



MINING INDUSTRY
HUMAN RESOURCES COUNCIL

NATIONAL YOUTH MINING CAREER AWARENESS STRATEGY 2021-2026

**TRANSFORMATION, INNOVATION
AND DIVERSITY**



MINING INDUSTRY
HUMAN RESOURCES COUNCIL

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INTRODUCTION

The mining sector is a major employer and a vital part of the Canadian economy. The Canadian Minerals and Metals Plan (CMMP) aims to solidify Canada's position as a global mining leader. A key goal of this plan is to attract highly qualified personnel and develop the pipeline of future talent by showcasing mining as an excellent career choice.¹

The Mining Industry Human Resources Council

The Mining Industry Human Resources Council (MiHR) is Canada's knowledge centre for mining labour market information. An independent, non-profit organization, MiHR leads collaboration among mining and exploration companies, organized labour, contractors, educational institutions, industry associations and Indigenous groups to identify opportunities and address the human resource and labour market challenges facing the Canadian minerals and metals sector.

MiHR led the development of this strategy by providing labour market information, conducting research and hosting events designed to identify the way forward for mining career awareness in Canada.

Mining Career Opportunities

There are many desirable work opportunities for youth in the mining sector as well as a high demand for workers in technology, environmental sustainability, and social responsibility. These rewarding well-paid jobs with opportunities for career advancement are available in a range of work locations. Yet, the percentage of youth participation in the sector is low compared to their overall presence in the Canadian labour force.² In part, due to the struggles to engage youth, women, and immigrants, the scarce supply of diverse labour in mining results in a limited labour pool.

MiHR forecasts that the industry will experience significant labour force challenges over the next 10 years (2020 to 2030) due to increases in retirement and modest employment growth. As a result, there is a need to attract new workers, retain existing workers, and increase the potential available supply of labour to meet industry demand.

Gearing Up: Developing Mining Talent Through Work-Integrated Learning

Since 2017, MiHR has collaborated with mining and mineral employers and post-secondary institutions to increase the connection between students, new graduates, and the mining industry by providing them with work experience, skills development, and workplace inclusion-related training prior to graduation. Gearing Up has created over 1250 new WIL opportunities in mining through wage subsidies for co-ops, internships, field placements, applied projects, capstone projects or case competitions. A key project of Gearing Up is to implement awareness, outreach and recruitment strategies to promote the mining industry. MiHR's Gearing Up program aims to change the way post-secondary students perceive careers in the mining sector. The Gearing Up Steering Committee guided the themes and recommendations of this report through planning sessions that culminated with the final report.

Impact of COVID-19

The COVID-19 pandemic has had a significant impact on youth due to uncertainty related to academic programs, employment opportunities and the effects on mental health. It has resulted in cancelled or shortened experiential learning opportunities and a shift to remote work. The shift to automation and technological transformation accelerated in all sectors of the economy including mining further increasing the demand for highly skilled workers. In addition, the systemic barriers faced by many groups, particularly those that are underrepresented in the mining sector, have been exacerbated and moved to the forefront. During this time of uncertainty and change, it is even more critical for all stakeholders in the sector to collaborate and implement innovative approaches to address the labour challenges facing the industry.

¹ Natural Resources Canada (2020). The Canadian Minerals and Metals Plan: Update to Action Plan 2020. Retrieved from https://www.minescanada.ca/sites/default/files/pictures/PDF/cmmpp_actionplan2020_update_final-en.pdf

² Mining Industry Human Resources Council (2020). The Changing Nature of Work: Innovation, Automation and Canada's Mining Workforce. Retrieved from https://mihr.ca/wp-content/uploads/2020/05/MIHR_Innovation_Report_EN_WEB.pdf

PURPOSE

A national mining career awareness strategy to attract youth to the mining sector provides a focused vision and directions for future initiatives. Career awareness refers to activities and programs designed to make youth cognizant of careers and occupations available to them in the future that align with their talents and interests.³ This strategy will guide research, program development and stakeholder engagement over the next five years to prepare the mining sector for anticipated labour force challenges pending available resources and funding.

PLANNING

Blueprint for a National Mining Career Awareness Strategy

In 2019, MiHR facilitated the development of the Blueprint for a National Mining Career Awareness Strategy aimed at understanding the context, challenges and solutions for attracting youth to the sector. This initiative included a literature review, an environmental scan, focus groups with key stakeholders and a survey of students working in the mining sector. The project identified that significant effort is required to raise awareness of mining careers amongst youth to secure the labour supply required to meet industry demand given forecasted labour shortages in the sector. The final report summarized key findings and provided a roadmap for the creation of the final strategy report.⁴

National Mining Career Awareness Strategy Development

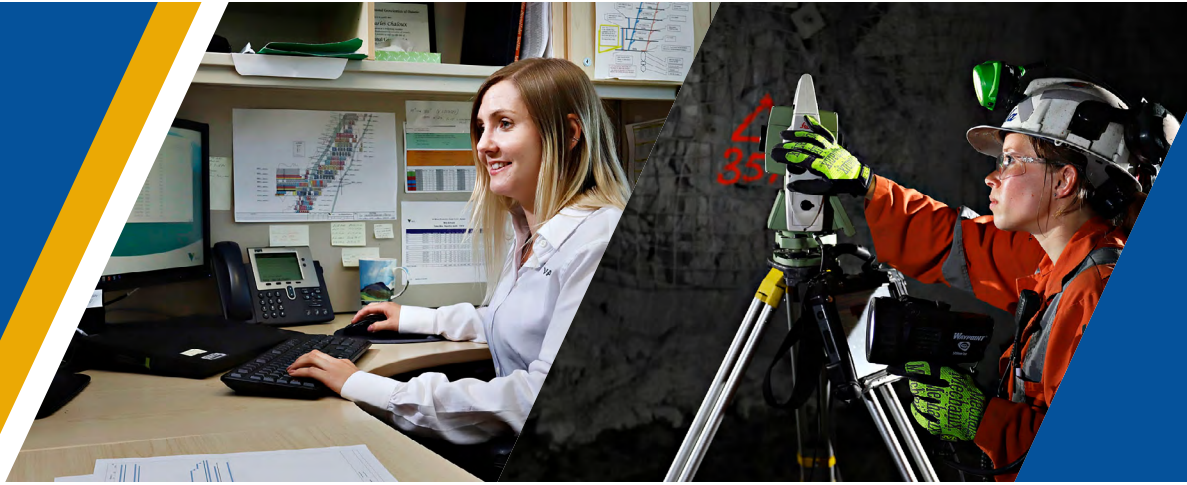
A second phase of the creation of the Strategy focused on building on the work of the Blueprint through additional research, data collection and stakeholder engagement. An inventory of stakeholders within the fields of mining, education and career awareness was completed. This inventory was used to identify new partnerships for reaching key audiences and implementing innovative approaches to promoting mining careers to youth from diverse backgrounds and interests. Labour market information from the mining sector as well as current research into youth career awareness from other fields was compiled to further guide the development of these recommendations.

Youth Polling

In keeping with its aim to ensure that efforts are both effective and responsive to current career awareness needs among young jobseekers, MiHR conducted a national poll of 3000 youth, aged 15 to 30 who reflect the diversity of youth residing in both urban and rural contexts in Canada. The survey explored youth awareness and perceptions of the mining sector as well as motivations and barriers to choosing a career in mining.

³ New Ways to Work (2019). Preparing All Youth For Success In College, Career and Life. Retrieved from <https://www.newwaystowork.org/wp-content/uploads/2019/05/new-cdc.pdf>

⁴ Mining Industry Human Resources Council (2020). Facilitating the Development of a Blueprint for a National Mining Career Awareness Strategy. Submitted to Natural Resources Canada, April 2020.



VISION, PRINCIPLES, AND PILLARS

VISION

Youth in Canada see mining as an innovative, challenging and rewarding career choice.

PRINCIPLES

- **Empower** youth to engage with the industry and help shape the future of mining.
- Ensure **equity, inclusion and diversity** are central to any programs with an emphasis on attracting and retaining members of underrepresented groups.
- Apply **evidence-based** solutions and strategies that are informed, implemented, and evaluated using current research, knowledge, and best practices.

Engagement

Involvement, consultation, and relationship building with youth and stakeholders.

Awareness

Changing perceptions and knowledge of the industry through multiple channels including education, training, and marketing.

Research

Conducting high quality research into labour market information, program evaluations and development of best practices.

NATIONAL YOUTH MINING CAREER AWARENESS STRATEGY AT-A-GLANCE



STRATEGIC DIRECTIONS

INCREASING YOUTH ENGAGEMENT

Engaging youth directly in program development is essential to effective program design. Initiatives aimed at youth should draw on their experiences, perspectives, and ideas to inform discussion, decision-making and actions.

There are a wide range of organizations across the country involved in career awareness initiatives targeted at youth. Those involved directly with mining career awareness through the Gearing Up program are primarily mining companies,

mining associations and post-secondary institutions. There are, however, several organizations in the mining industry who are also engaged in promoting youth career awareness. A significant number of organizations and associations directly involved with career awareness and career development, however, have limited or no direct involvement with the mining industry.⁵ These organizations often provide services to specific underrepresented groups and offer insights for enhancing mining career awareness programs.

Engage youth and key stakeholders in the conception and implementation of mining career awareness initiatives.

OBJECTIVES	TACTICS	ACTIVITIES	
		YEAR 1-2	YEAR 3-5
<p>Establish a cohesive approach to attracting youth to the sector across Canada that draws upon the knowledge and experiences of a diverse range of stakeholders.</p>	<p>Engagement Involve youth and career development professionals in the design and implementation of career awareness strategies.</p> <p>Awareness Share information regarding innovative initiatives and successful practices across the industry.</p> <p>Research Use innovation-focused labour market information to design/inform data-driven strategies to address labour force challenges.⁶</p>	<p>Establish youth advisory committee to provide input and guidance into the design and implementation of research and career awareness initiatives.</p> <p>Integrate labour market information and program evaluations into the design of new initiatives.</p> <p>Participate in conferences and networking opportunities within the mining, career development and education sectors.</p>	<p>Produce reports and recommendations to guide future mining career awareness activities.</p> <p>Support and promote new approaches to engage youth in the mining sector.</p>

⁵ Mining Industry Human Resources Council (2021). National Mining Career Awareness Strategy: Stakeholder Analysis. Unpublished report.

⁶ Mining Industry Human Resources Council (2020). The Changing Nature of Work: Innovation, Automation and Canada's Mining Workforce. Retrieved from https://mihrc.ca/wp-content/uploads/2020/05/MIHR_Innovation_Report_EN_WEB.pdf



TRANSFORMING PERCEPTIONS

A sustainable and prosperous mining industry needs young people to see mining as a viable career choice. Recent polling of Canadian youth found that while mining is perceived as being skilled work, meaningful, and respected by others, it is also viewed as requiring relocation, being unsafe and being more for men.⁷ These negative perceptions about the mining sector and mining careers are a barrier to attracting young workers.

The polling also found many youth have not yet formed an opinion about mining and mining careers due to a lack of knowledge and experience related to the sector. Highlighting the level of compensation, work-life balance, and challenge of the work in mining would make careers in this sector more attractive to youth. Messaging related to environmental sustainability, social responsibility and technological advancement will also have a positive impact on their perceptions.

More information about career opportunities and pathways into the workforce would encourage youth to consider a career in mining. Tools that enable youth to link their skills, talents, and interests to learning, skills development and employment opportunities could close that gap.⁸

Parents and family members influence youth career choices in multiple ways such as role-modelling, knowledge and connections, and career preferences.⁹ MiHR's recent polling of youth identified that 35% of youth felt that their parent or family reaction to choosing a career in mining would be negative while one in five thought their reaction would be positive. It is important to note that just under half of youth answered that they were unsure or felt their reaction would be neutral.¹⁰

Transform youth perceptions of the mining sector and mining sector careers.

OBJECTIVES	TACTICS	ACTIVITIES	
		YEAR 1-2	YEAR 3-5
<p>Raise awareness among youth and key influencers about the career opportunities mining offers and the sector's role in environmental sustainability, social responsibility and technological innovation.</p>	<p>Engagement Involve youth in the design and development of messages and tools.</p> <p>Awareness Design and implement a comprehensive national marketing campaign aimed at youth, parents, educators, and other key influencers.</p> <p>Research Examine youth perceptions about the industry to identify effective key messages and target audiences.</p> <p>Provide accessible labour market information about demand, skills, qualifications, and geographical proximity of opportunities.</p>	<p>Update existing and create new career awareness materials, including a new mining career awareness website.</p> <p>Leverage online platforms to offer personalized training plans that link jobs and skills to training and education options.</p> <p>Establish a career ambassador program that offers guest speakers from the mining industry for youth-oriented events.</p> <p>Monitor reach and uptake of campaign and materials.</p>	<p>Study changes in perceptions and youth participation in the mining sector.</p> <p>Develop and implement marketing strategies to maintain positive perceptions of mining sector and careers among youth and key influencers.</p>

7 Mining Industry Human Resources Council/Abacus Data (2021). Millennial Perceptions of and Interest in a Career in the Mining Sector. Unpublished report.

8 Employment and Social Development Canada (2021). Canada – A learning nation: A skilled, agile workforce ready to shape the future. Retrieved from <https://www.canada.ca/en/employment-social-development/programs/future-skills/report-learning-nation.html>

9 Social Research and Demonstration Corporation (2020). The role of career education on students' education choices and post-secondary outcomes: Results Presentation. Retrieved from <https://ceric.ca/project/role-of-career-education-on-high-school-students-education-choices-and-post-secondary-outcomes/>

10 Mining Industry Human Resources Council/Abacus Data (2021). Millennial Perceptions of and Interest in a Career in the Mining Sector. Unpublished report.



REACHING YOUNGER STUDENTS

Promoting mining career awareness at elementary and secondary school levels is essential to reaching youth before they have made decisions about their future career path.¹¹ Most students, including those currently working in the industry, do not learn about careers in mining until they are in post-secondary education. Career awareness is the first phase of the activities and

experiences youth go through along their journey into the workforce.¹² Each phase includes specific tactics for preparing youth for a successful transition to a desirable and suitable career. There are opportunities at each stage of this journey for the mining sector to increase knowledge and understanding of mining careers among youth.

Integrate mining sector and mining career awareness into public education curricula and classrooms at the elementary, intermediate and secondary levels.

OBJECTIVES	TACTICS	ACTIVITIES	
		YEAR 1-2	YEAR 3-5
<p>Increase mining sector and mining career awareness in public education curricula and classrooms at the elementary and secondary levels.</p>	<p>Engagement Involve teachers from all grade levels in the design and implementation of programs.</p> <p>Awareness Focus mining career awareness teaching resources and materials on early engagement to support key career development transitions.</p> <p>Research Identify opportunities and approaches for integrating mining career awareness materials into public education curricula and classrooms.</p> <p>Identify resources and programs for early exposure to careers in mineral exploration and mining.</p>	<p>Review provincial curricula across Canada to identify opportunities for integration.</p> <p>Complete an inventory of existing mining career awareness resources and stakeholders.</p> <p>Showcase existing and emerging programs and resources through participation in webinars, conferences, and articles.</p> <p>Create teaching resources in collaboration with youth, teachers and industry experts.</p>	<p>Disseminate mining career awareness tools to teachers and guidance counsellors.</p> <p>Offer experiential learning opportunities at the elementary, intermediate, and secondary levels.</p> <p>Monitor reach and uptake of teaching resources.</p>

¹¹ Mining Industry Human Resources Council and Prospectors and Developers Association of Canada (2017). Canadian Mineral Exploration HR Outlook 2017. Retrieved from https://mihrc.ca/wp-content/uploads/2020/03/Canadian-Mineral-Exploration-HR-Outlook_EN_WEB.pdf

¹² New Ways to Work (2019). Career Development Continuum. Retrieved from <https://www.newwaystowork.org/wp-content/uploads/2019/05/new-cdc.pdf>



BUILDING ALLIANCES BETWEEN INDUSTRY AND EDUCATION

The mining industry needs workers who are skilled in science, technology, engineering and math (STEM) and are prepared for the challenges and requirements of the mining industry.¹³ During recent years, mining engineering programs have experienced a significant drop in enrolment compared to other types of engineering programs.¹⁴ Projected labour needs in the mining industry, however, are not limited to exploration, extraction, and production. Talent shortages are expected for supervisors, coordinators, and superintendents and support workers such as human resources, financial operations, and communications.¹⁵

Employers and educators agree that industry-related work experience is key to exploring and preparing for careers in mining. Institutions and students report that lack of opportunities makes it challenging to acquire experience. Academic programs also have limited resources to meet the needs of all students interested in experiential learning opportunities especially underrepresented groups such as international students and students facing physical, mental or social challenges to participating in WIL.

Foster innovative industry and post-secondary education partnerships to attract and prepare youth for careers in the mining sector.

OBJECTIVES	TACTICS	ACTIVITIES	
		YEAR 1-2	YEAR 3-5
<p>Increase enrollment in mining-related programs and align post-secondary program learning outcomes with the skills requirements of employers.</p>	<p>Engagement Facilitate the inclusion of mining representatives on academic advisory committees and in the co-development of training programs.¹⁶</p> <p>Offer opportunities for students from all regions to gain industry-related experiences through work-integrated learning and field courses.</p> <p>Awareness Promote mining-related programs and careers to students, instructors, and campus-based career development professionals.</p> <p>Research Integrate industry skills and knowledge requirements within academic program curricula development.¹⁷</p>	<p>Develop relationships with campus-based co-op and career counselling services across the country to promote the mining sector to students from a variety of disciplines.</p> <p>Encourage employers to promote opportunities to students from a range of geographic locations and backgrounds.</p> <p>Promote mining careers at post-secondary and college educational fairs.</p> <p>Work with employers and government to increase the number of work-integrated learning opportunities including competitions, accelerators and hackathons.</p>	<p>Build a network of industry and post-secondary stakeholders focused on sharing and developing post-secondary programs that align with the needs of the industry.</p> <p>Continue to develop a talent pipeline that meets industry requirements in a range of occupations.</p>

¹³ Mining Industry Human Resources Council (2020). The Changing Nature of Work: Innovation, Automation and Canada's Mining Workforce. Retrieved from https://mihrc.ca/wp-content/uploads/2020/05/MIHR_Innovation_Report_EN_WEB.pdf

¹⁴ Mining Industry Human Resources Council (2019). Canadian Mining Labour Market Outlook 2019. Retrieved from https://mihrc.ca/wp-content/uploads/2020/02/NationalOutlook2019_EN_Final-Chap3Fix.pdf

¹⁵ Mining Industry Human Resources Council (2020). Canadian Mining Labour Market 10-Year Outlook 2020. Retrieved from https://mihrc.ca/wp-content/uploads/2020/03/MIHR_National_Report_web2.pdf

¹⁶ Mining Industry Human Resources Council (2020). The Changing Nature of Work: Innovation, Automation and Canada's Mining Workforce. Retrieved from https://mihrc.ca/wp-content/uploads/2020/05/MIHR_Innovation_Report_EN_WEB.pdf

¹⁷ Mining Industry Human Resources Council (2020). The Changing Nature of Work: Innovation, Automation and Canada's Mining Workforce. Retrieved from https://mihrc.ca/wp-content/uploads/2020/05/MIHR_Innovation_Report_EN_WEB.pdf



PROMOTING DIVERSITY IN THE WORKFORCE

The mining industry needs to attract more women, immigrants, Indigenous peoples, and labour from other industries to help fill the gap in labour supply and meet the changing skills requirements brought on by innovations in mining.¹⁸ While the representation of immigrants and visible minorities in the mining workforce is lower relative to other industries, it has been modestly increasing.¹⁹ Currently, Indigenous peoples represent close to 7% of the mining workforce in Canada in 2016.²⁰ In addition, women account for only 16% of the mining labour force. Mining engineering has the lowest proportion of women enrolled at the undergraduate level among

engineering programs. Although the representation of women has remained relatively unchanged, there is indication of a momentum shift.²¹

Out-of-school programs offered by organizations providing services to targeted underrepresented groups²² have a detailed knowledge of their clientele that could facilitate mining career awareness.²³ Youth who are not in employment, education or training are looking for information about viable career opportunities and face a lack of experience and job opportunities in their area.²⁴

Diversify the mining workforce by engaging with youth from underrepresented groups

OBJECTIVES	TACTICS	ACTIVITIES	
		YEAR 1-2	YEAR 3-5
<p>Increase participation of underrepresented groups including women, Indigenous peoples, immigrants, visible minorities, and people with disabilities within the mining industry to reflect the diversity of the Canadian workforce.</p>	<p>Engagement Involve underrepresented youth and service providers in mining-career awareness advisory committees.</p> <p>Awareness Co-develop career awareness tools with key stakeholders tailored to support targeted underrepresented groups.</p> <p>Establish opportunities for experiential and workplace-based learning for youth who are out-of-school and seeking career information.</p> <p>Research Examine the perceptions and experiences of underrepresented youth related to the mining industry.</p>	<p>Recruit youth from underrepresented groups to participate in youth advisory committees.</p> <p>Collect data on participation of underrepresented groups in career awareness programs and their experiences in the mining industry.</p> <p>Identify organizations providing career development services to underrepresented youth.</p> <p>Promote training and programs for building supportive and inclusive workplaces.^{25 26}</p>	<p>Monitor the participation level of youth from underrepresented groups in the mining industry.</p> <p>Design and implement tools tailored for specific underrepresented groups such as multilingual resources.</p> <p>Develop training and experiential learning opportunities tailored to the needs of specific underrepresented groups.</p>

18 Natural Resources Canada (2019). The Canadian Minerals and Metals Plan. Retrieved from https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/CMMP/CMMP_The_Plan-EN.pdf

19 https://mih.ca/wp-content/uploads/2020/02/NationalOutlook2019_EN_Final-Chap3Fix.pdf

20 Mining Industry Human Resources Council (2019). Canadian Mining Labour Market Outlook 2019. Retrieved from https://mih.ca/wp-content/uploads/2020/02/NationalOutlook2019_EN_Final-Chap3Fix.pdf

21 https://mih.ca/wp-content/uploads/2020/02/NationalOutlook2019_EN_Final-Chap3Fix.pdf

22 In this report, underrepresented groups (URG) are defined as youth, women, members of LGBTQ2S+ communities, newcomers, Indigenous peoples, racialized persons, persons with disabilities

23 Labour Market Information Council (2019). From Data to Information: What LMI do career development practitioners need? Retrieved from <https://lmic-cimt.ca/publications-all/lmi-insights-report-no-20-from-data-to-information-what-lmi-do-career-development-practitioners-need/>

24 Labour Market Information Council (2019). Finding Their Path: What Youth Not in Employment, Education or Training (NEET) Want. Retrieved from <https://lmic-cimt.ca/publications-all/lmi-insights-report-no-17-finding-their-path-what-youth-not-in-employment-education-or-training-neet-want/>

25 For more information about Gender Equity in Mining (GEM), visit <https://mih.ca/inclusion-diversity/gender-equity-in-mining-works-gem-works/>

26 For more information about MiHR's Intercultural Awareness Training, visit <https://mih.ca/inclusion-diversity/intercultural-awareness-training/>

NEXT STEPS

IMPLEMENTING THE STRATEGIC PLAN

The National Mining Career Awareness Strategy benefits from a network of stakeholders invested in attracting youth to the mining sector. As a leader in identifying and addressing the human resource and labour market challenges facing the mining sector, MiHR is well positioned to advocate for the support and implementation of the activities outlined in this strategy. The achievement of this vision will require assistance and investment from industry and government in collaboration with key partners. As MiHR moves forward with engaging youth from diverse backgrounds in the sector, the vision and strategies outlined in this plan provide the foundation for generating support and resources to bring about its success.

MiHR is committed to leading the efforts of the mining sector to respond to the emerging challenges facing the industry through innovative and collaborative mining career awareness strategies.

MiHR WILL:

- Align the overall vision of the strategy with organizational goals and objectives.
- Initiate research that provides labour market information, program evaluations and development of best practices to ensure an evidence-based approach to attracting youth to the sector.
- Communicate these strategic directions to mining sector stakeholders in industry, education, career development and to youth.
- Seek out opportunities for resources to support the implementation of these strategies in partnership with industry, governments, and associations.
- Revisit and renew the directions and activities outlined in this plan on an annual basis to ensure it remains relevant and responsive.



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