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Rising Skills

A Toolbox Talk on Social and Emotional Skills
in the Construction Trades



Issue briefing | December 14, 2020



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.

The Future Skills Centre was founded by a consortium whose members are Ryerson University, Blueprint ADE, and The Conference Board of Canada.

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Key findings

- The construction sector will need to recruit under-represented groups to address labour shortages and realize the benefits of workplace diversity. Tradespeople in this sector need social and emotional skills (SES) to work in more diverse teams. They need these skills, too, to advance occupational health and safety.
- Data for this report were collected prior to the COVID-19 global pandemic. But the skills underlined here will likely grow in importance as the sector works to mitigate the pandemic.
- Construction trades will be needed to address housing shortages in much of Canada's North; however, Indigenous apprentices in Northern and remote regions still face several unique barriers.
- The following actions would help make it easier for tradespeople to gain the skills they need to thrive in Canada's construction sector:
 - Expand access to mentorship training within and beyond the apprenticeship pathway.
 - Address barriers faced by Indigenous people in rural and remote regions.
 - Incorporate social and emotional skills into health and safety role-playing exercises.

Introduction

The construction trades workforce is changing. Tradespeople are tackling new challenges in multi-generational and increasingly diverse workplaces. What skills do tradespeople need to adapt to these trends?

Tradespeople identified social and emotional skills (SES) as a priority in adapting to the future of construction work. Skills such as critical thinking and emotional intelligence will be needed to work with multiple generations from diverse backgrounds and to advance occupational health and safety.



Social and emotional skills required for a diverse workforce

Changing demographic and labour trends will be a challenge for the construction trades. They will need to recruit from non-traditional talent pools to address this challenge, leading to more diverse teams. The sector will require stronger attention to the social and emotional skills that tradespeople need to work in more diverse teams.

The Canadian trades workforce is aging faster than the workforce with a university degree at the bachelor level.¹ To replace those who will retire from the construction sector, it is becoming increasingly important to recruit young people, Indigenous people, women, and skilled immigrants.²

This is especially important in Ontario and British Columbia, which are expected to grapple with recruitment challenges over the next few years because of a high volume of construction projects.³ Although several initiatives such as women in skilled trades pre-apprenticeship programs are under way to encourage diversity in the trades, less consideration has been given to the social and emotional skills that tradespeople need to adapt to diverse work sites.

Tradespeople will need a range of social and emotional skills to participate in an increasingly diverse construction workforce.

Gender diversity and inclusion cannot thrive in the workplace unless tradespeople have the social and emotional tools to support it. While many apprenticeship stakeholders reported belonging to workplaces with zero-tolerance harassment and discrimination policies, fewer stakeholders cited having access to training that promotes the skills needed to contribute to a respectful and inclusive workplace. Stakeholders used the phrase “old boys’ club” to describe the construction sector, noting that older tradespeople are experiencing the most difficulty exercising the skills needed to contribute to an inclusive workplace. As one stakeholder noted, inclusive workplaces will be key to achieving recruitment and retention goals in the sector: “I think in order to entice people to work and stay, there has to be an open, friendly, inviting workplace.”

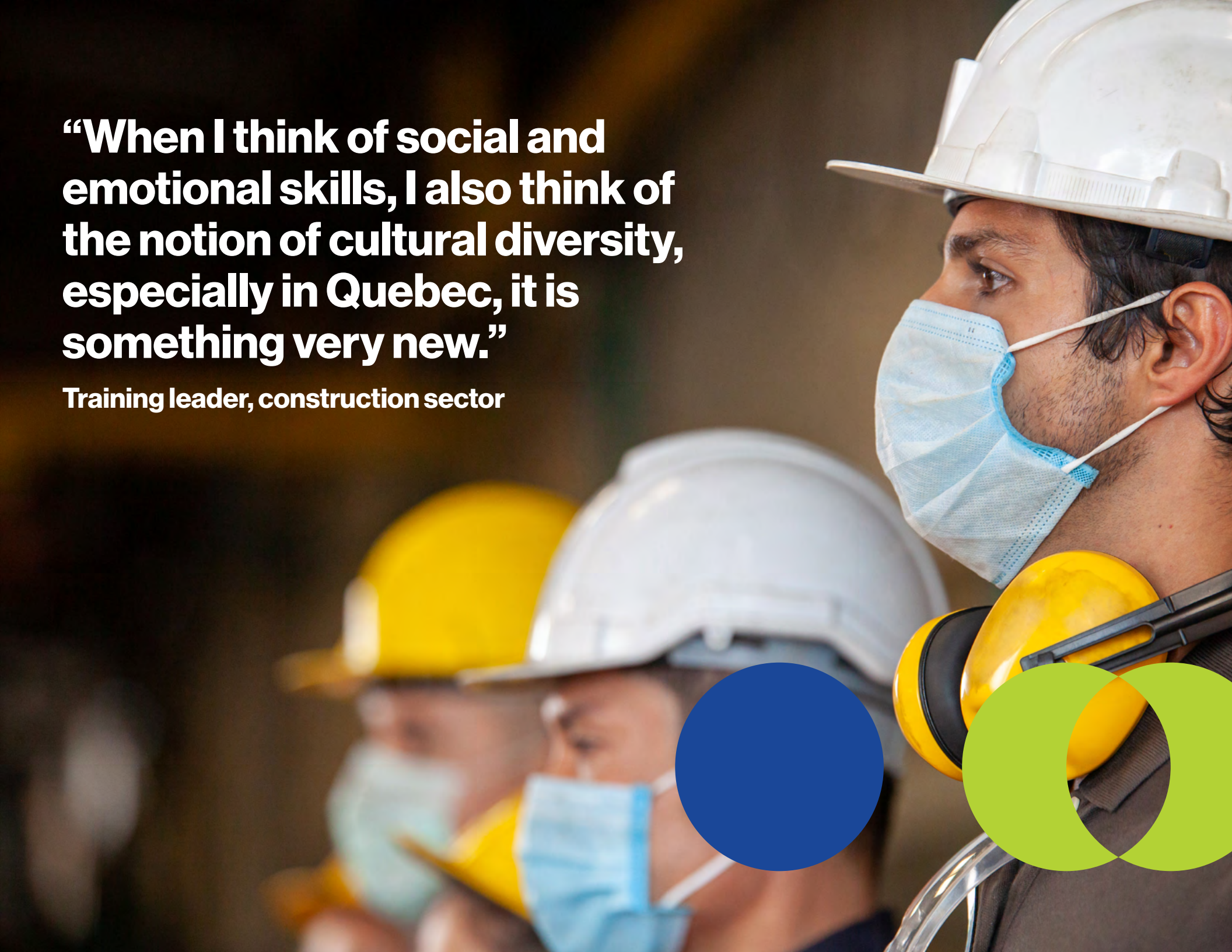
¹ Statistics Canada, “Pathways and Earnings Indicators for Registered Apprentices in Canada.”

² Advisory Council on Economic Growth, *Tapping Economic Potential Through Broader Workforce Participation*.

³ Canadian Apprenticeship Forum, *Apprentice Demand in the Top Ten Red Seal Trades*.

“When I think of social and emotional skills, I also think of the notion of cultural diversity, especially in Quebec, it is something very new.”

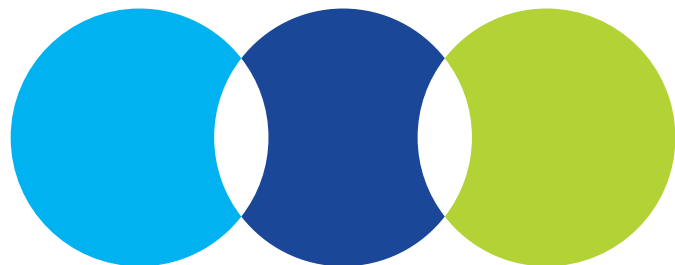
Training leader, construction sector



Patience and communication skills to facilitate learning in a multi-generational workforce

Generational differences in communication and work style mean communication skills between apprentices and journeypersons are becoming increasingly important. Whereas journeypersons typically prefer in-person or voice communication and established work routines, apprentices expressed a preference for text or e-mail communication and more flexible workplaces.

These mismatched preferences can impede knowledge transfer. For instance, apprentices may ask questions via text that go unanswered. In this context, tradespeople need stronger communication skills, such as the ability to share information with colleagues in a manner that is responsive to generational preferences. From a journeyperson's perspective, active listening and patience are needed to communicate with the younger generation.



Critical thinking and problem-solving are needed to advance health and safety

Critical thinking, problem-solving, and collaboration are increasingly important to advance occupational health and safety, a high priority in the sector:⁴

- Different construction trades must communicate effectively with one another to raise awareness of health and safety risks on shared job sites. For example, electricians may need to alert carpenters, plumbers, and other trades of the location and dangers of electrical conduits.
- Critical thinking skills are important for assessing and mitigating health and safety risks: tradespeople often need to decide when to exercise the right to refuse unsafe work.
- Collaboration skills are needed for construction tradespeople to work together to achieve safety objectives identified through “tailgate meetings” or “toolbox talks.”
- Problem-solving skills are needed to respond appropriately to hazardous situations encountered in the workplace, for example, ensuring prompt and proper cleanup of an oil or diesel spill.

Construction tradespeople need social and emotional skills to navigate a wide range of health and safety hazards, such as falls and crushed-by or struck-by accidents.⁵ Given the benefits linked to adopting safety practices, including a faster project schedule, a higher project return on investment (ROI), and a positive impact on the company's reputation,⁶ it is important to attend to social and emotional skills in health and safety training.

⁴ Ministry of Labour, *Construction Health and Safety Action Plan*.

⁵ Provincial Building and Construction Trades Council of Ontario, *Submission to the Ministry of Labour*.

⁶ McGraw Hill Construction, *Safety Management in the Construction Industry*.

Challenges in rural and remote regions

Red Seal Program

The Red Seal Program sets common standards to assess the skills of tradespeople across Canada (www.red-seal.ca).

Although not all tradespeople consulted for this report were Red Seal-certified, we primarily engaged trades approved for Red Seal status. In some exceptions, stakeholders commented on trades that are available in a smaller number of jurisdictions: one example is the housing maintainer trade, a recognized trade in Nunavut and the Northwest Territories that is not a Red Seal trade.

See [Appendix A](#) for details on who we spoke to.

Construction trades, including electricians, carpenters, and housing maintainers, will be needed to address the housing shortages that exist in much of Canada's North.⁷ In addition, the Government of Nunavut has recognized mining and construction as its most rapidly expanding sectors.⁸ Unfortunately, Indigenous people in rural and remote regions face many barriers to developing skills and achieving certification in the construction trades. These barriers include the following:

- **A preference for remaining in one's community.** Training options, such as specialized training offered by technical training institutes or product manufacturers, are limited in rural and remote regions. Often, there is not enough interest to justify a program. Where there is interest, there may not be sufficient resources (e.g., equipment, space) to offer training. Indigenous people may be reluctant to travel to attend training due to travel costs or the close ties they have with their community.
- **Gaps between construction projects.** Demand for construction trades fluctuates depending on the number of construction projects being undertaken in the region. Apprentices have difficulty finding relevant employment and getting the number of hours needed to become Red Seal-certified when few or no projects are being undertaken.
- **Costly and unreliable Internet access.** Many Indigenous people cannot afford Internet access, and those who can cannot count on a reliable connection. This limits online learning opportunities, the use of educational virtual reality (VR) and augmented reality (AR) technologies, and access to relevant apps.

⁷ Government of Canada, *Northern Housing Policy Recommendations*.

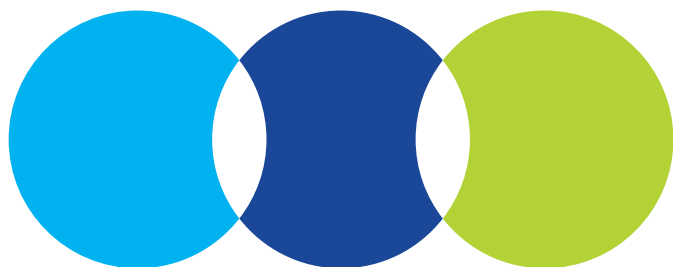
⁸ Department of Family Services, *In-Demand Career Options*.

- **Curricula that are not adapted to rural and remote training needs.** Residential construction in Northern Indigenous communities requires training that is tailored to regional climate and housing stock challenges. Yet, in the territories and remote regions of several provinces, apprentices pursuing certification in a construction trade may receive training that is useful for specialized construction work in urban areas but less applicable to the generalist skills needed in Northern communities. One exception is the housing maintainer trade that was developed to meet the unique housing needs of the Northwest Territories.

What needs to happen?

We have the following suggestions to strengthen apprenticeship training and post-certification upskilling for tradespeople in the Canadian construction sector:

- **Expand access to mentorship training within and beyond the apprenticeship pathway.** Although some Red Seal occupational standards have integrated mentorship content, there is a need to also include this content across occupational standards and post-certification instructor training. Good mentoring relationships between apprentices and journeypersons can address generational differences that can create a non-inclusive work environment for younger tradespeople. Offering mentorship training in the workplace and incorporating mentorship criteria into certification requirements makes it possible to upskill current journeypersons and equip apprentices with the skills they will need as journeypersons in the future.
- **A promising approach to mentorship training:**
The *Mentorship Matters* program developed by SkillPlan in British Columbia emphasizes the importance of good communication skills. The program identifies six steps to be a good mentor: identify the point of the lesson, link the lesson, demonstrate the skill, provide opportunity for practice, give feedback, and assess progress. The program also identifies six steps to be a good mentee: communicate effectively, listen, receive feedback, ask questions, know your learning style, and set realistic goals. SkillPlan has also developed Mentorship Advantage, a mobile app that tracks mentorship activity and progress and provides weekly “toolbox talks” and mentorship training tips.



- **Address barriers faced by Indigenous people in rural and remote regions:** Invest in broadband for remote Northern communities so that apprentices can benefit from existing online resources as well as virtual reality and augmented reality training opportunities. With stronger connectivity, local training providers could work with apprentices and journeypersons to connect online training content to practical applications in the area. In addition, virtual mentorship could play a strong role in the North. This could involve virtually pairing apprentices with a journeyperson mentor who may not be physically present in the community. Finally, provide apprentices with support in their job search and in obtaining relevant employment within their community.
- **A promising approach to job search support for rural and remote tradespeople:** The Northwest Territories and Nunavut Construction Association provides a free reverse job board service to tradespeople in the Northwest Territories and Nunavut. Tradespeople submit their contact information, trades of interest, and apprenticeship status, and this information is sent to industry contacts in the region looking to hire.
- **Incorporate social and emotional skills into occupational health and safety role-playing exercises.** Social and emotional skills, including problem-solving, critical thinking, and collaboration skills, should be integrated into health and safety training through in-person or virtual role-playing exercises. Role-playing exercises eliminate the safety risks of failing to properly address a health and safety issue, while accommodating the visual and hands-on learning style that many tradespeople prefer. To ensure relevance, in-person and virtual reality role-play scenarios can be based on real-world accident reports in the construction sector.⁹



9 Mo and others, "Data-Driven Approach to Scenario Determination," 116–25.

What are we doing?

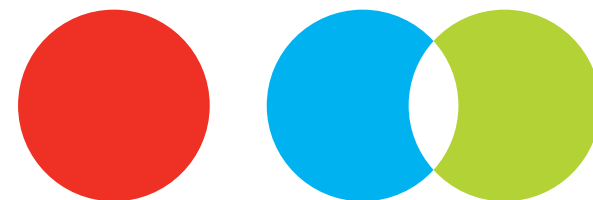
Assessment tool

As part of the Future Skills Centre's research project on social and emotional skills (SES), The Conference Board of Canada has developed a digital toolbox that summarizes key approaches and tools to assess SES. The digital platform provides a curated guide to key SES measurement resources. Check out this platform to learn more about ways to measure social and emotional skills and to find out more about applied studies on SES measurement and development:

<https://www.conferenceboard.ca/focus-areas/education-skills/future-skills/measuring-social-and-emotional-skills>.

The Conference Board and the Future Skills Centre are bringing together apprenticeship stakeholders to better understand the emerging skills needed to adapt to sector-specific future work trends. Through our work we aim to:

- discover ways to bridge the gaps between the skills that will be needed and how we integrate those skills into apprenticeship training in Canada;
- identify innovations that address emerging digital, social and emotional, and green skills needs in Canada's apprenticeship systems;
- provide a roadmap for Canada to bring the best training possible to our newest generation of tradespeople – one that fosters the lifelong learning they need to adapt at all stages of their careers.



Appendix A

Who did we speak to?

We spoke to 75 stakeholders from across Canada about the emerging skills that tradespeople will need to adapt to the future of work in the construction sector, particularly in the Red Seal trades. Participants included 51 construction stakeholders and 24 apprenticeship stakeholders with responsibility across multiple sectors. We engaged 18 apprentices, 12 journeypersons, 10 industry leaders, 17 training leaders, 9 workforce development executives, and 9 apprenticeship authority representatives through focus groups and semi-structured interviews. These consultations were part of a larger apprenticeship research project in which we spoke to 175 apprenticeship stakeholders from across trade sectors.

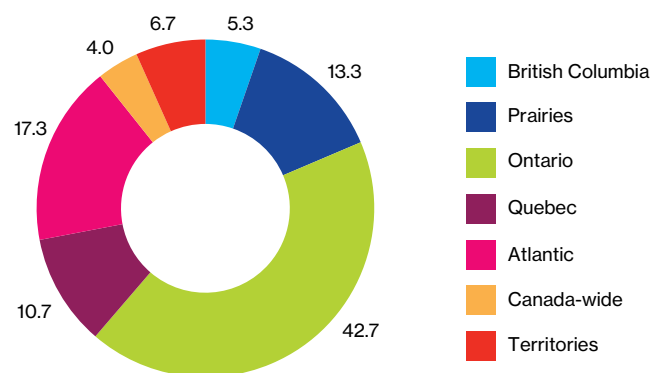
We engaged the following trades:

- carpenters
- cabinetmakers
- plumbers
- construction electricians
- heavy equipment operators (i.e., dozer and excavator)
- refrigeration and air conditioning mechanics
- ironworkers (i.e., generalist and reinforcer)

Participants were at different stages of their career and included first-year apprentices, established journeypersons, tradespeople who had gone on to establish their own business, and tradespeople working as educators. We engaged construction and multi-sector apprenticeship stakeholders from Atlantic Canada, central Canada, the Prairie provinces, Canada's West Coast, and the territories. Most construction and multi-sector stakeholders were from Ontario (42.7 per cent), the Atlantic provinces (17.3 per cent), Quebec (10.7 per cent), the Prairie provinces (13.3 per cent), and the territories (6.7 per cent). (See Chart 1.)

Chart 1

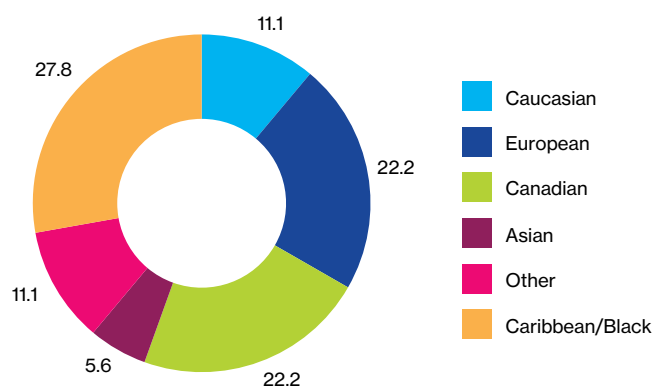
Construction sector stakeholders engaged by region
(per cent)



Source: The Conference Board of Canada.

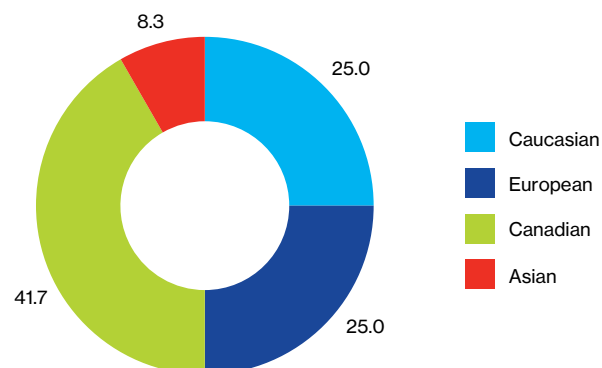
Participating tradespeople in the construction sector included a relatively mature and diverse cohort of apprentices alongside an older and less diverse generation of journeypersons. Just over 33 per cent of apprentice participants identified as Caribbean/Black (27.8 per cent) or Asian (5.6 per cent), while 33.3 per cent identified as European (22.2 per cent) or Caucasian (11.1 per cent). (See [Chart 2](#).) Among journeypersons, 50 per cent identified as Caucasian (25 per cent) or European (25 per cent), and only 8.3 per cent identified with a visible minority group (Asian). (See [Chart 3](#).) The 33.4 per cent of apprentice participants who identified with visible minority groups is higher than the 8.2 per cent of apprentices who identify as visible minorities in Canada.¹⁰

Chart 2
Ethnic background of construction sector apprentices
(per cent)



Source: The Conference Board of Canada.

Chart 3
Ethnic background of construction sector journeypersons
(per cent)

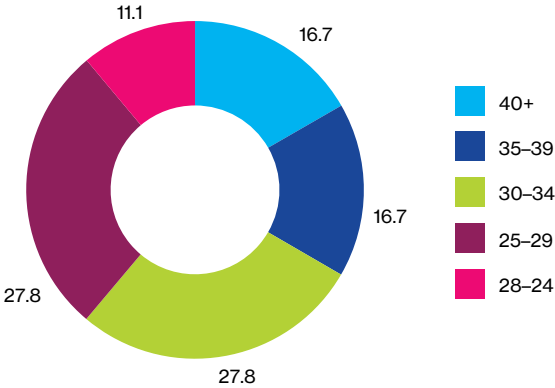


Source: The Conference Board of Canada.

Participating apprentices and journeypersons in the construction sector represented differing generational perspectives. Nearly 67 per cent of apprentices were under the age of 35, while 75 per cent of journeypersons were 35 years old or older. Journeypersons were more likely to represent baby boomer and Generation X perspectives, while apprentices were more likely to represent millennial or Generation Z perspectives. (See [charts 4 and 5](#).)

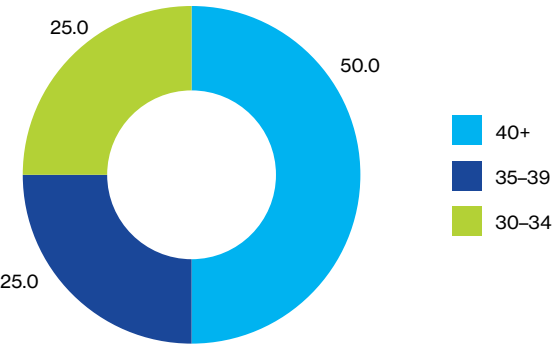
10 Arrowsmith, *Apprenticeship in Canada*.

Chart 4
Age of construction sector apprentices
(per cent)



Source: The Conference Board of Canada.

Chart 5
Age of construction sector journeypersons
(per cent)



Source: The Conference Board of Canada.

Appendix B

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Andrew Bieler, Matthew McKean, and Stacie Kerr

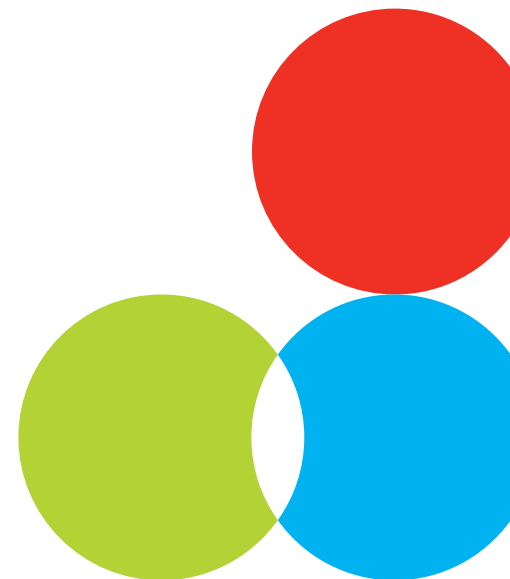
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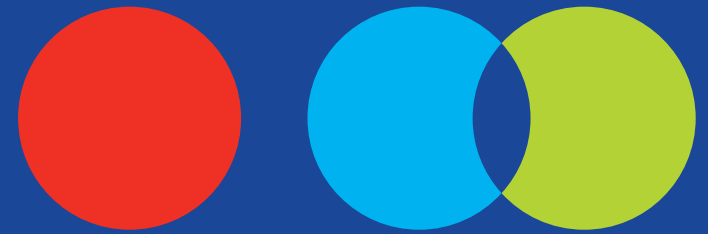
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