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# A Path Forward

Job Transitions in Canada



The Future Skills Centre – Centre des Compétences futures (FSC-CCF) is a forward-thinking centre for research and collaboration dedicated to preparing Canadians for employment success. We believe Canadians should feel confident about the skills they have to succeed in a changing workforce. As a pan-Canadian community, we are collaborating to rigorously identify, test, measure, and share innovative approaches to assessing and developing the skills Canadians need to thrive in the days and years ahead.

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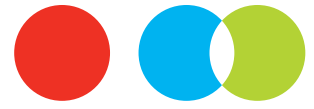
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Funded by the  
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**Canada**



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# Key findings

- We identified potential career transitions for Canadian workers using two criteria: viability and desirability.
- A viable job transition has similar skills, abilities, knowledge, experience, and educational credentials. A desirable one pays similar or higher wages, and has prospects for employment growth.
- Most people looking for the next stage in their career have an array of potential transition options available to them.
- The single biggest obstacle to transitioning from one occupation to another is characteristic similarity: having the requisite skills, abilities, and knowledge, a facility with any necessary tools and technologies, and any special qualifications needed for the destination occupation.
- Employers experiencing skills or labour shortages have more options for recruiting than they may think. However, accessing this labour pool may require employers to focus on the skills requirements for their vacant roles, rather than specific educational or experience requirements.
- Roles with the most viable and desirable transitions can be segmented into:
  - jobs in knowledge industries that require some university-level education and strong social and emotional skills like active listening and learning;
  - in-the-field jobs with below-average pay that require versatile operational skills like quality-control analysis and operations monitoring.
- When people change roles, it can be hard for them to jump from one type of role to another (for example, from a skilled trade to management).
- Sales and service occupations are the main bridge to higher-level professional roles.
- Some occupations have no viable and desirable transitions. These occupations tend to be either high-paying or highly specialized. People who want to transition from such roles may need to do one or more of the following:
  - Undertake some level of retraining.
  - Use skills they currently have, but that are not required for their current role.
  - Take a sizable pay cut.



## Introduction

**Workers considering a career change need to better understand how to capitalize on their current skills, education, abilities, experience, and knowledge. Similarly, human resource professionals, educational institutions, and labour market policy-makers need a better sense of what skills, education, abilities, experience, and knowledge characteristics make someone more employable, today and in the future. Some workers have the background to easily move to more promising occupations, while others will need upskilling or retraining.**

Many people may be asking themselves: “Where can I put my skills to work and succeed?” Or they may be asked by a future employer: “Do you have what it takes?” To help answer these questions, this research project mapped potential job transitions using role-specific skill requirements and other work-related information. (See Appendix A for an outline of the framework used.)

Using OpportuNext, our employability skills database, we assessed job transitions for 450 occupations. These transitions were then filtered based on our definitions of a viable and desirable transition. (See “Defining potential career transitions.”) A more detailed discussion of how we used the viability and desirability criteria to map potential job transitions can be found in the accompanying methodology primer.<sup>1</sup> In this report we provide a high-level summary of the results. A complete mapping of transitions for every occupation can be found on the OpportuNext website.



1 Conference Board of Canada, The, *A Methodology for Modelling Job Transitions in Canada*.

## Defining potential career transitions

We use similarity scores to define which job transitions are viable. Similarity scores measure how similar jobs are to one another, based on their required skills, abilities, knowledge, experience, and educational credentials. We calculate similarity scores using a measure called cosine similarity. The higher the similarity score between two jobs, the more alike their job requirements are to one another.

We use wage levels and employment growth to define which transitions are desirable. A desirable job transition offers a similar wage and prospects for positive employment growth.

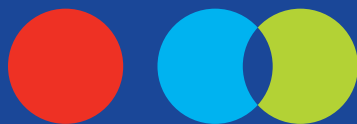
## Criteria for viable and desirable job transitions

### Viable transitions

- Similarity scores between occupations are high
- Transition does not require large leaps in current education or training level

### Desirable transitions

- Move to jobs with growth prospects
- Wages are similar to or better than current position



## Most people have options for career transitions

Most roles have a reasonable number of qualifying career transition options. This means that people with the right skills, abilities, and other qualifications who are looking for the next stage in their career have an array of potential options to pursue. As well, those who have been displaced from their existing role should be able to find a new job outside of their current area with minimal or no retraining.

However, making these transitions may require people to present their credentials and experience in a different way. For example, job seekers may need to emphasize their skills, abilities, and familiarity with tools and technologies, rather than focusing on their experience, particularly if those credentials are not typically associated with their current occupation. Successful career transitions between roles that are not commonly associated with one another by employers may require similar adaptations.

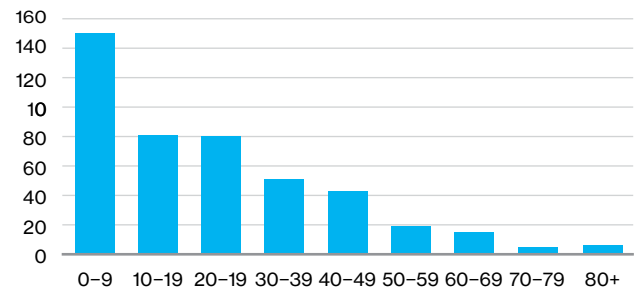
On average, we found 22 possible qualifying transitions for each occupation, with the number of potential transitions for each occupation ranging from zero to over 100. (See Chart 1). However, nearly half of the 450 occupations occupations have fewer than 20 possible transitions, and one-third have fewer than 10. (See “Highly paid jobs and those with unique skill sets may have no transitions.”) At the opposite end of the spectrum, six occupations had more than 80 possible transitions.

The single biggest obstacle when considering possible moves to any other occupation is not having the necessary skills, abilities, and knowledge and a facility with any necessary tools and technologies. Taken on its own, an average of just 11 per cent of possible moves had sufficient characteristic similarity to be considered viable. By comparison, 52 per cent of possible moves met the wage criteria, 84 per cent met the education/training level criteria, and 83 per cent met the employment growth criteria.

That said, no single characteristic stands out as driving this result. The ultimate qualification of a transition depended on the unique pairwise matching of the requirements for any two occupations.

Not surprisingly, relaxing the viability and desirability criteria results in more transition options, though job seekers would have to accept lower pay and/or a job in a declining industry. Some workers may be comfortable with a greater than 10 per cent drop in wages, depending on their immediate employment prospects and other non-wage-related preferences. Allowing pay cuts of up to 25 per cent pushes the average number of possible transitions for each occupation up to 27. This highlights how greater flexibility on wages and other criteria may bolster a worker's ability to transition from their current role.

**Chart 1**  
**Most occupations have fewer than 20 potential transitions**  
(number of occupations; number of transitions by range)



Sources: The Conference Board of Canada; O\*NET; Vicinity Jobs.

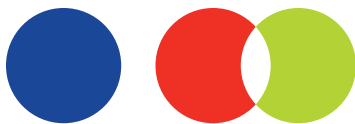
## Employers have more recruiting options than they may think

Millions of Canadians start new roles each year, and employers often struggle to find people with the right skills. Consider that, in the third quarter of 2020, as the economy struggled with the COVID-19 recession, nearly one-third of employers reported that they were limiting investment due to labour shortages.<sup>2</sup> That employers sometimes struggle to fill roles, even at a time of high unemployment, speaks to their need to go beyond the usual suspects when hiring. Recruiters may find that they have more

2 Conference Board of Canada, The, *Index of Business Confidence: August 2020*.

options than they think. In fact, our results show that, on average, each occupation has 25 possible roles that could transition into it. Tapping into this labour pool may require employers to understand and focus on the skills requirements for their vacant roles, rather than educational or experience requirements.

For example, the occupation of computer and information systems professional has one of the highest job vacancy rates in the country. But when looked at through a skills-based transition lens, we find a pool of 38 qualifying source occupations that could fill this role. These potential feeder occupations range from similar computer tech-based jobs to less-expected sources such as managers in transportation and/or advertising, marketing, and public relations managers. Key skills required for computer and information systems professionals include social and emotional skills like active listening, speaking, and critical thinking, which typify many knowledge and service sector jobs. The lesson is that employers can potentially find talent in unexpected places to fill labour market gaps.



## Social, emotional, and operational skills support career transitions


The jobs with the most potential transitions tend to be characterized by a well-rounded social and emotional skill set that is easily transferable. They also typically offer lower wages, increasing the number of roles that qualify as transition options. Most of these transitions are to other knowledge-intensive occupations such as policy researchers, business consultants, or program officers. (See Table 1.)

**Table 1**  
**Top 10 jobs with the most possible transitions**  
(units)



<b>Job title</b>	<b>Number of transitions</b>	<b>Annual wages</b>
Program officers unique to government	104	\$50,747
Plastic products assemblers, finishers, and inspectors	84	\$34,114
Other wood products assemblers and inspectors	84	\$32,065
Landscape and horticulture technicians and specialists	83	\$32,438
Health policy researchers, consultants, and program officers	79	\$63,910
Administrative officers	79	\$49,409
Technical occupations related to museums and art galleries	77	\$19,649
Recreation, sports, and fitness policy researchers, consultants, and program officers	76	\$45,198
Managers in social, community, and correctional services	76	\$62,929
Social policy researchers, consultants, and program officers	75	\$61,756

Source: The Conference Board of Canada.





**In terms of skills, the top 10 jobs with the most transitions typically require high proficiency in active listening and critical thinking.**



In terms of skills,<sup>3</sup> the top 10 jobs with the most transitions typically require high proficiency in active listening and critical thinking. (See Table 2.) An emphasis on speaking, reading comprehension, monitoring, judgement, and decision-making are also a key part of the essential skills base for eight of the top 10 jobs. Other research by The Conference Board of Canada similarly finds that social and emotional skills are becoming more important as labour-market demand for knowledge workers grows.<sup>4</sup>

The below-median-wage jobs that appear in the top 10 transitions group generally require judgment and the ability to manage operations. Especially important are quality control analysis, operations monitoring, and coordination. By contrast, technical tasks and manual skills like repairing, installation, equipment selection, and computer programming are relatively less important for all these occupations.

**Table 2**  
**Social and emotional skills are essential to the top 10 most transitionable jobs**

<b>Top 10 most important skills, in descending order of importance</b>	<b>Program officers unique to government</b>	<b>Health policy researchers, consultants, and program officers</b>	<b>Natural and applied science policy researchers, consultants, and program officers</b>	<b>Plastic products assemblers, finishers, and inspectors</b>
1	Active listening	Active listening	Active listening	Quality control analysis
2	Reading comprehension	Speaking	Reading comprehension	Active listening
3	Speaking	Reading comprehension	Speaking	Reading comprehension
4	Critical thinking	Writing	Critical thinking	Speaking
5	Writing	Social perceptiveness	Writing	Critical thinking
6	Complex problem-solving	Critical thinking	Judgment and decision-making	Monitoring
7	Judgment and decision-making	Service orientation	Complex problem-solving	Coordination
8	Active learning	Complex problem-solving	Social perceptiveness	Operation monitoring
9	Social perceptiveness	Active learning	Monitoring	Judgment and decision-making
10	Monitoring	Coordination	Active learning	Writing

(continued ...)

3 Our discussion of the skills associated with the jobs that have the most transitions is based on the O\*NET skill taxonomy.

4 Conference Board of Canada, The, *The Future Is Social and Emotional: Evolving Skills Needs in the 21st Century*.

**Table 2**  
**Social and emotional skills are essential to the top 10 most transitionable jobs**

<b>Top 10 most important skills, in descending order of importance</b>	<b>Landscape and horticulture technicians and specialists</b>	<b>Managers in social, community, and correctional services</b>	<b>Social policy researchers, consultants, and program officers</b>
1	Critical thinking	Social perceptiveness	Social perceptiveness
2	Active listening	Service orientation	Service orientation
3	Speaking	Active listening	Critical thinking
4	Coordination	Critical thinking	Active listening
5	Monitoring	Active learning	Complex problem-solving
6	Time management	Monitoring	Judgment and decision-making
7	Social perceptiveness	Coordination	Active learning
8	Reading comprehension	Complex problem-solving	Coordination
9	Judgment and decision-making	Judgment and decision-making	Monitoring
10	Operation and control	Time management	Time management
	<b>Other products assemblers, finishers, and inspectors</b>	<b>Other wood products assemblers and inspectors</b>	<b>Recreation, sports, and fitness policy researchers, consultants, and program officers</b>
1	Operation monitoring	Active listening	Speaking
2	Quality control analysis	Speaking	Critical thinking
3	Monitoring	Monitoring	Social perceptiveness
4	Active listening	Reading comprehension	Coordination
5	Critical thinking	Critical thinking	Reading comprehension
6	Speaking	Quality control analysis	Active listening
7	Operation and control	Coordination	Management of personnel resources
8	Reading comprehension	Judgment and decision-making	Writing
9	Judgment and decision-making	Operation monitoring	Service orientation
10	Time management	Complex problem-solving	Active learning



## Transitions across major job categories can be challenging

Although most occupations have multiple transition options, it is less common for those moves to be from one major job category to a completely different one. (See Chart 2.)

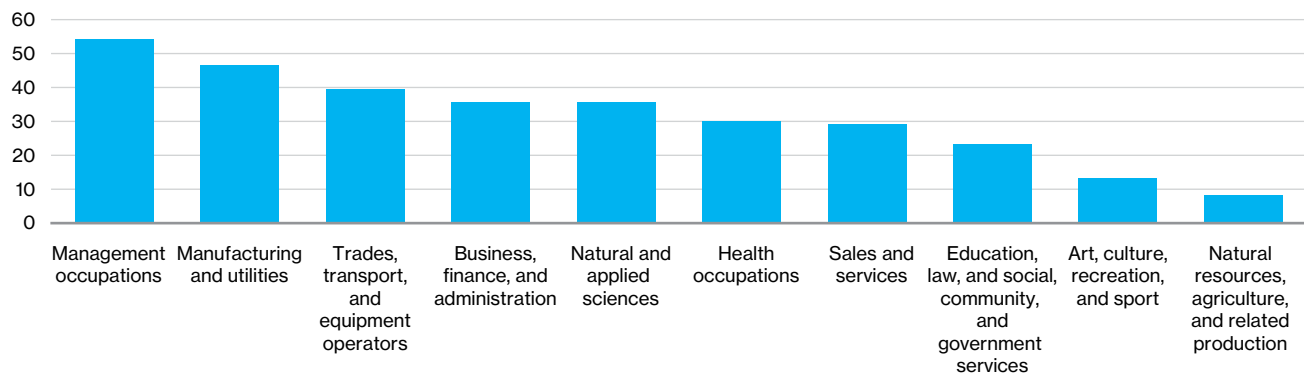
However, some occupations have a characteristics-based pathway that helps them transcend this job-group boundary. For example, most transition options for roles in the education, law, and social, community, and government services occupational group are to jobs outside that group. This reflects the high transferability of the social and emotional skills (e.g., active listening, speaking, and critical thinking) that typify these roles.

For other such boundary-crossing occupations, limited transitions within their group result in most of their options lying elsewhere. Consider

the natural resources, agriculture, and related occupations group, or the art, culture, recreation, and sport group. For both, less than 15 per cent of transitions lie within their own occupational group. For natural resources, agriculture, and related occupations, a key reason for the limited number of in-group transitions is that many of those roles are expected to experience declining employment over the next 10 years, and therefore do not qualify as desirable transitions.

The diverse and highly specialized skills characteristics of jobs in the art, culture, recreation, and sport occupational group severely limit their pool of qualifying transitions, with most being moves to outside roles. Indeed, around 40 per cent of the occupations in this group have less than five transitions, and several have no transitions at all.

**Chart 2**  
Possible transitions are more common within major job categories  
(percentage of transitions within own occupational group)



Sources: The Conference Board of Canada; O\*NET; Vicinity Jobs.

## Sales and service occupations can be bridges to important career pathways

Although transitioning between occupational groups may be challenging, there are clear paths for those who seek them. For example, those moving into management roles are most likely to transition from natural and applied sciences or professional service roles. Sales and services and manufacturing roles are also the most common feeders into the trades.

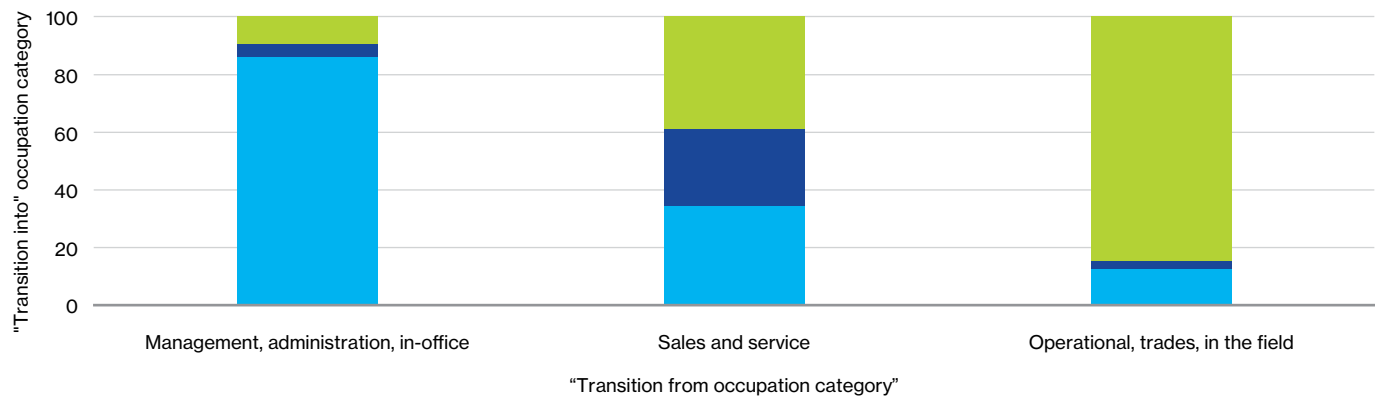
More broadly, career transition pathways tend to stay clustered within either the traditional operational/trades/in-the-field group or the professional/admin/in-the-office group. That said, the results show that sales and service occupations appear to offer a “transition bridge,” in that they have an equal share of

potential transitions to either category. (See Chart 3.) Results such as these warrant further investigation and point to how this research could be extended to offer insights into ways to enable transitions between major occupational groups and classifications.



**Chart 3**

**Sales and service occupations have greater ability to move between different types of roles**  
(per cent of transitions available to each group)



Sources: The Conference Board of Canada; O\*NET; Vicinity Jobs.

## Highly paid jobs and those with unique skill sets may have no transitions

Some occupations show very limited options for transition. We found that 23 occupations, or about 5 per cent of the total, do not have any possible transitions. These fall into two main groups: occupations with no characteristic-similar matches (i.e., not viable), and occupations for which transitioning would entail a large pay cut (i.e., not desirable). (See Table 3.)

**Table 3**  
**Some jobs have no viable transitions, while for others the viable transitions are not desirable**

No viable transitions	Viable transitions, but not desirable
Railway and yard locomotive engineers	Industrial instrument technicians and mechanics
Testers and graders, food and beverage processing	Athletes
Hairstylists and barbers	Specialist physicians
Actors and comedians	Contractors and supervisors, pipefitting trades
Real estate agents and salespersons	Senior managers – financial, communications, and other business services
Supervisors, railway transport operations	Judges
Dentists	School principals and administrators of elementary and secondary education
Other performers, n.e.c.	Optometrists
Logging machinery operators	Letter carriers
Aquaculture and marine harvest labourers	Chiropractors
Railway conductors and brakemen/women	Police officers (except commissioned)
	Lawyers and Quebec notaries

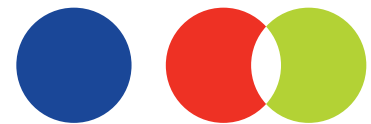
Sources: The Conference Board of Canada; ESDC; O\*NET; Statistics Canada; Vicinity Jobs.

Occupations with no viable transitions typically have unique skill sets. For example, actors and comedians, dentists, and railway conductors are occupations whose required skill sets are uniquely specialized, compared with all other occupations.

Occupations with no desirable transitions typically faced only lower-paying options. For example, industrial instrument technicians and mechanics have 15 viable transitions, but none of them are desirable, due to the prospective wage cut they would entail. Contractors and supervisors for pipe-fitting trades and specialist physicians have just three and four viable transitions, respectively, but again, these transitions all entail sizable pay cuts, making them undesirable options.

People in positions without viable or desirable transitions can still move into other roles. They may, however, need to do one or more of the following:

- Undertake some level of retraining or upskilling.
- Use skills they currently have, but that are not required for their current role.
- Be willing to take a sizable pay cut.



## Next steps

The Conference Board of Canada designed and built the OpportuNext database, which was used to identify potential career transitions. Information on all possible transitions will be accessible via the forthcoming OpportuNext website. The database will provide stakeholders with a unique tool for labour-market planning. The job-transition mapping allows:

- career placement and development professionals to determine possible career paths and transition strategies;
- employers to identify pools of talent that they can tap to fill labour shortages;
- policy-makers, researchers, and analysts to determine where to focus training, retraining, and upskilling programs or policies.

The Conference Board of Canada is also exploring how the OpportuNext database can inform specific areas of concern in different segments of Canada’s labour market. For example, the database can help identify potential transitions for workers at high risk of being displaced by automation and other technological innovations, or for employees who lost their jobs during the COVID-19 pandemic.

It is important to note that, while the data show which jobs make for viable and desirable transitions for each occupation, they do not explain or demonstrate how those transitions can be actioned more concretely. Moreover, the data define “desirable” rigidly and do not attest to the subjective desirability of such transitions in a broader sense.

More work can be done to examine the best transitions for each occupation. However, longitudinal data for occupations in Canada is lacking, making this analysis more difficult. New and improved occupational data will help and is needed to address some of the pressing questions that the Canadian labour market and economy face.



# Appendix A

## Data, scaling, and weighting framework

Data source	Input	Number of dimensions	Definition	Type of information	Scaling	Weighting for similarity score	
<b>O*NET data</b>	KSA measure	Knowledge	33	Organized sets of principles and facts applying in general domains	Level	0–100	1 (equal weighting of each measure in O*NET KSA)
		Skills	35	Developed capacities that facilitate learning or the more rapid acquisition of knowledge	Level	0–100	
		Abilities	52	Enduring attributes of the individual that influence performance	Level	0–100	
	Work activities	41	General types of job behaviours occurring on multiple jobs	Level	0–100	1	
	Education, training, and experience	41	The frequency of categories for education, training, and experience that each occupation has	Distribution	0–100	1	
<b>Vicinity Jobs data</b>	Skills measure	General/soft skills	52	General/soft skills are useful in most occupations	Percent of job postings containing skill name	0–100	1 (equal weighting of each VJ skill measure)
		Specialized skills	147	Specialized skills apply to specific jobs	Percent of job postings containing skill name	0–100	
	Education and experience	Tool and equipment and technology	4,099	Equipment, tools, and technological skills entails knowledge of ICTs and heavy machineries	Percent of job postings containing skill name	0–100	1 (equal weighting of each measure in VJ education and experience)
		Experience	2	The experience requirements for the stated occupation	Percent of job postings containing experience requirement	0–100	
		Education	7	The education requirements for the stated occupation	Percent of job postings containing educational requirement	0–100	

Sources: The Conference Board of Canada; O\*NET; Vicinity Jobs.



# Appendix B

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## Acknowledgements

This impact paper was prepared by The Conference Board of Canada's Sheila Rao, Principal Research Associate; Thomas Hindle, Economist; and Nachum Gabler, Senior Economist, on behalf of the Future Skills Centre. It was reviewed internally by Matthew McKean, Director; Michael Burt, Executive Director; and Susan Black, Chief Executive Officer.

The authors thank members of the Research Advisory Board who reviewed this paper and shared their feedback:

- Vincent Dale, Director, Centre for Labour Market Information, Statistics Canada;
- Zayna Khayat, Future Strategist, SE Health; Adjunct Professor, Health Sector Strategy, Rotman School of Management;
- Jean-François Larue, Executive Director, Labour Market Information Directorate, ESDC;
- Philip Mondor, President and CEO, Tourism HR Canada;
- Christina Taylor, former Chair, Buildforce Canada; former Executive Director, Career Link Atlantic;
- Steven Tobin, Executive Director, Labour Market Information Council.

This report was prepared with financial support provided through the Future Skills Centre. The Conference Board of Canada is proud to serve as a research partner in the Future Skills Centre consortium. For further information about the Centre, visit the website at <https://fsc-ccf.ca/>.

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### **A Path Forward: Job Transitions in Canada**

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To cite this research: Hindle, Thomas, Rao, Sheila, and Gabler, Nachum. *A Path Forward: Job Transitions in Canada*. Ottawa: The Conference Board of Canada, 2021.

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