



CENTRE OF
TRAINING
EXCELLENCE
IN MINING

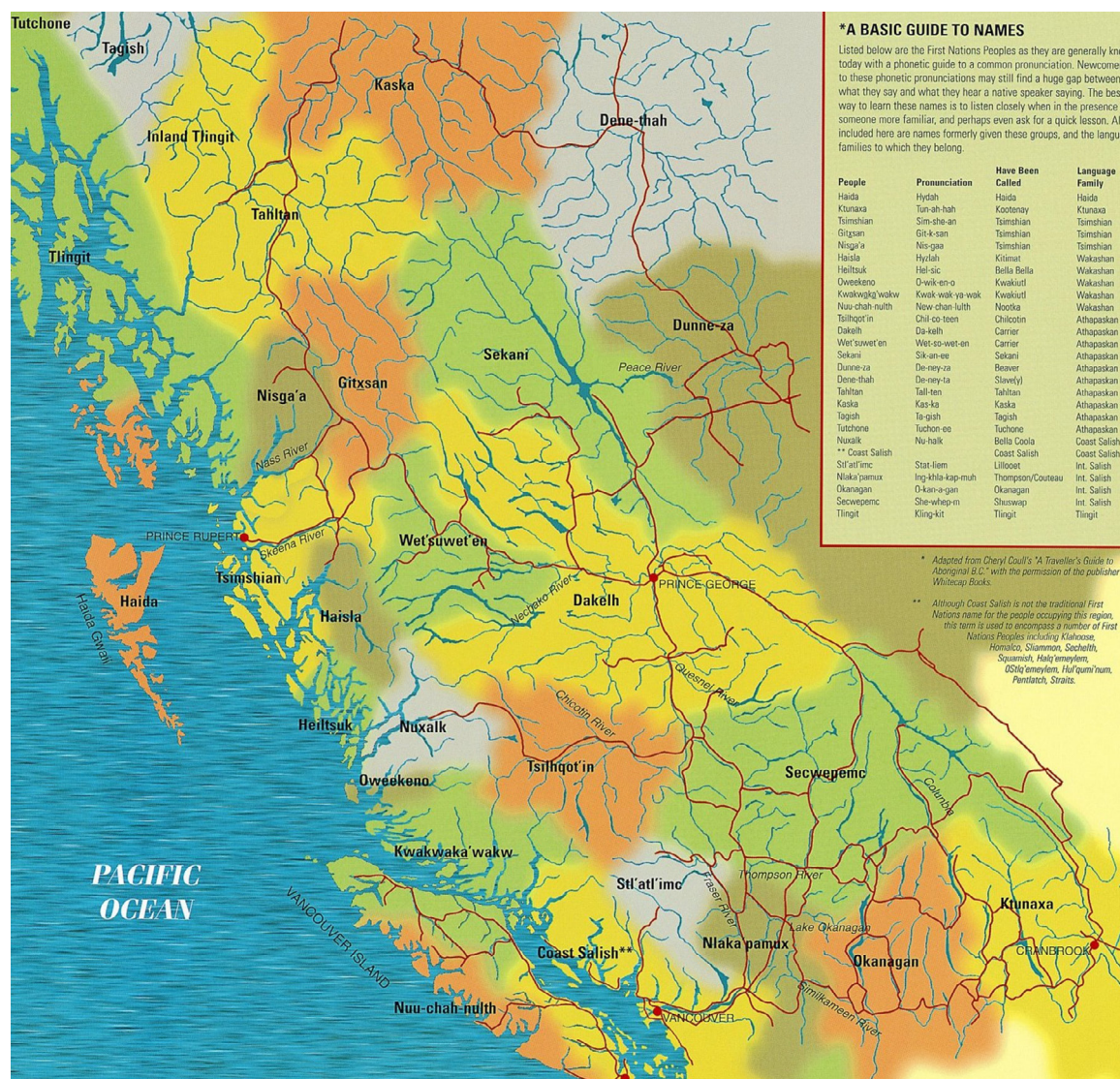
*Facilitating Collaborative and Innovative
Training for BC's Mining Industry*

BC Centre of Training Excellence in Mining (CTEM)

Three-Year Strategic Plan
2023 – 2026

Territorial Land Acknowledgement

CTEM operates as a virtual hub and collaborates with numerous First Nations communities in British Columbia. With this understanding, CTEM acknowledges the Traditional Territories of all Nations in British Columbia.



Source: The University of British Columbia¹ Participating Partners Acknowledgement

¹ University of British Columbia, "[Indigenous] Maps and Mapping." (2022). <https://guides.library.ubc.ca/aboriginalmaps>

Participating Partners Acknowledgement

Over 40 individuals of diverse groups comprised of CTEM Advisory Council Members and representatives of strategic partners provided direct insight into the 2023-2026 Strategic Plan. CTEM would like to acknowledge, with thanks, the CTEM Executive Council Members and Advisory Council Members listed below:

CTEM's Leadership, Executive Council Members

- Wayne Kaboni, Chair of CTEM, Citxw Nlaka'pamux Assembly
- Heather Hamilton, Vice-Chair of CTEM, Thompson Rivers University
- Mike Schoen, Past-Chair of CTEM, University of British Columbia
- Jill Tsolinas, CTEM's Executive Director and Chair of the Association for Mineral Exploration British Columbia
- Leah Bradish, College of the Rockies
- Lauren DeGaine, Post-Secondary Education and Skills Training
- Laurie-Lynn Kalliou, Coast Mountain College
- Sean Kingsley, Independent Investor Relations Consultant
- Roben Van Hislop, Golder Associates

CTEM's Advisory Council Members

- Leah Bradish, College of the Rockies
- Jonathan Buchanan, Association for Mineral Exploration British Columbia
- Steve Cook, Independent Geologist Consultant
- Charles Daley, Sunrise Project Services
- Sonia D'ambra, Simon Fraser University and University of British Columbia
- Lauren DeGaine, Post-Secondary Education and Skills Training
- Lana Eagle, Independent Indigenous Consultant
- Mory Ghomshei, British Columbia Institute of Technology
- Derek Holmes, British Columbia Stone, Sand & Gravel Association
- Douglas Jamieson, College of New Caledonia

- Wayne Kaboni, Chair of CTEM, Citxw Nlaka’pamux Assembly
- Laurie-Lynn Kallio, Coast Mountain College
- Sean Kingsley, Independent Investor Relations Consultant
- Tim McEwan, Mining Association of British Columbia
- Nicole McLaren, Independent Community Consultant
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- Andy Randell, SGDS Hive and Aeonian Resources
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- Mike Schoen, University of British Columbia
- Garth Thompson, BC Ministry of Energy, Mines and Low Carbon Innovation
- Jill Tsolinas, CTEM’s Executive Director and Chair of the Association for Mineral Exploration British Columbia
- Derek Turner, Douglas College
- Roben Van Hislop, Golder Associates

Extensive gratitude is extended to strategic partner organizations that provided additional insights and expertise to compliment the knowledge and perspectives shared by the Advisory Council Members. They include representatives from:

- Artemis Gold Inc.
- Nisga’a Lisims Government
- Mining Suppliers Association of BC
- Osisko Mining Inc.
- Mining Industry Human Resources Council
- Skilled Trades BC
- New Gold Inc.
- Tahltan Central Government (TCG)

Letter from the Chair

The year 2023 marks CTEM's 10th anniversary and we commend our partners for their dedication and commitment to continue creating innovative training opportunities for British Columbia's mining sector. A few selected accomplishments over the years include:

- Leading the provincial mining labour market need assessment.
- Identifying the skills needed today and those for future jobs.
- Producing the *BC Career Pathway Guidebook for Mining Careers*.
- Development of a Curriculum Framework for Underground Miner that led to the internationally recognized Underground Miner Training.
- Recognizing barriers for rural and remote job seekers and under represented groups.
- Supporting the BC Mining Jobs Task Force recommendations of developing “training programs that support the skills of today and tomorrow”, particularly the “development and implementation of a cohesive roadmap to enhance mine sector training to meet the mining sector's future skills and labour needs through a collaborative, inclusive and innovative and geographically focused approach.”
- Supporting BC government mandates as related to the mining and training space in BC.
- Proactively collaborating with national partners to have BC as leaders in the mine training space.

All this work could not have been done without the strong partnerships established and maintained with national, provincial, and regional organizations.

CTEM was the first provincial organization, within the mining and industry and training space, to establish a diverse board, a diverse leadership body and an extensive collaborative network. Since the last strategic plan, new members of CTEM's Advisory Council were actively sought to bring different experiences, perspectives and represent organizations in regions where there is an increase in mining exploration and production activities. To further build and cement these achievements, CTEM's Advisory Council members met over two days in January this year to set the organization's strategic direction of communicating our mandate and role, support the development of relevant training, and building partnerships. This and new contractors joining CTEM's team to focus on implementing strategic projects, managing the website, and other activities, will continue to build our brand and a strong foundation for new projects.

Based on its ten years of legacy building, CTEM looks forward to the next three years of continuing to create innovative training opportunities for British Columbia's mining sector through new partnerships.

Sincerely,
Wayne Kaboni

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**CENTRE OF
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1.0 Introduction

The *2023-2026 Strategic Plan* is intended to provide a roadmap for CTEM's operations, but is expected to evolve and be updated as the global demand for critical minerals and metals fluctuates. Over 40 representatives of diverse groups working in the BC mining industry were consulted through an online survey, one-on-one interviews and in-person strategy sessions. This consultation also took an in-depth look at the mining and post-secondary and skills training landscapes to make a distinct connection between the two sectors, a new addition since the last strategic plan. All input gathered from CTEM's Advisory Council Members and Strategic Partners through primary and secondary research is detailed in Appendix D.

2.0 Data Collection and Analysis Approach

PHC Inc. and Rockandel & Associates were retained to conduct the primary research with Advisory Council Members and Strategic Partners through surveys, key informant interviews, and two, half-day workshops. PHC Inc. provided a summary report outlining key findings from the surveys and interviews completed and Rockandel & Associates facilitated two half-day workshop sessions resulting in the one-page strategic plan with an updated vision, mission, strategic objectives and goal statements. Naakah Solutions Inc. completed the secondary research and thematic analysis to develop the detailed strategic plan outlining the key activities, expected results and key performance indicators (KPI's). Additional information from the [Skills Roadmap Project](#) and other relevant reports were incorporated into the mining sector landscape section of the plan to provide further context for the strategic objectives and goals. Detailed alignment between strategic objectives, goals, expected results and KPI's are not included the 2023-2026 *Strategic Plan* and will form the foundation of the annual operations plan.

19

survey
respondents



12

strategic
partner interviews



18

workshop
participants



352

potential
activities



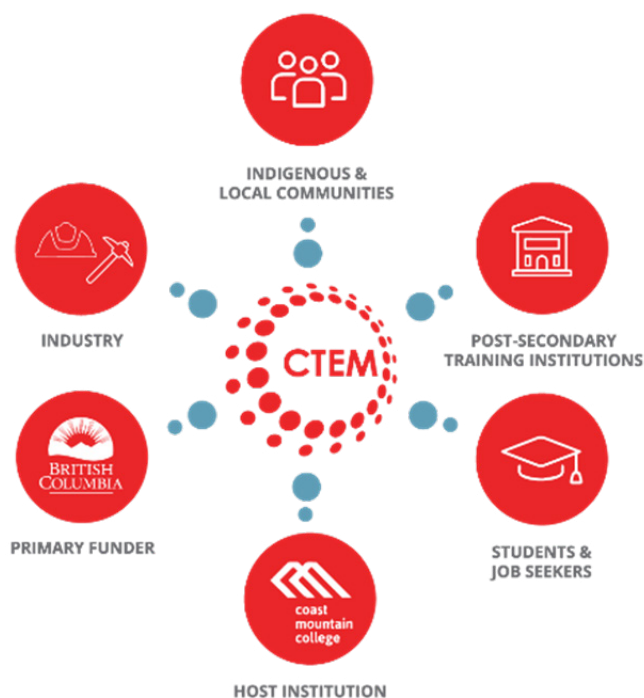
Analysis: researched mining, post-secondary and skills training sector landscapes, categorized potential activities to create key activities, expected results, and key performance indicators

Result: 3-year strategic plan, 3 strategic objectives, 3 goals and 11 key activities

3.0 About the BC Centre of Training Excellence in Mining (CTEM)

In response to the mining sector training needs, the Ministry of Post-Secondary Education and Future Skills (PSFS)² announced in November 2012 its commitment to advancing mine training to meet the growing demand for a skilled workforce and fill the forecasted labour shortages. In May 2013, to fulfill this commitment, CTEM became operational as a provincial-wide virtual hub that facilitates collaborative and innovative training solutions for BC's mining sector.

The Advisory and Executive Councils provide strategic oversight and are comprised of 24 representatives from industry, public training providers, Indigenous organizations, communities, and mining associations. As a non-profit organization, CTEM is largely funded by one-time grant funding with additional industry sponsorship. Coast Mountain College is the host organization responsible for administering and allocating funding to CTEM.



² Formerly known as the Ministry of Advanced Education and Skills Training (AEST).

4.0 British Columbia's Mining Sector Landscape

4.1 Mining Sector Overview

The global demand for industrial metals and materials makes British Columbia's mining sector an attractive investment for local and international companies seeking long-term growth opportunities. With the continued shift towards a green energy economy, British Columbia is strategically positioned to expand as a global exporter of critical minerals and metals that are required for technology, innovation and society's transition to a low carbon future³.

BC Mining Exploration & Production, 2022

- 230 Exploration Projects
- 1,000+ Aggregate Mines and Quarries
- 30 Industrial Mineral Mines
- 17 Metal and Coal Mines
- 3,700 Mining Suppliers

The mineral development continuum consists of six phases: land use planning; exploration; feasibility/mine planning; construction; mine operation; mine closure and post closure.⁴ Currently, there are eight new mines or mine expansions waiting for permit authorization and seven operating metallurgical coal mines. For a list of operating mines in British Columbia, please see Appendix A.

4.2 Mineral Exploration and Production in 2022

The annual *British Columbia Geological Survey* reports that "British Columbia is Canada's largest exporter of metallurgical coal, leading producer of copper, and only producer of molybdenum. Also produced are significant amounts of gold, silver, lead, and zinc and more than 30 industry minerals." British Columbia is Canada's third largest exploration province, spending a record setting \$740.4 million in 2022. Mineral production in British Columbia has an estimated value of \$18.2 billion, and it is forecasted there will be a \$4.3 billion increase from the 2021 preliminary estimate of \$13.9 billion, due to high metallurgical coal prices and the commodity pricing for steelmaking coal also hitting a record high of \$670 per ton.

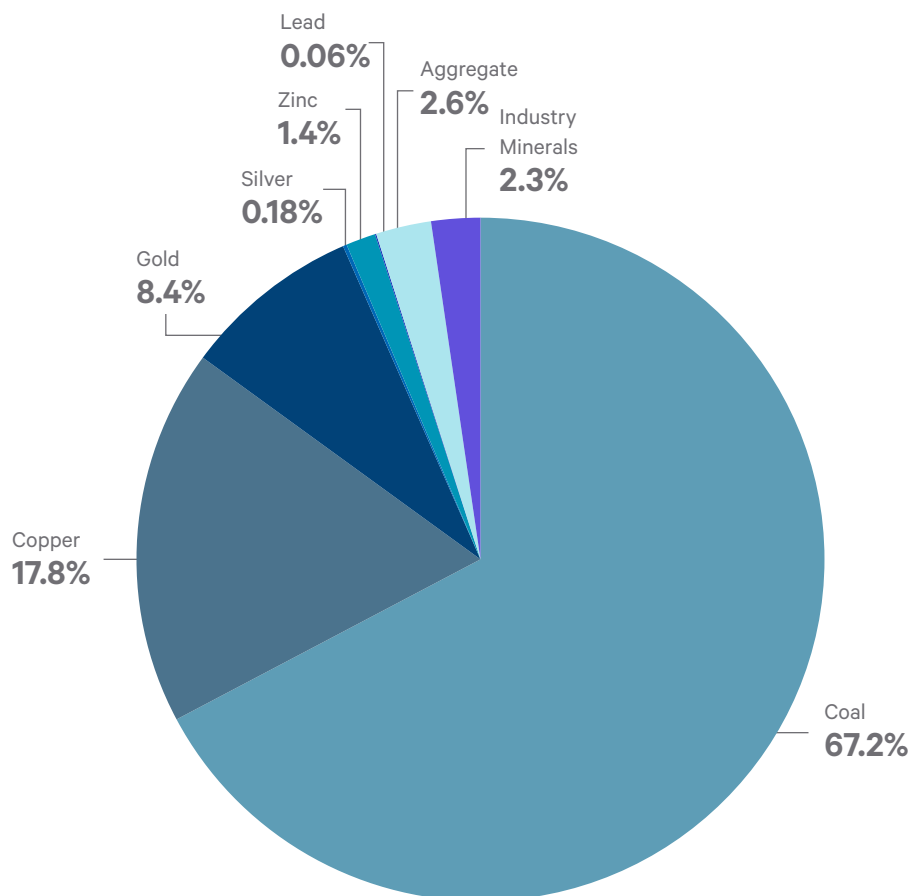
³ Trade and Invest British Columbia, "Prospects in Mining: Mining Products – Innovation." (2018).

https://www.britishcolumbia.ca/wp-content/uploads/RS892_2018MiningUSWeb_EN.pdf

⁴ Energy and Mines Ministers' Conference, "Mining Sector Performance Report 2011-2020." (2022). <https://natural-resources.canada.ca/sites/nrcan/files/emmc/pdf/MSPR%202022-EN-July5-2022-2.pdf>

Canada's *Critical Minerals Strategy* identified copper as a high-demand mineral which is key to the digital economy and energy transition. By 2030, the estimated global demand for copper is projected to grow by 4.7 million tons, making Canada a global leader with British Columbia being its biggest copper producer. This growth has already started; in 2022 spending on copper exploration was \$235 million in BC, an increase of 84 per cent from the previous year.⁵ The majority of all BC exploration was concentrated in the Northwest region of British Columbia, an area also known as the Golden Triangle, accounting for 61 per cent of the total provincial spend in exploration activities.⁶

BC Mineral Production by Commodity, 2022



2022 forecast value of British Columbia mineral production by commodity total is \$18.2 billion;

Source: British Columbia Geological Survey, 2022

⁵ Ministry of Energy, Mines and Low Carbon Innovation, "Provincial Overview of Exploration and Mining in British Columbia, 2022." (2022). https://cmscontent.nrs.gov.bc.ca/geoscience/PublicationCatalogue/InformationCircular/BCGS_IC2023-01.pdf

⁶ EY et al, "BC Exploration Sector Hits 10-Year Expenditure High." (2023), page 3.

4.3 Policy, Regulations and Legislation

CTEM operates within an evolving policy, regulations and legislative environment, and the review of this environment highlighted the potential training needed in British Columbia's mining sector. The policies and regulations in this section of the report are an example of government decision-making based on concerns raised by Rights-holders and mining organizations.

Implementing the United Nations Declaration on the Rights of Indigenous Peoples Act

British Columbia is leading the way for implementing the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP) by rooting it in legislation; in November 2019 the *Declaration on the Rights of Indigenous Peoples Act* (DRIPA) was passed into law, and is the province's framework for reconciliation as called for by the Truth and Reconciliation Commission's *94 Calls to Action*. In June 2022, the Tahltan Central Government (TCG) and the province of British Columbia signed the [historical consent-based decision-making agreement](#) under the *Declaration Act Consent Decision Making Agreement for Eskay Creek Project* to produce gold and silver⁷. TCG will play a significant role in the BC environmental assessment review process, as outlined in Section 7 of the Environmental Assessment Act. This step creates certainty for international mining companies that are considering investment opportunities in mining projects in British Columbia.

New Interim Mining Reclamation Policy Expands Environmental Protection

In 2022, the province developed an interim reclamation security policy to ensure mining companies, or owners of large-scale industrial projects, are fully responsible for the environmental clean-up if the project is abandoned. This policy was developed in response to the 2016 Auditor General's report *An Audit of Compliance and Enforcement of the Mining Sector* which indicated a significant improvement on policy was required based on extensive engagement with Indigenous Peoples, non-government organizations, industry and the public.

Permitting Solutions for Mining in British Columbia is a Government Priority

A spokesperson for the Premier's Office, Timothy Chu, stated in an interview with Mining.com that a "one-stop approach" adapted from the provincial housing strategy to meet the growing market demand will be used to create efficiencies in the permitting approval process. Over the next three years, \$18 million is dedicated to support the permitting and *Environmental Assessment* reviews, resulting in funding 13 new regional permitting positions. Additionally, the Ministry of Water, Land and Resource Stewardship is working closely with First Nations to create a new vision to co-manage land and natural resources, build trusted data to improve planning and management, and modernize land use plans that protect cultural values.⁸

⁷ Bennett, Nelson. "Province, Tahltan sign first content mine permitting agreement." (June 6, 2022). <https://biv.com/article/2022/06/province-tahltan-sign-first-consent-mine-permitting-agreement>

⁸ Stutt, Amanda. "Permitting solutions for mining in British Columbia 'a priority' says gov't." (2023). <https://www.mining.com/permitting-solutions-for-mining-in-british-columbia-a-priority-says-govt/>

4.4 Current Trends and Opportunities

The COVID-19 global pandemic was a catalyst for changing work and learning environments which significantly impacted mine operations and the global supply chain. Although mining was considered “essential”, employers and training providers had to adapt quickly to ensure operations and training delivery continued with minimal interruption.

Mining Trends and Opportunities

Current trends in mining include modernizing its digital core by adopting robotics, autonomous self-driving trucks and machinery, automated remote control of machinery and advanced analytical tools to enhance procedures for optimal performance in exploration and production activities.⁹ This shift led to new and emerging careers, and the need for skills and training specific to artificial intelligence, data analytics and other technological careers. Other trends include the need to better understand how mining impacts communities, reporting on Environmental, Social and Governance (ESG) and Greenhouse Gas Emission performance, adapting workplace cultures to recruit and retain untapped talent pools, and an increase in hybrid or virtual work environments. These trends present an opportunity for British Columbia’s mining sector to provide input into how the Province of British Columbia is developing the ESG Centre of Excellence.

Although there is an increase in equity, diversity and inclusion awareness training along with Indigenous awareness and cultural safety training, more research is required to determine the baseline for measuring progress on whether this training is making an impact on workplace cultures in British Columbia’s mining sector. Also required is more research to understand how equity-deserving groups face multiple barriers due to the intersectionality of identity traits, specifically amongst 2SLGBTQ+, Indigenous Peoples, newcomers, people living with a disability and women. Furthermore, to explore how the multiple barriers identified can be best mitigated to expand the labour pool and support a more inclusive and equitable sector.

⁹ Duff, John. “How Automation is Transforming the Mining Industry.” (August 2, 2022). <https://www.thomsondata.com/blog/automation-transforming-mining-industry/>

Indigenous Partnerships and Participation

In 2021 Natural Resources Canada reported that there were 99 active agreements signed between mineral exploration and mining companies and Indigenous communities or governments across British Columbia, making the province the second largest holder of agreements in Canada. These agreements directly align with the strategic direction of “Advancing the Participation of Indigenous Peoples - increased economic opportunities for Indigenous Peoples and supporting the process of reconciliation” outlined in the *Canadian Minerals and Metals Plan. The Mining Sector Performance Report 2011-20*, published in July 2022, also selected this strategic direction to improve and monitor social performance, using Indigenous partnerships and participation, Indigenous employment, gender diversity and the number of agreements, and government funding for public and Indigenous participation in impact assessments as indicators of success.¹⁰ For a summary listing of agreements with Nations in British Columbia, please see Appendix B.

Post-Secondary and Skills Training Trends and Opportunities

Current trends in the post-secondary and training sector are hybrid learning (models that include both online and in-person activities), an increase in work integrated learning opportunities with employers, significant growth in online learning, and the future adoption of learning technology such as artificial intelligence (AI) adaptive course delivery or augmented reality/virtual reality (AR/VR).¹¹ Other trends include the use of behavioural insights and design thinking to improve services for newcomers¹², designing programs that include “[Skills for Success](#)”, using applied learning such as self-testing, and engaging students through online simulations.¹³ Skills assessment tools and resources are also increasing in demand; one resource provided by Employment and Social Development Canada lists 29 skills assessment and training tools which is projected to increase as more investments are made in this area.

There is a common theme in the post-secondary, skills training and mining sectors: the significant advancement of innovation and technology which leads to an increased demand for digital literacy skills in preparation for current and future careers in technology. To prepare for the increased demand for digital literacy skills and in preparation for current and future careers in technology, the Province of British Columbia is prioritizing investments in skills for future jobs, specifically the *Future Ready Action Plan* that includes a new grant for short-term training programs.

¹⁰ Energy and Mines Ministers’ Conference, “Mining Sector Performance Report 2011-20.” (July 5, 2022). <https://natural-resources.canada.ca/sites/nrcan/files/emmc/pdf/MSPR%202022-EN-July5-2022-2.pdf>

¹¹ McKinsey & Company Article, “How technology is shaping learning in higher education.” (June 15, 2022). <https://www.mckinsey.com/industries/education/our-insights/how-technology-is-shaping-learning-in-higher-education>

¹² Social Research and Demonstration Corporation (SRDC), “Using Behavioural Insights and Design Thinking to Improve Services for Newcomers.” (March 3, 2023). <https://www.srdc.org/news/using-behavioural-insights-and-design-thinking-to-improve-services-for-newcomers.aspx>

¹³ Contact North | Online Learning, *220 Pockets of Innovation in Online Learning.* (2019). https://teachonline.ca/sites/default/files/pdfs/contact_north_i_contact_nord_220_pockets_of_innovation_in_online_learning_-_2019_0.pdf

Other government priorities include improving telecommunication infrastructure for internet connectivity in remote and rural communities, including First Nation communities. This creates accessibility to competitive online training options that use various learning platforms, although it can become overwhelming for industry trainers or adult learners to adapt to these new platforms without adequate support.

Although it is predicted that AI and VR technology will change how training is delivered, it remains unknown what impact it will have on the growing demand for technological jobs in the mining sector. Regardless, CTEM is well positioned to further explore these impacts and continue making connections between training providers and the mining sector, creating the pathway of training to employment for job seekers in British Columbia.

4.5 Labour Market Outlook for the Mining Sector

According to the British Columbia Labour Market Outlook 2022-2032 Forecast, the mining sector is forecasted to have 5,800 new jobs openings by 2032 along with 3,000 total job openings for support activities in mining and oil and gas extraction. In 2022, the total employment in mining in BC was 16,100.¹⁴

British Columbia Minerals Sector Employment, 2021¹⁵

Mining Sub-sector	Number of Jobs
Mining and quarrying (except oil and gas)	13,985
Coal mining	6,070
Metal ore mining	6,585
Gold and silver ore mining	2,255
Copper, nickel, lead, and zinc ore mining	4,330
Non-metallic mineral mining and quarrying	1,330
Stone mining and quarrying	295
Sand, gravel, clay, and ceramic and refractory metals mining and quarrying	980
Other non-metallic mineral mining and quarrying (except diamond and potash)	55
Support activities for mining	4,595

Source: Statistics Canada, 2023

¹⁴ British Columbia Post-Secondary Education and Future Skills “*British Columbia Labour Market Outlook 2022-2032 Forecast*.” (2022 Edition). <https://www.workbc.ca/sites/default/files/2023-02/LMO-2022-Report.pdf>

¹⁵ Statistics Canada “*Labour Statistics consistent with the system of national accounts by job category and industry for British Columbia*.” (February 10, 2023). <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610048901&pickMembers%5B0%5D=1.11&pickMembers%5B1%5D=2.1&cubeTimeFrame.startYear=2021&cubeTimeFrame.endYear=2021&referencePeriods=20210101%2C20210101>

A 2017 BC mining labour forecasting report¹⁶ highlighted 120 occupations in the mining sector and noted that mining labour needs are significantly influenced regionally, and given this finding, labour forecasting reports should be completed based on regions. Additionally, provincial and regional labour market data is limited, making it challenging to accurately forecast job openings, employment rate, demographics, workforce skills and training needs specific to the mining sector. Furthermore, there is limited labour market information on equity-seeking groups employed in the mining sector and the potential labour supply. For example, the number of newcomers to British Columbia and the communities they are choosing to reside in is currently unknown.

4.6 Mine Training in British Columbia

There are numerous organizations with various roles that contribute to the post-secondary and skills training system in British Columbia including 25 public post-secondary institutions, 46 Indigenous Adult and Higher Learning Association Institute members and 1,754 certified private training institutions. For the K-12 education system, there are 1,571 public schools and 365 independent schools along with 60 public school districts. Additionally, there are many organizations supporting Indigenous learning such as the 15 Indigenous Skills, Employment and Training (ISET's) providing "*Skills for Success*" programming and the First Nations Education Steering Committee (FNESC) mandated to support First Nation Students and advocate for First Nation education.

CTEM's training focus for the BC mining industry is on post-secondary training, as MineralsEd already supports the primary and secondary training needs for the province. CTEM acts as the bridge between organizations and training programs, establishing collaborative partnerships that result in the development of innovative mine training programs. The following section summarizes how the mining and training sectors are interconnected. For a summary list of mining associations and other organizations serving these two sectors, please see Appendix C.

¹⁶ Association for Mineral Exploration British Columbia et. al. "*Preparing for the Future: Mining Labour Market Outlook for British Columbia, 2016 – 2026.*" (February 2017).
http://ctem.wpengine.com/wp-content/uploads/preparing_for_the_future-mining_labour_market_outlook_for_british_columbia_feb2017-1.pdf

Post-Secondary and Skills Training Trends and Opportunities

SkilledTradesBC (formerly Industry Training Authority) oversees the trades training system by maintaining program standards, issuing credentials, funding training programs and supporting apprentices. The [trades most in-demand](#) and specific to the mining sector include:

- Construction millwrights
- Industrial mechanics
- Heavy-duty equipment mechanics
- Heavy equipment operators
- Industrial electricians
- Truck and transport mechanics
- Welders

Other trades in-demand in the mining industry include cooks, construction labourers, and instrumentation and control technicians.¹⁷ Unfortunately, there is no current data on the number of apprentices sponsored by mining employers and suppliers.

The government of BC plays a significant role in training for jobs in the mining industry. This includes overseeing the public post-secondary training organizations (e.g. providing degrees, diplomas, certifications), the skills trades governing bodies (e.g. Red Seal, apprenticeships), and for a few separate certifications specific to jobs at mine sites. Private post-secondary training organizations also service the BC mining industry and typically meet the needs of regional training, training that is on-demand, and specific to certain jobs (e.g., haul truck drive, truck driver, underground miner). There are a small number of associations that provide training for specific skills development and some of these training groups also provide skills assessments or skills recognition.

For protection of workers and the public, the *British Columbia Mines Act and the Health, Safety and Reclamation Code for Mines in British Columbia* (Code) require valid *Mines Supervisor Certification and Blasting Certification*. Both certifications are offered through the Open Learning BC online platform, and regional offices offer other certifications including *Shiftboss Certification*, *Fireboss Certification* (Underground Coal), and *Mine Rescue Certification*. There is minimal available data on enrollment and completion rates for these government issued certifications.¹⁸

¹⁷ Skilled Trades BC, “Top in-demand Trades.” (2022). https://skilledtradesbc.ca/find-your-trade?f%5B0%5D=in_demand%3A1

¹⁸ BC Mines Certification, “Blasting Certification, Mine Supervisor Certification and Certifications offered at regional mining offices.” (2022). <https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/health-safety/certifications>

The Mining Industry Human Resources Council (MiHR) offers mine sector training including *Indigenous Inclusion Training, Common Competency Training and Training Assessors* for employers across Canada. The organization manages the national mine training database that tracks training completed by people working or who previously worked in the mining sector across Canada for specific jobs or skills, and issues credentials for the *Canadian Mining Certification Program (CMCP)* that is recognized by mining employers across Canada. MiHR also maintains seven NOC career profiles including *Diamond Driller, Frontline Supervisor, Hoist Operator, Minerals Processing Operator, Surface Miner, Underground Miner, and Industry Trainer*. Various programs are administered by MiHR to financially support employers, training institutions and workers in areas of aligning training programs, upskilling workers, and wrap-around supports for program delivery such as the *Essential and Mine Readiness Training Program*, and wage subsidies.¹⁹

For workers already in the sector, there are opportunities for skills development through organizations offering training and professional development courses. One example is the Canadian Institute of Mining, Metallurgy and Petroleum, in partnership with Edumine, who deliver 180 certified in-demand courses. These are only a few select examples of mine training programs delivered across the province and a current list has not been developed.

In 2016, CTEM produced the *BC Career Pathways Guidebook for Mining Careers, Edition 2* in partnership with BC mining associations and the Province of British Columbia.²⁰ This resource was made available at WorkBC locations across the province and at other organizations that provide career guidance for job seekers. At that time, there were 12 public post-secondary institutions that offered core mine training programs for various mining occupations; today, it is unknown how many public and private training providers offer core mine training programs.

In 2021, CTEM *Skills Roadmap* project participants indicated there were low transition rates from training to employment, and the regional or provincial enrolment rates, compared to mining program completion rate remains unknown.²¹ Furthermore, a British Columbia core mine training program is currently undefined and the skills training gaps are unknown amongst mine training providers. This demonstrates the need for more in-depth research to help bridge the gap between a trained workforce and the mining sector.

19 Mining Industry Human Resources Council (MiHR), “*The Mining Sector Skills and Solutions Strategy for the Clean Economy (M4S)*.” (2023). <https://mihr.ca/wp-content/uploads/2023/02/MiHR-Strategy-M4S-EN-v2.pdf>

20 CTEM, “*B.C. Career Pathways Guidebook, Mining Careers*.” (2016). <http://ctem.wpengine.com/wp-content/uploads/ctem-guidebook-2016-final-web.pdf>

21 Core mine training needs to be defined in British Columbia

To maintain accurate career profiles, Employment, Skills and Training Development Canada annually surveys businesses to provide input on the National Occupational Classification (NOC) standards for over 500 occupations. According to MiHR, the British Columbia mining sector has approximately 120 occupations, including Red Seal Trades. Out of the 120 occupations, MiHR maintains seven NOC standards that have been validated by mining employers across Canada. To further maintain programs and curriculum offered by public institutions, selected British Columbia employers participate in either Program Advisory Committees or Articulation Committees that meet on an annual basis. However, private training institutions may have a different industry validation process, which is unknown.

Although there is a provincial database listing trades training offered in British Columbia, a centralized database that lists relevant training programs specific to the mining sector is needed, as it is currently overwhelming for a learner to navigate the overall training system, particularly for industry recognized certification. Additional information provided by WorkBC, BC Stats, CTEM and MiHR including career profiles, labour market outlooks, and forecasting in-demand jobs by sector are valuable when training providers are developing programs.

In summary, there are significant opportunities for CTEM to grow as an organization and leverage its partnerships to continue advancing available training opportunities for British Columbia's mining sector.

5.0 Vision, Mission and Values

Vision

In collaboration with industry, training partners, and communities, CTEM's vision is to support BC mining jobs today and in the future.

Mission

To connect industry, students, job seekers, training providers and communities by developing partnerships, facilitating BC industry-driven training and recognizing industry skills requirements.

Values

Collaborative	CTEM is collaborative and seeks different perspectives, knowledge, and ideas.
Inclusive	CTEM is inclusive and welcomes diverse partners who share the same vision.
Innovative	CTEM is innovative, adapting to the changes in the industry and to emerging training needs in the sector.
Supportive	CTEM is supportive to the mining sector and its current and future workforce.
Responsive	CTEM is responsive to sector trends and needs of industry, training providers and communities by being flexible and agile.
Respectful	CTEM is respectful to communities, partners, and individuals, including staff and Council members.

Provincial Impact

CTEM's significant provincial impact is known, and the organization is transitioning into being able to provide more tangible benefits to regions that are emerging with a high need for training in order to be able to respond to the industry's changing workforce needs.



6.0 Strategic Direction for the Next Three Years

6.1 Strategic Objectives

The following strategic objectives for CTEM's next three years are:

- Explore and develop relevant training to support a diverse workforce that meets industry driven needs.
- Be the catalyst for partnerships that bridge gaps for a trained workforce.
- Communicate CTEM's mandate and role.

6.2 Goals, Activities, Expected Results and Key Performance Indicators

Prioritized goals and activities that align with the strategic objectives are provided in the following section. They are selected examples from 500 items of feedback and insights, gathered from over 300 participants, for use in the strategic planning process. They are not viewed as exclusive or as imperative as CTEM is required to remain adaptive and responsive.

There are several factors that influence an organization's prioritization of goals, activities, expected results and key performance indicators. They include the personnel and financial capacity of an organization, emerging trends and partners changing needs, etc.

Please refer to Appendix D for a complete list of input gathered from participants. This is considered to be a snapshot in time, not inclusive of all perspectives and limited based on perspectives shared; it should therefore not be deemed as exclusive or exhaustive. Revising and reviewing priorities will be necessary to allow CTEM to respond to needs as they emerge in the industry.

Strategic Objective: Connect and develop relevant training to support a diverse workforce that meets industry-driven needs

Goal: Identify and Support Relevant Mine Training Responses

Key Activities

- Conduct a province-wide mine training needs assessment to identify gaps in mine training programs, future jobs in-demand and workforce demand.
- Facilitate a skills assessment framework for current and potential mine workers to identify workforce training needs.
- Conduct further research to identify intersectionality and barriers faced by equity-deserving groups in mine training and employment retention.
- Support inclusive development of BC mine training programs for equity-deserving groups, trainers, and employers.

Expected Results

- New programs developed to meet the gaps in mine training delivered across the province.
- Barriers that impact 2SLGBTQ+ and other underrepresented groups either entering or remaining in the mining industry.
- Industry report on mine training gaps, job forecast, barriers for 2SLGBTQ+ and other underrepresented groups, and skills assessment updates.

Key Performance Indicators

- Number of new mine training programs developed.
- Number of programs delivered.
- Number of underrepresented groups trained and employed from completing new mine training programs.
- Cost of delivering mine training programs.
- Program participants experience/satisfaction rating.

Strategic Objective: Be the catalyst for partnerships that bridge gaps for a trained workforce

Goal: Foster and Initiate Implementation of Strategic Projects

Key Activities

- Support the development of a centralized database of mine training programs and an inventory of skills that lead to industry recognized certification.
- Connect the BC mining industry with partners to maintain national program standards, curriculum development and a credential recognition framework.
- Collaborate with current and new partners that can facilitate innovative training delivery options to improve training accessibility in remote or rural communities.
- Form a provincial “Community of Practice” to collect information, share resources, and support cross-sector collaboration.
- Foster partner capacity to provide training to current and new trainers that support local and diverse trainers who can deliver inclusive mine training programs.
- Share project learnings and resources with other provincial and national partners.

Expected Results

- Workers can easily navigate mine training programs to enter the workforce.
- BC mining industry has access to an increased labour supply.
- Program standards for mine training are updated according to BC industry requirements.
- An inclusive provincial network that supports trainers, human resource leads, and training and development leads.
- Mine training programs are accessible in remote and rural communities.

Key Performance Indicators

- BC provides input into national program standards.
- Number of “Train the Trainer” programs developed.
- Number of “Train the Trainer” programs delivered.
- Number of strategic project partnerships established with organizations that represent Indigenous Peoples, women, newcomers, people with disabilities and youth.

Strategic Objective: Communicate CTEM’s mandate and role

Goal: Achieve Operational Stability

Key Activities

- Conduct outreach to expand CTEM’s partnerships.
- Identify and apply to relevant provincial or federal government funding programs.
- Develop and implement a three-year marketing and communications plan to increase brand awareness within the BC mining industry.
- Conduct a review of the existing funding model and determine the feasibility of including a membership fee-based structure or corporate/industry sponsorship that supports program development

Expected Results

- Acquire multi-year funding for implementing strategic projects and/or operations.
- BC mining industry and partners are aware of CTEM and interact more with the organization to advance training that leads to future employment.
- Potential new funding model or structure that generates new revenue streams.

Key Performance Indicators

- Average contribution agreement value.
- Average contribution agreement length.
- Total annual revenue.
- Total number of speaking engagements, conference participation and presentations delivered.
- Social media follower growth.
- Total reach from marketing strategies.

Appendix A

Operating Mines in BC, 2023

Mine Name	Permittee	Mine Type	Region
Bamberton Quarry	Malahat Investment Corporation	Sand & Gravel	Southwest
Blackwater Gold	BW Gold Ltd.	Metal	Central
Brucejack Mine	Pretium Resources Inc.	Metal	Northwest
Brule Coal Mine	Conuma Resources Limited	Coal	Northeast
Coal Mountain Operations	Teck Coal Limited	Coal	
Copper Mountain Mine	Copper Mountain Mine (BC) Ltd.	Metal	South Central
Craigmont Mine	Huldra Properties Inc.	Metal	
Elk Gold Mine	Elk Gold Mining Corp.	Metal	
Elkview Operations	Teck Coal Limited	Coal	Southeast
Fording River Operations	Teck Coal Limited	Coal	Southeast
Gibraltar Mine	Gibraltar Mines Ltd.	Metal	North Central
Greenhills Operations	Teck Coal Limited	Coal	Southeast
Highland Valley Copper Mine	Teck Highland Valley Copper Partnership	Metal	South Central
Line Creek Mine	Teck Coal Limited	Coal	Southeast
Mosquito Creek Mine	Barkerville Gold Mines Ltd.	Metal	Northwest
Mount Milligan Mine	Thompson Creek Metals Company Inc.	Metal	North Central
Mount Polley Mine	Mount Polley Mining Corporation	Metal	
Myra Falls Operations	Myra Falls Mine Ltd.	Metal	Southwest
New Afton Mine	New Gold Inc.	Metal	South Central
Orca Sand & Gravel Ltd.	Orca Sand & Gravel Ltd.	Sand & Gravel	Southwest
Premier Mine	Ascot Resources Ltd.	Metal	
Red Chris Mine	Newcrest Red Chris Mining Limited	Metal	Northwest
Willow Creek Mine	Conuma Coal Resources Limited.	Coal	Northeast
Wolverine Coal Mine	Conuma Coal Resources Limited.	Coal	Northeast

Source: BC Mine Information, 2022 <https://www.mines.nrs.gov.bc.ca/projects>

Appendix B

Known Agreements between Nations and Mining Companies in Northwest and North-Central BC, 2019

Project Name	Mining Company	Nation	Agreement Type	Project Status	Year	Commodity
Red Mountain	Ascot Resources Ltd.	Nisga'a Village of New Aiyansh, Nisga'a Village of Laxgalt'sap, Nisga'a Village of Gitwinksihlkw	Exploration Agreement	Development	2019	
Rock & Roll Property	Etruscus Resources Corp.	Tahltan Central Government	Exploration Agreement	Exploration	2019	Gold
KSM Project	Seabridge Gold Inc.	Tahltan First Nation	Impact and Benefits Agreement	Development	2019	Gold
Kemess	Centerra Gold Inc. & Premier Gold Mines Ltd.	Tse Keh Nay consisting of Takla Lake First Nation, Tsay Keh Dene, and Kwadacha First Nation	Other	Exploration	2017	
Multiple Projects	Colorado Resources Ltd.	Tahltan Central Council	Other	Exploration	2017	
Snip Gold Mine	Skeena Resources Limited	Tahltan First Nation	Exploration Agreement	Exploration	2017	Gold
Red Chris	Newcrest Mining Limited	Tahltan First Nation	Impact and Benefits Agreement	Producing	2015	
Silvertip Mine	JDS Silver	Kaska First Nations Communities of the Daylu Dena Council	Socio-Economic Agreement	Exploration	2015	

Brucejack Project	Pretium Resources Inc.	Nisga'a Village of Gingolx, Nisga'a Village of Gitwinksihlkw, Nisga'a Village of Laxgalt'sap, Nisga'a Village of New Aiyansh	Cooperation Agreement	Producing	2015	
Kitsault	Alloycorp Mining Inc.	Metlakatla First Nations (Coast Tsimshian Nation)	Memorandum of Understanding	Development	2014	Molybdenum
Kitsault	Alloycorp Mining Inc.	Nisga'a Lisims Government	Other	Development	2014	Molybdenum
Kitsault	Alloycorp Mining Inc.	Wilp Luuxhon House of Gitanyow First Nation	Other	Development	2014	Molybdenum
KSM Project	Seabridge Gold Inc.	Nisga'a Lisims Government	Impact and Benefits Agreement	Exploration	2014	
Kitsault	Alloycorp Mining Inc.	Gitanyow First Nation	Memorandum of Understanding	Development	2013	Molybdenum
KSM Project	Seabridge Gold Inc.	Nisga'a Lisims Government	Other	Exploration	2013	
Kemess North	Alamos Gold Inc.	Tse Keh Nay consisting of Takla Lake Nation, Tsay Keh Dene, and Kwadacha Nation	Other	Exploration	2012	Gold
Watson Island Site	Colonial Coal International Corp.	Metlakatla First Nation (Coast Tsimshian Nation), Lax Kw'alaams Band	Memorandum of Understanding	Exploration	2011	Coal
Arctos Anthracite	Fortune Minerals Limited	Tahltan Nation	Other	Development	2009	Coal
Kitsault	Alloycorp Mining Inc.	Nisga'a Lisims Government	Other	Development	2008	Molybdenum

Schaft Creek	Copper Fox Metals Inc. & Teck Resources Limited	Tahltan Nation Development Corporation	Memorandum of Understanding	Exploration	2007	
Schaft Creek	Copper Fox Metals Inc. & Teck Resources Limited	Tahltan Nation Development Corporation	Other	Exploration	2007	
Kutcho	Kutcho Copper Corp.	Kaska First Nations Communities of the Daylu Dena Council	Other	Development	2007	
Kutcho	Kutcho Copper Corp.	Tahltan Nation Development Corporation	Memorandum of Understanding	Development	2007	
Kemess South	Alamos Gold Inc.	Tse Keh Nay consisting of Takla Lake Nation, Tsay Keh Dene, and Kwadacha First Nation	Cooperation Agreement	Closed or in Reclamation	2006	Gold
Galore Creek	NovaGold Resources Inc.	Tahltan Central Council	Participation Agreement	Exploration	2006	
Kemess North	Alamos Gold Inc.	Tse Keh Nay consisting of Takla Lake Nation, Tsay Keh Dene, and Kwadacha First Nation, Gitxsan Nation	Other	Exploration	2005	Gold
Eskay Creek	Barrick Gold Corporation	Tahltan Central Council	Socio-Economic Agreement	Closed or in Reclamation	2004	Gold

<https://open.canada.ca/data/en/dataset/488faf70-b50b-4749-ac1c-a1fd44e06f11>

Appendix C

British Columbia Mining Associations and Other Organizations

- Articulation Committees - BC Council for Admissions and Transfers (BCCAT)
- Association for Co-operative Education and Work-Integrated Learning BC/Yukon (ACE-WIL)
- Association for Mineral Exploration British Columbia (AME)
- British Columbia Assembly of First Nations (BCAFN)
- British Columbia Association of Institutes and Universities (BCAIU)
- BCcampus
- BC Colleges
- BC First Nations Energy and Mining Council (FNEMC)
- BC Indigenous Skills and Employment Training (ISET) Providers
- BC Placer Miners Association
- BC Regional Mining Alliance (BCRMA)
- BC Stone, Sand & Gravel Association (BCSSGA)
- British Columbia Teaching and Learning Council (BCTLC)
- BC Technical and Research Committee on Reclamation (TRCR)
- Canadian Institute of Mining, Metallurgy and Petroleum (CIM)
- Cariboo Mining Association
- Chamber of Mines of Eastern BC
- Construction Foundation of British Columbia
- East Kootenay Chamber of Mines
- EducationPlannerBC
- Engineers and Geoscientists British Columbia
- First Nations Education Steering Committee (FNESC)
- First Nations Technology Council (FNTC)
- First Nations Schools Association (FNSA)
- Geoscience BC
- Immigrant Services Society of BC (ISSofBC)
- Indigenous Adult and Higher Learning Association (IAHLA)

- Indigenous Post-Secondary Education and Training Partners Group (PSE Partners)
- Innovate BC
- Kamloops Exploration Group
- Metis Nation British Columbia (MNBC)
- MineralsEd
- Mining Association of BC (MABC)
- Mining Association of Canada (MAC)
- Mining Industry Human Resources Council (MiHR)
- Mining Suppliers Association of BC (MSABC)
- Multi-Lingual Orientation Service Association for Immigrant Communities (M.O.S.A.I.C.)
- Program Advisory Committees (PAC's)
- Progressive Intercultural Community Services (PICS) Society
- Prospectors & Developers Association of Canada (PDAC)
- Research Universities' Council of British Columbia
- SkilledTradesBC
- SkillPlan
- SkillSource
- Smithers Exploration Group
- Trades Training BC
- Transfer Credit System (TCS)
- Unions
- WelcomeBC
- Women in Mining Canada
- WorkBC
- WorkSafeBC

Appendix D

Categorized Potential Activities Based on 2023 Goal Statements

Goal 1: Achieving Operational Stability

No.	Category	Potential Activities	Expected Results
1	Funding	Achieve multi-year (four to five year) funding. Investigate new funding opportunities aligned with Critical Minerals Strategy	Multi-Year Funding
2	Funding	Secure multi-year funding to allow for long term planning	Multi-Year Funding
3	Funding	Sustainable funding is the most significant challenge, with long-range planning and momentum-building suffering as a result	Multi-Year Funding
4	Funding	Sustainable funding is always a top priority, but collaborating with industry is also an excellent way to promote long-term sustainability.	Multi-Year Funding
5	Funding	Sustainable funding to administrate long-term goals.	Multi-Year Funding
6	Funding	Continued and secured organizational funding/ Changes to the technical and regulatory requirements in the mining industry/Demand for 'rare' mineral mining projects that can supply the increased digital/tech needs of multiple industries/Adoption of best practices in training and education that will help mining companies to attract, retain, and develop their workforce	Multi-Year Funding
7	Funding	CTEM's funding model creates a narrow focus based on specific interests	Funding Model
8	Funding	If the model is to secure grant after grant, then funding will always be challenging.	Funding Model
9	Funding	Industry kicks in a certain percentage for membership and long-term operational funds (Ie: BCRMA model)	Funding Model
10	Funding	Establish industry/ corporate sponsorship	Funding Model
11	Funding	Explore concept of engaging in a membership drive with fees	Funding Model
12	Funding	Apply for more long-term government grants and industry \$	Funding Model
13	Funding	Apply for federal funding related to critical minerals strategy	Government Funding
14	Funding	Use success to leverage legacy funding with AME, MABC for year-end request	Government Funding

15	Funding	Funding for position to communicate our story	Government Funding
16	Funding	Apply for project specific funding	Government Funding
17	Funding	Consider a for-profit arm of CTEM – chairing for training programming	Funding Model
18	Funding	Sponsorship model – large Industry sponsor	Funding Model
19	Funding	Build relationship with JEDI in addition to PSFS and mines for \$	Government Funding
20	Funding	Leverage partnerships to support operational stability	Government Funding
21	Funding	Partner with associations and other organizations to go after other larger or different funding sources	Government Funding
22	Funding	Look at opportunities coming out of Ministry of JEDI	Government Funding
23	Funding	Advocate for sustainable funding from BC government – value has been proven – EMLI needs groups like CTEM to be established when mandates come down – with the skills and knowledge and Industry, community connections to drive impacts	Government Funding
24	Funding	Advocate for increased mining training resources	Government Funding
25	Funding	Establish connection with Ministry of Jobs Economic Development and Innovation –with particular reference to their focus on rural and remote workforce opportunities is a natural synergy with the BC mining industry	Government Funding
26	Funding	Focus of provincial government on the future ready workforce – expectation that this will be the focus of funding opportunities	Government Funding
27	Funding	Focus on diversity and inclusiveness is aligned with government priorities of creating opportunities for equity-seeking groups with a focus on Indigenous equity	Government Funding
28	Funding	Creating sponsorship opportunities and raising further capital for CTEM operations	Multi-Year Funding
29	Funding	Pursuing initiatives at the federal level to gain funding	Government Funding
30	Funding	Focus of federal government and BC government on future skills training initiatives	Government Funding
31	Funding	Explore partnership models with other similarly mandated organizations – e.g. MiHR, MineralsEd	Funding Model
32	Management	CTEM's Year in Review (May) in person	Annual Operations Plan
33	Management	Strengthen CTEM leadership capacity (full advisory council, staff functions such as communications, ED)	Human Resources
34	Management	Align volunteers based on expertise	Human Resources
35	Management	Human resource capacity for CTEM is a concern	Human Resources
36	Management	Establish committees to support goals. Work on funding applications, establish KPIs, analyze data	Annual Operations Plan

37	Management	To build a strategic plan for the mining industry with and implementation plan with specific time-bound targets and goals for execution	Annual Operations Plan
38	Management	Complete any projects currently in the 'hopper' so that there is demonstrable evidence of the value of the work that CTEM does and is capable of	Annual Operations Plan
39	Management	No need to reinvent the wheel – honing the skills we have gained, refining our priorities to move forward	Annual Operations Plan
40	Management	Communication specialist contract. Fixed term to assess success	Human Resources
41	Marketing & Communications	Build awareness of CTEM	Strategy & Plan
42	Marketing & Communications	Increase social media presence – have an 'About CTEM'	Social Media
43	Marketing & Communications	Increase speaking opportunities (events, government, speaking tour)	Presentations
44	Marketing & Communications	CTEM advisory members reach out to identify people who are not aware of CTEM (partners and communities)	Promotion
45	Marketing & Communications	CTEM hosts events	Events
46	Marketing & Communications	Build awareness (storytelling, brochure, social outreach, elevator pitch) through engaged partners	Strategy & Plan
47	Marketing & Communications	Create internal newsletter and be included in partner/ relevant reports/ newsletters	Marketing Collateral
48	Marketing & Communications	Success stories brochure	Marketing Collateral
49	Marketing & Communications	Develop information package to share	Marketing Collateral
50	Marketing & Communications	Capture statistics – CTEM success ie: 300 underground miners trained. CTEM track record feeds into success stories – use infographics	Marketing Collateral
51	Marketing & Communications	Who do we want to reach? What do we want to show/ tell them about CTEM)	Target Audience
52	Marketing & Communications	Host brown bag lunches/ partnered events to understand workforce trends	Events
53	Marketing & Communications	Online workshop – invite 200-300 – presentation, then open it up 'do you want to have a conversation?'	Events
54	Marketing & Communications	Follow up, what we do pitch? Potentially bring value based on our priorities and successes	Product or Service
55	Marketing & Communications	Draft communications marketing plan	Strategy & Plan
56	Marketing & Communications	Council members utilize their networks to promote CTEM	Promotion

57	Marketing & Communications	Council members to be guest speakers and/or lecturers	Presentations
58	Marketing & Communications	Identify and consolidate current and past BC career and industry awareness resources and determine gaps in current campaigns with a focus on engaging diverse groups in remote, rural, and urban communities	Marketing Collateral
59	Marketing & Communications	Develop career awareness resources that connect and attract workers from other sectors	Marketing Collateral
60	Marketing & Communications	Develop comprehensive and inclusive BC mining and career exploration awareness strategy and communications plan	Strategy & Plan
61	Marketing & Communications		Presentations
62	Marketing & Communications	Develop materials that explain mining career pathways that focus on skills capacity development and career progression identifying transferable skills and new skilling	Marketing Collateral
63	Marketing & Communications	Develop communication strategy	Strategy & Plan
64	Marketing & Communications	Develop communication materials to reach workers who have been displaced from other sectors/careers as a result of COVID-19	Marketing Collateral
65	Marketing & Communications	Add HR specific content in conferences to raise awareness of barriers and to share successes	Key Messaging
66	Marketing & Communications	Foster formal and informal champions, mentors and “you can get there” role models	Marketing Campaign
67	Marketing & Communications	Create resources that highlight technology careers in mining and the role mining will play in creating a low carbon future to attract young, high-tech talent into the sector	Marketing Campaign
68	Marketing & Communications	Conduct training and skills forums/symposia to share collective experiences and address challenges and opportunities - supporting employers and training providers to better understand and create strategies to overcome systemic (and sometimes compounded) barriers in training and skills development	Events
69	Marketing & Communications		
70	Marketing & Communications	CTEM collaborates with various stakeholders to advance training and development in the British Columbia mining industry	Key Messaging
71	Marketing & Communications	To work across all facets of the mining industry to build a plan for skills training and employee development	Key Messaging
72	Marketing & Communications	To work with and provide collaborative training initiatives for the mining industry in British Columbia	Key Messaging

73	Marketing & Communications	Support the mining industry's need for a skilled workforce through creating relationships and partnerships with industry, educators, government and general public	Key Messaging
74	Marketing & Communications	To promote existing, and develop new training for BC's growing mining industry	Key Messaging
75	Marketing & Communications	To prepare existing and new persons in the mining industry with the skills necessary for careers within the sector through collaboration with training partners	Key Messaging
76	Marketing & Communications	To provide top tier mining education support and education so people can learn about the industry and have the paths for success within it. Also to be a leading voice of the realities of the industry and how it can be a desirable career	Key Messaging
77	Marketing & Communications	To provide training opportunities for those who might be interested or who already are interested in a mining career	Key Messaging
78	Marketing & Communications	CTEM's objective is to ensure BC mines have the professional resources needed to develop and operate, and anticipate and be ready to adapt for future needs	Key Messaging
79	Marketing & Communications	To facilitate opportunities in training, skills development and partnerships within the mining industry and training organizations. To bridge opportunities and partnerships on training within the mining industry To be the champion and collaborator between industry and education	Key Messaging
80	Marketing & Communications	To bring together industry, trainers and students in an ever evolving BC mining industry and lead the way in the development of new training initiatives	Key Messaging
81	Marketing & Communications	To advocate for and support training and entry into the workplace in the mineral exploration and mining industry in BC	Key Messaging
82	Marketing & Communications	Facilitate training pertaining to mining related activities in BC	Key Messaging
83	Marketing & Communications	CTEM is an important contributor to addressing workforce challenges in the mining industry and fostering collaboration and innovation with industry and post-secondary institutions	Key Messaging
84	Marketing & Communications	To provide practical training in the skills required for persons to succeed in the mining and exploration industries	Key Messaging
85	Marketing & Communications	I think this may have evolved over time. Initially it has been to support training of workers either in or entering in the mining industry. I think it has evolved into helping industry take advantage of programs that will provide them with a skilled labor force and also helping other NGOs in their assessments of programs they are implementing or want to implement	Key Messaging

86	Marketing & Communications	To collect the best practices from the education sector along with up to date needs of the mining industry, to create/promote relevant and timely programs that industry will recognize and value in their employees	Key Messaging
87	Marketing & Communications	To bring the mining industry, post secondary, government and communities impacted by mining together to develop collaborative ground-sourced training solutions to BC's mining sector workforce challenges	Key Messaging
88	Marketing & Communications	Understand the needs of the mining industry and communicate these needs to communities and training providers, connect the various stakeholders and support the creation of training programs that meet the identified training needs	Key Messaging
89	Marketing & Communications	CTEM is a strong collaborator for the BC mining industry. CTEM is knowledgeable of the BC minerals industry and constantly maintains strong networks	Key Messaging
90	Marketing & Communications	CTEM seems to pull together interests across the mining industry that might otherwise work at cross purposes	Key Messaging
91	Marketing & Communications	Adaptability	Key Messaging
92	Marketing & Communications	Excellent collaborative skills and fostering relationships	Key Messaging
93	Marketing & Communications	Developing innovative training opportunities	Key Messaging
94	Marketing & Communications	Allowing a diverse network of stakeholders to collaborate	Key Messaging
95	Marketing & Communications	Ability to create space for diverse viewpoints to voice their opinions and feel comfortable. Also, identifying transferable skills and providing the space for those to develop in the mining industry	Key Messaging
96	Marketing & Communications	Understands and is always seeking to better understand the industry	Key Messaging
97	Marketing & Communications	Open mindedness of the advisory council strong support of executive director's recommendations and insights	Key Messaging
98	Marketing & Communications	The courage to try something new and the determination to see it through	Key Messaging
99	Marketing & Communications	Still new with CTEM, so the above look all-inclusive	Key Messaging
100	Marketing & Communications	Connection and understanding of forthcoming EMLI mission and initiatives	Key Messaging
101	Marketing & Communications	Addressing workforce challenges in the mining industry and fostering collaboration and innovation with industry and post-secondary institutions	Key Messaging

102	Marketing & Communications	I think that representation from educational institutions is good. There are more universities\ colleges represented	Key Messaging
103	Marketing & Communications	From the brief experience that I have had with CTEM, it is clear that its strengths are: - collaborative - positive - inclusive - determined - professional - focused on relevance	Key Messaging
104	Marketing & Communications	Ability to connect BC to national initiatives, for example MiHR	Key Messaging
105	Marketing & Communications	Diversity	Key Messaging
106	Marketing & Communications	Opposition to mining in BC potentially	Marketing Campaign
107	Marketing & Communications	The everchanging nature of the industry is a great one, so one question is how to build the right awareness and connections to ensure that this can be addressed properly	Marketing Campaign
108	Marketing & Communications	To prove its relevance to industry, govt., and NGO partners	Marketing Campaign
109	Marketing & Communications	Raising the profile of CTEM	Strategy & Plan
110	Marketing & Communications	Promoting CTEM, gaining recognition	Strategy & Plan
111	Marketing & Communications	Highlighting the positive messaging around mining, such as contribution to the BC economy and to a low carbon future (including the use of social media to spread these messages)	Key Messaging
112	Marketing & Communications	Continue to include positive employment stories about the Underground Miner Project	Marketing Collateral
113	Marketing & Communications	Build the level of awareness about CTEM	Strategy & Plan
114	Marketing & Communications	COVID has changed the way we work and engage with training, it has people focused and motivated differently (e.g. mental health) and we need to be responsive to those shifts	Marketing Campaign
115	Marketing & Communications	Challenges for mining on its attractiveness to younger generations who are extremely keen on the environmental side – and may not know about the environmental and sustainable skills needs and focus within the industry	Marketing Campaign
116	Marketing & Communications	Importance of having available career and skills materials – salary information, job pamphlets for building connections and awareness of the training opportunities in the Industry. These need to be updated regularly and distributed widely	Marketing Collateral

117	Marketing & Communications	CTEM is a bridge builder	Key Messaging
118	Marketing & Communications	CTEM is the steppingstone between the opportunity and the individual – to what they need – the training aspect and the information to help make those training decisions	Key Messaging
119	Marketing & Communications	CTEM's willingness to be flexible and adapt	Key Messaging
120	Marketing & Communications	Making up lost ground in the aftermath of the pandemic	Key Messaging
121	Marketing & Communications	CTEM helps to ensure that student/trainees are connected to current industry trends	Marketing Collateral
122	Marketing & Communications	Clarify its purpose to outside audiences – develop the elevator pitch for CTEM, clearly articulate how CTEM works with AME, MABC, MiHR, MineralsEd etc. and the different mandates/value provided by the different organizations	Marketing Collateral
123	Marketing & Communications	Continue to hone the message of CTEM – as being the BC focused mining training authority on training needs in the province CTEM is the on the ground reality of what is needed in the workforce and brings that voice forward	Key Messaging
124	Marketing & Communications	CTEM helps to ensure that training is responsive to the changing needs of industry	Key Messaging
125	Marketing & Communications	Ensure that the workforce is aware and excited about the opportunities in the mining sector	Marketing Collateral
126	Marketing & Communications	Advisory Council members identify/ refer collaborative initiatives	Promotion
127	Marketing & Communications	Expand promoting and facilitating educators/ teachers and students to attend provincial and regional conferences	Promotion
128	Marketing & Communications	Invest in expanding or reinvigorating existing programs (e.g. ITA (trades samplers), BC Women in Trades, Below BC, MineralsEd, EduMine, BC Industry Training Authority's trade sampler programs, UBC Geering Up)	Promotion
129	Marketing & Communications	Municipal and rural government	Target Audience
130	Marketing & Communications	Mining services sector	Target Audience
131	Marketing & Communications	The federal government	Target Audience
132	Marketing & Communications	Employers	Target Audience
133	Marketing & Communications	BC Government	Target Audience

134	Marketing & Communications	Rural and remote communities	Target Audience
135	Marketing & Communications	Indigenous organizations & businesses	Target Audience
136	Marketing & Communications	Indigenous governments & leadership	Target Audience
137	Marketing & Communications	Job seekers	Target Audience
138	Marketing & Communications	Students and Trainees	Target Audience
139	Marketing & Communications	Weave inclusion and diversity into all initiatives and communication	Key Messaging
140	Marketing & Communications	Ensure our diversity and inclusion focus is training related – e.g. not just about attracting women to mining, but its attracting women into training opportunities for mining employment	Key Messaging
141	Marketing & Communications	Based on the gap analysis, develop new BC mining career and training resources that are universally accessible and reflective of the different regional needs and opportunities, making sure to utilize research collected through capacity building efforts	Marketing Collateral
142	Marketing & Communications	Create a plan/tool to support mine operators to recognize and apply new understanding from project findings	Marketing Collateral
143	Marketing & Communications	Build cohesion around Red Seal training - building connection with ITA understanding that operations in underground mining is different	Key Messaging
144	Marketing & Communications	Implement and facilitate mine tours (virtual or in-person) for community and students	Promotion
145	Marketing & Communications	Identify supports required to increase mine tour access with a focus to mitigate barriers for rural school visits	Promotion
146	Marketing & Communications	Strengthen the BC focused position – keeping initiatives BC focused, training local people for local jobs and the connection to retention of employees	Key Messaging
147	Marketing & Communications	CTEM provides value as being the ‘boots on the ground’ connecting with the Industry, communities, and training at the regional level	Key Messaging
148	Marketing & Communications	Build relationships with Indigenous technicians – e.g. remediation, water quality technicians	Target Audience

Goal 2: Identify and Support Relevant Mine Training Responses

No.	Category	Potential Activities	Expected Results
1	Equity, Diversity & Inclusion	Expand current diversity research to include intersectionality and the impact on mine training and skills outcomes along with acquisition and retention	Industry Reporting
2	Equity, Diversity & Inclusion	Implementing strategic projects related to Equity, Diversity and Inclusion	Program Development
3	Equity, Diversity & Inclusion	Develop capacity to track Equity, Diversity, and Inclusion (EDI) stats within mine training programing and organizations	Industry Reporting
4	Equity, Diversity & Inclusion	Collect greater data on programs that have made a positive difference in Equity Diversity and Inclusion (EDI) of the workforce and training	Industry Reporting
5	Equity, Diversity & Inclusion	Conduct research to identify mine training barriers experienced by 2SLGBTQ+ community and disabled workers	Industry Reporting
6	Equity, Diversity & Inclusion	There continues to be low representation of equity-seeking groups within the trades that serve mining – e.g. gender inequity	Industry Reporting
7	Equity, Diversity & Inclusion	Ensuring that newcomers to Canada can put their training and abilities to work as quickly as possible, and that international students are supported to have a positive experience here. Any work CTEM may have that is related to training or connecting with newcomers and international students may be valuable	Program Development
8	Equity, Diversity & Inclusion	Leverage collaboration to implement EDI training across the sector to shift workplace cultures to be more inclusive	Program Development
9	Equity, Diversity & Inclusion	Develop guides that are aligned with leading Equity, Diversity and Inclusion (EDI); Environmental, Social, Governance (ESG) and innovation practices	Program Development
10	Equity, Diversity & Inclusion	Invest in expanding EDI training programs (e.g. Mining Industry Human Resources Council's cultural training and the B.C. Industry Training Authority's 'Be More Than a Bystander' training)	Program Development
11	Equity, Diversity & Inclusion	Provide training for trainers on mentorship, cultural agility/awareness, bystander training and EDI (equity, diversity, and inclusion), and online delivery	Program Development
12	Equity, Diversity & Inclusion	Expand Equity Diversity and Inclusion (EDI) resources for trainers	Program Development
13	Evaluation	We need a clearer understanding of what success looks like for training – what are the metrics we should be tracking?	Measurement

14	Skills Assessment	Collectively determine key identifiers related to monitoring current and emerging labour market needs (e.g. overcoming barriers) and produce baseline metrics	Labour Market Needs
15	Skills Assessment	Increase understanding/measuring of worker needs - regular check-ins/evaluation; is the sector improving workforce needs	Labour Market Needs
16	Skills Assessment	Expand across province skills assessments for current workers	Labour Market Needs
17	Skills Assessment	Identify and support the labour market needs of the provincial mining sector	Labour Market Needs
18	Skills Assessment	Develop and deliver pilot to cross-train workers (e.g. common competencies)	Program Development
19	Skills Assessment	Re-training/skilling forestry workers in BC	Program Development
20	Skills Assessment	Focus on transferable skills to help movement of workforce between mines and between sectors (given their short lifecycles)	Program Development
21	Skills Assessment	We need to support immigrants who need that bridge to the industry and the training and assessments required	Program Development
22	Skills Assessment	Expand assessments and recognitions of transferable skills of new and current workers	Program Development
23	Skills Assessment	Transitioning workers from traditional resource workers into the jobs of the future – as shown in the findings of the Skills Roadmap project	Program Development
24	Skills Assessment	Expand connection to programs and training opportunities for international students	Labour Market Needs
25	Training Needs Assessment	Collecting standardized reporting and synthesizing and giving it back to industry	Industry Reporting
26	Training Needs Assessment	Map current Industry training offerings and skills and training gaps	Skills Training Gap
27	Training Needs Assessment	Inability to understand the quickly changing training requirements	Program Development
28	Training Needs Assessment	Technological advances, such as automated hauling and improvement in mining efficiency and project predictability	Program Development
29	Training Needs Assessment	Work to provide forecast of what might be future skills required in industry and how to promote mineral exploration and mining as an opportunity for employment with these skills	Careers
30	Training Needs Assessment	Semi-regular reporting with industry partners to keep CTEM up to date on the needs of mine training	Program Development
31	Training Needs Assessment	CTEM is challenged by a lack of awareness across the industry	Program Development

32	Training Needs Assessment	Fast-paced technological changes	Program Development
33	Training Needs Assessment	Indigenous Training: Introduce an integrated Indigenous mine training program with provincial, federal and industry funding/participation	Program Development
34	Training Needs Assessment	Expanding the focus of CTEM to include exploration	Program Development
35	Training Needs Assessment	Field assistance training for exploration and development	Program Development
36	Training Needs Assessment	Digital literacy for entry-level workers and traditional resource workers	Program Development
37	Training Needs Assessment	3D modelling training	Program Development
38	Training Needs Assessment	Environmental monitoring	Careers
39	Training Needs Assessment	Occupational training for health safety – e.g. within OHS these are new jobs at site that were a result of the pandemic and these individuals will require training	Careers
40	Training Needs Assessment	Training for professional/skilled workers – e.g. engineers and geologists that need technical mine training – there isn't a place for them to go and EGBCs offerings aren't sufficient	Program Development
41	Training Needs Assessment	Training focused on reclamation and mitigation of future issues – presents opportunities for community members located close to the sites to be trained and ready for future opportunities	Program Development
42	Training Needs Assessment	Creating training opportunities that are relevant to surface mining operations	Program Development
43	Training Needs Assessment	Focus on training for the jobs for tomorrow – technology is changing so rapidly. We are looking around and responding to this challenge	Careers
44	Training Needs Assessment	Indigenous Training: Introduce an integrated mine training program	Program Development
45	Training Needs Assessment	Provide training opportunities at the grass roots level re: GHG, ESG, & Indigenous engagement	Program Development
46	Training Needs Assessment	Build on the Mining Future Ready Report to identify top three areas/ training gaps to develop with partners – training program seeds?	Program Development
47	Training Needs Assessment	Implement and foster training needs – introducing players to the table	Program Development
48	Training Needs Assessment	Facilitate training related to Critical Minerals	Program Development

49	Training Needs Assessment	The demographic shifts with the retirement en masse of the baby boom generation and the onset of "Gen X" retirement is the single biggest HR challenge facing the mining -- and other -- industries over the balance of this decade and beyond. This is happening as the public policy agenda in favour of mining (i.e. 'critical minerals' agenda) means industry has to ramp up training in anticipation of more mine development. This of course has cascading implications throughout industry workforce requirements from skilled trades, to operating jobs, to engineering, scientific and technical requirements	Program Development
50	Training Needs Assessment	Planning for mining jobs of the future will continue to be an important challenge to address	Careers
51	Training Needs Assessment	Identifying and developing training-based solutions to the future jobs which is uncertain with regards to what those new jobs/ skills will be/ when they will reach a critical mass requiring training so that the training developed is not ahead of the curve or irrelevant because of the uncertainty in the direction of the sector	Program Development
52	Training Needs Assessment	The (cautious) upturn in the economy including exploration leading to development and the corresponding need for training	Program Development
53	Training Needs Assessment	Align with the Critical Minerals Strategy	Program Development
54	Training Needs Assessment	Training for the future of mining	Program Development
55	Training Needs Assessment	Working with industry and other partners to determine what skills and jobs will be needed for the future of the industry, perhaps with an eye to "clean" economy	Program Development
56	Training Needs Assessment	Run a survey to understand industry training needs and required labour skills (including transferable skills)	Industry Reporting
57	Training Needs Assessment	Develop training needs analysis in collaboration with partners	Industry Reporting
58	Training Needs Assessment	Facilitate ongoing conversation with industry to identify needs and propose training-based solutions	Program Development
59	Training Needs Assessment	Understand current and future training needs	Program Development
60	Training Needs Assessment	Training needs of the industry around Indigenous reconciliation – the conversations and wide social lens on reconciliation have advanced - general population/ CEOs and talk about and share and understand – space in the middle to come together which presents new and growing training opportunities for CTEM	Indigenous Reconciliation

61	Training Needs Assessment	Critical Minerals Strategy will impact the number of mines going into operations, skills needs, and ultimately training needs across the province and the country	Program Development
62	Training Needs Assessment	Green energy economy initiatives of the BC government – shift towards environmental impacts and related jobs	Careers
63	Training Needs Assessment	Clean Economy and Reconciliation as critical factors of economic development and industry development	Program Development
64	Training Needs Assessment	Challenges in supply chain and the impact jobs/skills and training needed	Careers
65	Training Needs Assessment	Increasing ESG requirements and how this will impact the types of jobs and training in mining	Careers
66	Training Needs Assessment	Acknowledgement of the lack of skilled and qualified people doing permitting and land management	Program Development
67	Training Needs Assessment	Reclamation and post-closure training opportunities for Indigenous communities	Program Development
68	Training Needs Assessment	1 on 1 conversations with industry to understand their needs	Program Development
69	Training Needs Assessment	Connecting employers and trainers through offering cultural safety training was also indicated by strategic partners as an area for CTEM to support	Program Development
70	Training Needs Assessment	Conduct outreach to understand partners training needs, discover alignment and synergies	Program Development
71	Training Needs Assessment	Reach out to industry regarding needs related to critical minerals – exploration? Pilot plants?	Program Development
72	Training Needs Assessment	Asking industry what we can do to help them and government ministries what they would like us to do to help them	Program Development
73	Training Needs Assessment	Delivering programs that are specific to BC	Program Development
74	Training Needs Assessment	We need an agency to help provide post secondary and the mines with the training	Program Development
75	Training Needs Assessment	Continuing implementation of the trades certification – UGM	Program Development
76	Training Needs Assessment	Develop and deliver training for mentors (including peer mentors) for successful knowledge transfer, and inclusion. Ensure outreach to wider audiences	Program Development
77	Training Needs Assessment	Work with immigration agencies to increase outreach – orientation to mining – potential essential skills program	Program Development
78	Training Needs Assessment	Low-enrollment of mining engineering students – exasperating the shortages of qualified people	Careers

79	Training Needs Assessment	Bringing training to communities/operators	Training Accessibility
80	Training Needs Assessment	Identify our role in developing/delivering training for women, newcomers, and Indigenous Peoples	Program Development
81	Training Needs Assessment	Develop and deliver training to train local and diverse trainers	Program Development
82	Training Needs Assessment	Support training of 'Assessors' to recognize on-the-job skills development	Program Development
83	Training Needs Assessment	Cultural Safety	Program Development
84	Training Needs Assessment	Skilled Trades – choosing jobs in the trades	Careers
85	Workforce Demand	Labour supply: as it affects the minerals industry	Careers
86	Workforce Demand	Aging population and skilled workforce needs of the mining sector – in BC and more broadly at the national and international level	Careers
87	Workforce Demand	Future advocacy work on behalf of job seekers and to support their training for a future in mining	Careers
88	Workforce Demand	Synthesize existing data	Industry Reporting
89	Workforce Demand	Facilitate AME, MABC, WorkBC, BC Geological Survey to collect and report data	Industry Reporting
90	Workforce Demand	Standardized reporting using LMI and industry partners input to determine if LMI is what is happening on the ground?	Industry Reporting

Goal 3: Foster and Initiate Implementation of Strategic Projects

No.	Category	Potential Activities	Expected Results
1	Innovative Training Delivery	Develop flexible training options	Training Accessibility
2	Innovative Training Delivery	Evaluate and test potential pilots of portable education systems or units for remote and rural learners and communities	Training Accessibility
3	Innovative Training Delivery	Bridging the gap between hands on work and different education styles within the industry	Training Accessibility
4	Innovative Training Delivery	Help ensure that training is available to people who might not otherwise be able to get it	Training Accessibility
5	Innovative Training Delivery	Changing learning environments and needs – democratization of learning – with online learning platforms, students and learners looking for training that uses technology	Training Accessibility
6	Innovative Training Delivery	Providing support to remote communities – to remove access and participation barriers faced by remote and rural trainees/learners by bringing training to community	Training Accessibility
7	Innovative Training Delivery	Limitations on infrastructure, roads, housing, reliable internet and the way that those deficits impact individuals and communities’ ability to engage in training and employment in mining	Training Accessibility
8	Innovative Training Delivery	Customized to be responsive to the distinct needs of the different Indigenous community values and protocols	Indigenous Inclusion
9	Innovative Training Delivery	Work with post-secondary institutions and their Indigenous communities to incorporate speakers and Elders	Indigenous Inclusion
10	Innovative Training Delivery	Support blended delivery mechanisms	Training Accessibility
11	Mining Impacts to Community	A better understanding of the GHG, ESG and Indigenous engagement	Indigenous/ESG in Mining
12	Mining Impacts to Community	Assess intended and unintended consequences of mining in community	ESG & GHG in Mining
13	Mining Impacts to Community	Indigenous economic reconciliation (e.g., governance, administrative and technical capacity AND equity participation), along with infrastructure needs.	Indigenous Reconciliation
14	Mining Impacts to Community	Connecting ESG and Indigenous engagement	Indigenous/ESG in Mining
15	Mining Impacts to Community	A better understanding of the GHG, ESG and Indigenous engagement and provide training opportunities at the grass roots level	Indigenous/ESG in Mining
16	Mining Impacts to Community	ESG awareness and societal understanding of the impacts of mining	ESG in Mining
17	Partner Engagement	Grow the Underground Miner Training Program	Industry Partner

18	Partner Engagement	Potentially working with educational providers with access to offshore workers to fill vacant jobs	Labour Supply
19	Partner Engagement	Invest in expanding mentoring programs and networking groups (e.g. Association for Mineral Exploration British Columbia mentorship program, Young Mining Professionals Mining Network, Women in Mining BC Mentorship program)	Network
20	Partner Engagement	Advocate to provide greater tax incentives (e.g. flowthrough shares expanded) to be used for training and outreach	Government Policy
21	Partner Engagement	Develop resources to support employers to integrate policy initiatives with on-the-ground work culture and practices	Employer Policy
22	Partner Engagement	Facilitate internal conversations between HR and Project Management/Operations teams to integrate policy initiatives with on-the-ground work culture and practices	Employer Policy
23	Partner Engagement	Maintain and update Skills Roadmap	Sector Labour Market Partnership - Phase 5
24	Partner Engagement	Support the implementation of the Skills Roadmap Project	Sector Labour Market Partnership - Phase 5
25	Partner Engagement	While new goals can be seen as a positive initiative, I believe it's better to have fewer goals or projects that are done well than overstretching. To me CTEM's Skills Road Map project is highly relevant; however, once complete it may require reflection and revisions especially as more mines bring automation online. This in turn will require more time and human resources. (I'd like to add this to a previous question about CTEM's challenges - once you take on a project the relevancy may not be there unless it's continually updated)	Sector Labour Market Partnership - Phase 5
26	Partner Engagement	Expand reach into the high schools	School District Partners
27	Partner Engagement	Reach out to EGBC/ Engineers Canada to ensure access to talent training ie: competencies	Labour Supply
28	Partner Engagement	Deepen and create new partnerships with schools to increase teacher and student awareness of mining	School District Partners
29	Partner Engagement	Identify network of service providers/ entrepreneurs to connect with mentorship and training opportunities	Network
30	Partner Engagement	There is a need for greater collaboration with industry associations	Association Partners
31	Partner Engagement	Collaborating with other organizations to promote training in mining as well as dovetailing with organizations with a focus such as AMEBC, MABC	Association Partners

32	Partner Engagement	Educate youth in high schools about mining and what it has to offer	School District Partners
33	Partner Engagement	Continue collaborating all stakeholders	Industry Partner
34	Partner Engagement	Continue to work with proponents and government to train workers for mining jobs	Industry Partner
35	Partner Engagement	Be a partner with educational organizations in training - and spread the word about its successes	Training Partners
36	Partner Engagement	International schools, existing Indigenous training initiatives and organizations	Service Partners
37	Partner Engagement	I think they know who to engage with (ie: Indigenous groups, PSIs, all levels of gov't, industry, students, workers)	Industry Partner
38	Partner Engagement	The key is to decide where CTEM can engage most effectively, and leverage those relationships	Industry Partner
39	Partner Engagement	New partnership with Artemis Gold	Industry Partner
40	Partner Engagement	Continuing to nurture collaboration with MiHR, Minerals Ed, AME and MABC	Association Partners
41	Partner Engagement	Build and strengthen relationships in other regions within the province specifically where current mining operations are active (ex. Kootenays)	Industry Partner
42	Partner Engagement	CTEM's value in connecting national groups with local and regional training providers, industry, and communities was acknowledged as a specific value	National Partner
43	Partner Engagement	Create local networks (rural and remote communities) to develop trainer pool using local entrepreneurs and professionals	Network
44	Partner Engagement	Create trainer support networks; connect trainer networks with tech resources	Network
45	Partner Engagement	Build connection for training apprentices	Work Placements
46	Partner Engagement	Engage construction organizations ie: BC Road Builders	Industry Partner
47	Partner Engagement	Engage specific sites, community training providers and community economic development arms- needs and capacity (Golden Triangle, Heartland-Quesnel)	Industry Partner
48	Partner Engagement	Expand connections within post-secondary and training institutes – some of the profs/departments/schools have strong connections with the mining sector but there is opportunity to grow those connections when thinking of the diversity of training/skills that can connect to jobs within the mining sector (e.g. university/college may connect with mining through the trades program, but not through the environmental science program)	Training Partner

49	Partner Engagement	Connect with Indigenous communities in other mining regions in the province	Indigenous Partner
50	Partner Engagement	Relationships, partnerships with Indigenous communities	Indigenous Partner
51	Partner Engagement	Connections into the regions	Regional Partners
52	Partner Engagement	Develop industry connections with some of the larger mining companies (e.g. Teck)	Industry Partner
53	Partner Engagement	Outreach to non-member mines	Industry Partner
54	Partner Engagement	Need to enhance the Indigenous Government and Leadership connections	Indigenous Partner
55	Partner Engagement	Efforts could be increased for Indigenous Governments and Leadership, and Indigenous Communities	Indigenous Partner
56	Partner Engagement	Be the "to go" spot for relevant mining resources	Resource Network
57	Partner Engagement	Support policy/ advocacy for enhancing skills and training and accessibility (e.g. employment insurance (EI) access for skills upgrading, funding for micro-skilling)	Association Partners
58	Partner Engagement	DRIPA and UNDRIPA and the challenge in gaining clarity and understanding on CTEM's role in implementing DRIPA within mining and as it relates to Indigenous land stewards	Indigenous Reconciliation
59	Partner Engagement	Tap into a list (MABC, AME) of industry	Association Partners
60	Partner Engagement	Develop goals and measure (with follow up) the success for each partnership	Relationship Management
61	Partner Engagement	To refine CTEM goal statement regarding role in Reconciliation	Indigenous Reconciliation
62	Partner Engagement	Create a speakers' library to be a resource for educators/trainers and community groups (network of diverse industry speakers). Opportunity for knowledge transfer from transitioning/retiring workers engaging as speakers	Network
63	Partner Engagement	Develop Community of Practice to collect information, share resources, develop community, identify and disseminate strategies, support policy and advocacy development, and support sector and cross-sector collaboration	Network
64	Partner Engagement	Continue to build relationships	Regional Partners
65	Partner Engagement	Union participation in committees and projects	Union Partner

66	Partner Engagement	I don't know who is currently on our roster	Relationship Management
67	Partner Engagement	Strong partnerships with Indigenous organizations and governments, with particular emphasis on the relationships within the region commonly known within the mining industry as the "Golden Triangle."	Indigenous Partner
68	Partner Engagement	The mining services sector is a great place to identify coop opportunities with a diverse range of career opportunities	Careers
69	Partner Engagement	Growing societal knowledge/awareness for Indigenous rights and title, UNDRIP, barriers to employment and training and systemic inequities	Indigenous Reconciliation
70	Partner Engagement	Identify and disseminate cultural needs and practices for the retention of Indigenous employees	Workplace Culture
71	Partner Engagement	Connect with colleges, BC Teachers Federation, and public and FNs school boards to determine how best to support the sharing of career awareness/mining awareness materials and resources	Careers
72	Partner Engagement	Leverage MiHR's updated NOCs and corresponding training pathways for BC delivery	Careers
73	Partner Engagement	Reconciliation continues to be of theutmost importance	Indigenous Reconciliation
74	Partner Engagement	Continue to work closely with MiHR to finely tune best practices and relevance to the mining industry	National Partner
75	Partner Engagement	Bring govt, industry together to facilitate training programs	Industry Partner
76	Partner Engagement	Bring Indigenous and non-Indigenous service providers, educators, cultural educators, Elders, high schools, and industry (including current and past mine operators and contractors) and communities together and into the conversation	Network
77	Partner Engagement	Training to build understanding of Indigenous worldviews	Indigenous Reconciliation
78	Partner Engagement	Increase collaboration and partnership with MiHR at the national level	National Partner
79	Program Standards	Collaborate with K-12 school systems to enhance mining in the curriculum (create understanding of a resource-based economy) leveraging digital tools and resources	Curriculum
80	Program Standards	Develop resources to ensure training curriculum	Curriculum
81	Program Standards	Look into credential recognition opportunities with partners – where would a foreign credential apply to mining?	Credential Recognition

82	Program Standards	Look into dual credit programs to increase mining awareness – intent to fill vacancies	Credential Recognition
83	Program Standards	Enhance Mining Association of Canada's Towards Sustainable Mining (TSM) metrics to include more than training hours	Credential Recognition
84	Program Standards	Expand Mining Industry Human Resources Council's skills recognition program to recognize more jobs and to be implemented at all sites	Credential Recognition
85	Program Standards	Create an external body that establishes standards and accreditation for training and trainers	Credential Recognition
86	Program Standards	International Students – Newcomers to Canada BC government mandates to ensure that they have a positive experience in their studies. Opportunity for CTEM to support/improve the processes and evaluation of credentials for people getting into the mining Industry	Credential Recognition
87	Program Standards	Incorporation reconciliation as a core competency in training, parallel to first aid as a core competency to safety training	Workplace Culture
88	Program Standards	Develop and update curriculum and resources to strengthen connection of mining to everyday life – math skills, chemistry, physics	Curriculum
89	Program Standards	Support core and optional curriculum	Curriculum
90	Program Standards	Facilitate work-integrated learning (co-ops and apprentices)	Learning Model
91	Program Standards	Develop micro-credentialling for emerging skill needs	Learning Model
92	Program Standards	Supporting the delivery of hands-on-training	Learning Model
93	Program Standards	Support internship or short-term onsite training opportunities for current students or transitional labour	Learning Model
94	Program Standards	Internships and work placement for senior students – create that bridge to the Industry – provide days of training at mine sites – e.g. Rocks On in Kamloops	Learning Model
95	Program Standards	Technology and innovation in the industry and outside of the industry - is changing the skills profile of mining positions – e.g. Heavy Duty Mechanic are in demand but the specific skills may change with the increase of automation in trucks	Career Profile (Mining-NOC)
96	Employee Support	Develop workplace supports for current employees with a focus on small and medium sized companies (e.g. childcare, flexible scheduling)	Removing Barriers
97	Employee Support	Support retention and transition of displace workers	Labour Supply

98	Partner Engagement	Reduce driver's license barriers by working with Work with Insurance Corporation of British Columbia (ICBC) and partners (e.g. vehicles, instructors, and testers)	Removing Barriers
99	Employee Support	Establish childcare/caregiving supports for learners and workers	Removing Barriers
100	Employee Support	Supporting the removal of systemic training and skills development barriers	Removing Barriers
101	Government Priority	Better understanding our role in the Critical Mineral Strategy	Strategic Alignment
102	Government Priority	Better understanding of our role in implementing DRIPA	Strategic Alignment
103	Government Priority	Understanding our role in BC's part in the Critical Minerals Strategy	Strategic Alignment
104	Government Priority	Focus on diversity and inclusiveness is aligned with government priorities of creating opportunities for equity-seeking groups with a focus on Indigenous equity	Strategic Alignment
105	Government Priority	Collaborate or evolve or align to the BC Centre of Innovation	Strategic Alignment
106	Government Priority	Support BC Mining Roadmap	Strategic Alignment
107	Government Priority	Government trying to encourage people to take jobs in rural and remote communities – connections in the major city centres – we need people to training communities	Strategic Alignment
108	Government Priority	Training advocacy	Strategic Alignment
109	Technology	Expand national inventory of skills in mining to include additional jobs and expand, enhance, or link skills databases to recognize transferable skills and skills progression	Credential Recognition
110	Technology	Develop new scholarships and online repository of current scholarships for mining and exploration training and skills development	Financial Support
111	Technology	Develop and pilot portable education tools and resources (such as online education apps, simulation programs) and raise awareness about existing resources (e.g., core library)	Training Accessibility
112	Technology	Transferrable skills: Create and support an accessible worker database to support workforce transitions across the natural resource sector	Labour Supply
113	Technology	Increase internet connectivity in rural and remote communities	Training Accessibility
114	Technology Equipment	Develop industry program to repurpose or reuse equipment (laptops and cell phones) to increase connectivity for learners	Training Accessibility