service occupations | 1,690 | 1,740 | 1,845 | 1,450 | 1,455 | 1,465 | 1,140 |
| 7 Trades, transport and equipment operators and related occupations | 795 | 1,240 | 1,105 | 875 | 710 | 985 | 1,020 |
| 8 Natural resources, agriculture and related production occupations | | 495 | | | 475 | 245 | 80 |
| 9 Occupations in manufacturing and utilities | 380 | 445 | 560 | 390 | 345 | 415 | 495 |

Source: Statistics Canada, Job Vacancy and Wage Survey, Table: 14-10-0356-02.

Note: '---' indicates unavailable data due to unreliability, suppression, or failure to be collected for a specific time period.

Of the 32,665 job vacancies recorded between Q1 2019 and Q1 2021, 5.27% are in occupations that can be worked entirely remotely.

At the 4-digit level, there are consistently large numbers of vacancies for occupations such as NOC 3413: Nurse aides, orderlies, and patient service associates, NOC 6711: Food counter attendants, kitchen helpers, and related support occupations, and NOC 7511: Transport truck drivers. However, the majority of occupations with large vacancies are those that are not likely able to be worked remotely. This is because many of the vacant occupations require physical actions that must be carried out, such as the serving of food, the stocking of shelves, the driving of trucks, or the care of patients. Of the 32,665 job vacancies

recorded between Q1 2019 and Q1 2021, 5.27% are in occupations that can be worked entirely remotely. This works out to be approximately 246 vacancies per quarter that have the potential to be teleworked. These occupations are most commonly NOC 6552: Other customer and information services representatives, NOC 4212: Social and community service workers, and NOC 1114: Other financial officers. While it is important to consider that teleworking may not be an ideal way to fill these positions, it may present employers with an additional way to fill employment vacancies.

TABLE 15. VACANCIES BY 4-DIGIT OCCUPATION, STRATFORD-BRUCE, 2019-2021

| National Occupational Classification | Q1 2019 | Q2 2019 | Q3 2019 | Q4 2019 | Q1 2020 | Q4 2020 | Q1 2021 | Total Vacancies |
|---|------------|------------|------------|------------|------------|------------|------------|--------------------|
| 3413 Nurse aides, orderlies and patient service associates | 160 | 150 | 165 | 120 | 160 | 275 | 305 | 1335 |
| 6711 Food counter attendants, kitchen helpers and related support occupations | 370 | 360 | 540 | | | | | 1270 |
| 7511 Transport truck drivers | 240 | 250 | 205 | 145 | 145 | | | 985 |
| 6421 Retail salespersons | 180 | 230 | | | | | 220 | 630 |
| 6731 Light duty cleaners | 180 | 115 | 80 | 80 | 35 | | 40 | 530 |
| 9617 Labourers in food and beverage processing | | 105 | 80 | 85 | 65 | 55 | 75 | 465 |
| 7611 Construction trades helpers and labourers | | 225 | | | 230 | | | 455 |
| 6513 Food and beverage servers | 155 | 65 | 160 | | | | | 380 |
| 3233 Licensed practical nurses | 45 | 45 | 45 | 45 | | 90 | 85 | 355 |
| 6622 Store shelf stockers, clerks and order fillers | | | 135 | | 60 | 160 | | 355 |
| 7311 Construction millwrights and industrial mechanics | 30 | 75 | 40 | 40 | 25 | 15 | 40 | 265 |
| 6611 Cashiers | | | 135 | 60 | | 55 | 10 | 260 |
| 4212 Social and community service workers | 25 | 15 | 35 | 45 | 45 | 50 | 25 | 240 |
| 7452 Material handlers | | 30 | 60 | | 10 | 70 | 65 | 235 |

| National Occupational Classification | Q1 2019 | Q2 2019 | Q3 2019 | Q4 2019 | Q1 2020 | Q4 2020 | Q1 2021 | Total Vacancies |
|--|------------|------------|------------|------------|------------|------------|------------|--------------------|
| 9522 Motor vehicle assemblers, inspectors and testers | 80 | | | | | 80 | 65 | 225 |
| 1414 Receptionists | 45 | | 15 | 25 | 20 | 20 | | 125 |
| 9612 Labourers in metal fabrication | | | 40 | | | 25 | 25 | 90 |
| 1114 Other financial officers | | | | 15 | 20 | 10 | 20 | 65 |
| 6733 Janitors, caretakers and building superintendents | | | | 10 | 15 | 20 | 15 | 60 |
| 3211 Medical laboratory technologists | 10 | 10 | 15 | | 10 | 10 | | 55 |
| 8252 Agricultural service contractors, farm supervisors and specialized livestock workers | 30 | | | 10 | 15 | | | 55 |
| 7242 Industrial electricians | 15 | 15 | 10 | | | 10 | | 50 |
| 1431 Accounting and related clerks | 10 | | 10 | | | | 15 | 35 |
| 1123 Professional occupations in advertising, marketing and public relations | 15 | | | | 10 | 5 | | 30 |
| 4152 Social workers | 5 | | | 5 | 5 | | 10 | 25 |
| 1111 Financial auditors and accountants | 10 | 5 | 5 | 0 | 0 | | | 20 |

Source: Statistics Canada, Job Vacancy and Wage Survey, Table: 14-10-0356-02.

Note: This table includes all occupations that have at least 20 vacancies over at least 3 quarters

Note: '---' indicates unavailable data due to unreliability, suppression, or failure to be collected for a specific time period.

It is important to note that the value of telework in the Four County Region is not in the sheer number of people able to telework, but how it can expand the labour pool for businesses that need it. The option to telework can eliminate transportation costs and increase flexibility. This is especially important for more rural businesses that require skillsets that are difficult to come across. By utilizing telework for at least some positions, businesses are able to source potential employees from external geographies.

5.2 TELEWORK AND COMMUTERS

According to data from the 2016 Census, the Four County region has 12,990 workers who reside outside of the region (incommuters) and 16,265 residents who commute outside of the region for work (out-commuters), resulting in a net loss of 3,275 workers. With the introduction of telework to many workplaces, it is likely that more Four County residents will hold employment outside of the region.

The option to telework can eliminate transportation costs and increase flexibility.

TABLE 16. IN AND OUT-COMMUTERS, FOUR COUNTY REGION, 2016

| | Number of Commuters |
|---------------|---------------------|
| In-Commuters | 12,990 |
| Out-Commuters | 16,265 |
| Net Gain/Loss | -3,275 |

Source: Statistics Canada, 2016 Census (Custom tabulation).

29.8% work in occupations that have the ability to be entirely teleworked

Of the 12,990 workers who travel into Four County for work (incommuters), 29.8% work in occupations that have the ability to be entirely teleworked. Furthermore, the 1,590 in-commuters who travel distances of 50km+ one-way for work may especially benefit from remote work options.

TABLE 17. IN-COMMUTERS AND MEDIAN COMMUTING DISTANCE (KM) BY PLACE OF RESIDENCE, FOUR COUNTY, 2016

| Place of Residence | Total Commuters | Median commuting distance (km) |
|-------------------------------------|-----------------|--------------------------------|
| Ottawa | 15 | 462 |
| Renfrew | 20 | 378 |
| Greater Sudbury / Grand Sudbury | 45 | 290 |
| Hastings | 30 | 278 |
| Essex | 30 | 253 |
| Peterborough | 15 | 252 |
| Sudbury | 20 | 223 |
| Niagara | 85 | 220 |
| Muskoka | 20 | 215 |
| Durham | 105 | 207 |
| Parry Sound | 15 | 188 |
| York | 105 | 170 |
| Haldimand-Norfolk | 60 | 162 |
| Hamilton | 120 | 152 |
| Toronto | 315 | 151 |
| Chatham-Kent | 35 | 144 |
| Peel | 185 | 142 |
| Halton | 130 | 136 |
| Manitoulin | 20 | 135 |
| Elgin | 140 | 70 |
| Brant | 80 | 63 |
| Total In-Commuters | 12,990 | |
| Total In-Commuters Travelling 50km+ | 1,590 | |

Source: Statistics Canada, 2016 Census (Custom tabulation).

Of Four County's 16,265 out-commuters, 34.4% of them hold occupations that have the ability to be entirely teleworked. This is slightly higher than that of in-commuters due to the higher number of out-commuters working in professional occupations. Additionally, 2,855 of the total out-commuters travel a median commuting distance of 50km+ one-way to work. Therefore, many of these commuters may be especially interested in their workplace allowing some form of remote work.

34.4% of out-commuters hold occupations that have the ability to be entirely teleworked

TABLE 18. OUT-COMMUTERS AND MEDIAN COMMUTING DISTANCE (KM) BY PLACE OF WORK, FOUR COUNTY, 2016

| Place of Work | Total Commuters | Median commuting distance (km) |
|---------------------------------|-----------------|--------------------------------|
| Thunder Bay | 25 | 811 |
| Cochrane | 20 | 741 |
| Ottawa | 80 | 450 |
| Frontenac | 35 | 356 |
| Essex | 25 | 243 |
| Greater Sudbury / Grand Sudbury | 15 | 243 |
| Nipissing | 15 | 235 |
| Sudbury | 15 | 203 |
| Durham | 125 | 195 |
| Niagara | 90 | 183 |
| Muskoka | 20 | 150 |
| Toronto | 910 | 133 |
| Hamilton | 135 | 131 |
| Halton | 215 | 116 |
| Parry Sound | 20 | 113 |
| York | 190 | 109 |
| Peel | 785 | 109 |
| Manitoulin | 20 | 97 |

| Place of Work | Total Commuters | Median commuting distance (km) |
|--------------------------------------|-----------------|--------------------------------|
| Haldimand-Norfolk | 20 | 89 |
| Brant | 50 | 73 |
| Elgin | 45 | 71 |
| Total Out-Commuters | 16,265 | |
| Total Out-Commuters Travelling 50km+ | 2,855 | |

Source: Statistics Canada, 2016 Census (Custom tabulation).

APPENDIX A: TECHNICAL NOTES

TERMINOLOGY

- Telework and Remote Work are used interchangeably throughout the document and defined as a working style that allows employees to work outside of their usual place of work.
- Four County Region refers to the economic region of Stratford-Bruce Peninsula, including Bruce County, Grey County, Huron County, and Perth County.
- In-commuter refers to a person who works in the Four County Region but lives elsewhere.
- Out-commuter refers to a person who lives in the Four County Region but works elsewhere.

METHODOLOGY

Gallacher, G. & Hossain, I. (2020). Remote work and employment dynamics under COVID-19: Evidence from Canada. *Canadian Public Policy*, 46(S1), 44-54.

Dingel, J. I. & Neiman, B. (2020). How many jobs can be done at home? National Bureau of Economic Research, *Working Paper Series*, (26948).

This study follows the methodology of Dingel and Neiman (2020) to estimate the percentage of jobs that can be done at home in Canada. The original study used O*NET, a program from the US Department of Labor, to determine whether occupations could be teleworked. To do this, Dingel and Neiman used various descriptors found in the database to determine a telework indicator. Descriptors that indicated an occupation could not be performed at home included, but were not limited to, performing for or working directly with the public, handling and moving objects, and working outdoors everyday. Telework indicators were either 0 or 1, with 0 being impossible and telework and 1 being possible to be entirely teleworked. Within the original study, Dingel and Neiman (2020) note that their methodology only takes into consideration the factors that would make a job impossible to be worked from home and omits factors that may make a job difficult to be worked from home. Because of this, Dingel and Neiman acknowledge that their estimate of telework capacity is at the upper bound of what might be feasible.

Due to the different occupation classification systems between Canada and the U.S., Gallacher and Hossain (2020) used the Brookfield Institute for Innovation + Entrepreneurships's crosswalk to merge O*NET and Canada's National Occupation Classification (NOC). By doing this, the authors were then able to assign telework indices to NOCS at the four-digit level. However, it should be noted that occupations that have a telework index between 0 and 1 are a result of multiple O*NET occupations merging to form the equivalent of one NOC occupation.

APPENDIX B: DATA SOURCES

Business Conditions Survey

Data has been sourced from the two most recent iterations of the Canadian Survey on Business Conditions (Q1 2021 – released March, 2021 and Q2 2021 – released May 2021). Within this survey, business owners were asked how likely their business or organization is to adopt various measures after the COVID-19 pandemic is over. The measures relevant to this study include:

- 1. Offer more employees the possibility of teleworking or working remotely.
- 2. Require more employees to telework or work remotely.
- 3. Require employees to come back to on-site work.

Business owners were asked to answer using a scale from 1 to 5, where 1 means "very unlikely" and 5 means "very likely". However, for the purpose of this report, answers have been grouped into four categories: Likely (4 and 5), Unlikely (1 and 2), Neither, and Not Applicable. This data is publicly available at the national and provincial level.

Additional data for the Stratford-Bruce economic region was provided in a custom data order. As noted in the text, this included a small sample size (Q1 2021 – 42, Q2 2021 – 47) and results should be interpreted with caution.

It is important to note that this survey is voluntary and uses a stratified random sample of business establishments classified by geography, industry sector and size.

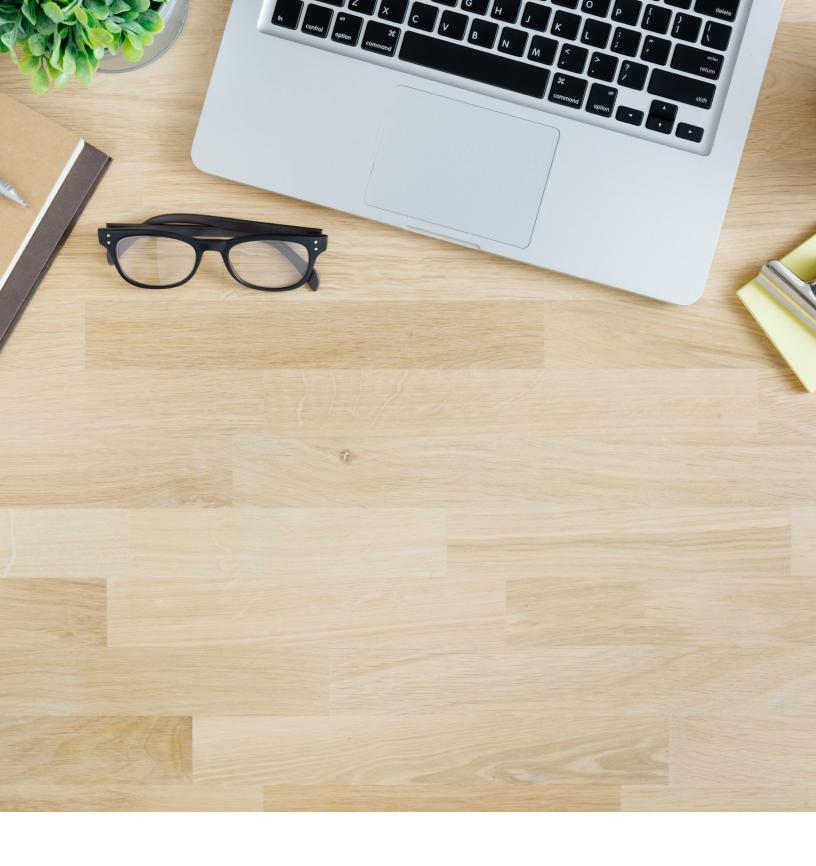
Labour Force Survey - Supplement

Data has been sourced from a custom tabulation from the Labour Force Survey Supplement, released February 2021. The custom data consists of employees ages 15 to 64 who have at least 24 months of tenure with their employer, who usually worked outside the home prior to the COVID-19 pandemic but worked most of their hours at home during the reference week of February 2021 (new teleworkers).

It is important to note that the supplemental questions are only asked to a small subset of Labour Force Survey respondents.

APPENDIX C: TABLES

Please visit www.planningboard.ca/reports to view Appendix C or contact the Four County Labour Market Planning Board office to request a copy.



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