Indigenous Leadership in Technology Strategy

December 2025

This program is funded by the Government of Canada and the Province of British Columbia.

First Nations Technology Council

Table of Contents

Acknowledgements

The Indigenous Leadership in Technology (ILIT) Strategy was made possible by the contributions of time and knowledge provided by research participants and advisors from May 2025 to November 2025.

This report has been written with deep gratitude for each person's willingness to share their experiences. Participants included Indigenous people from the following communities listed below, as well as several Indigenous people who came from territories outside of what is currently known as British Columbia but now live in the province.

?Esdilagh First Nation
?Akisq'nuk First Nation
Cheam
Cowichan Tribes
Cree
Ehattesaht First Nation
Esk'etemc First Nation
Esquimalt
Fort Nelson First Nation
Gitanmaax
Gitsegukla First Nation
Gitxsan
Haida
Haisla Nation
Hesquiaht First Nation
Huu-ay-aht
K'ómoks First Nation
Kispiox
Kitkatla
Kitsumkalum
Kwadacha Nation
Kwakiutl
Kwikwasut'inuxw Haxwa'mis First Nation
Lake Babine Nation
Lax Kw'alaams
Lheidli T'enneh
Lytton
Metis
N'Quatqua
Namgis First Nation
Nak'azdli Whut'en First Nation
Hagwilget
Okanagan Nation
Old Massett Village Council
Penticton
Saik'uz First Nation
Saulteau First Nations
Scia'new First Nation
Skidegate
Skowkale
Snuneymuxw
Spallumcheen (Splatsin) First Nation
Squamish Nation
Sts'ailes
Sumas
Tahltan
Takla Nation
Taku River Tlingit First Nation
Tk'emlúps te Secwépemc First Nation
Tla-o-qui-aht First Nation
Tsleil-Waututh Nation
Tseshaht
Ts'kw'aylaxw First Nation
We Wai Kai First Nation
Westbank First Nation
Williams Lake First Nations
Witset

Engage Delaney supported the engagement work of the project. Analysis and report writing was supported by the Information and Communications Technology Council (ICTC).

Executive summary

The Indigenous Leadership in Technology (ILIT) Strategy sets a clear direction for advancing Indigenous participation and leadership in British Columbia's growing technology sector. Developed by the First Nations Technology Council, this strategy builds on extensive engagement with over 200 Indigenous students, potential students, alumni, peer organizations, and delivery partners to identify actionable steps that ensure the Technology Council's priorities align with both labour market realities and student needs.

The ILIT Strategy is grounded in a rapidly changing labour market. British Columbia's technology sector employs over 180,000 workers, contributes $25.6 billion to provincial GDP, and continues to expand across fields such as software development, AI, and cybersecurity.[1] Yet Indigenous representation remains below 1% of the provincial tech workforce.[2] Nationally, employers are shifting toward skills-based hiring that emphasizes adaptability, communication, and problem-solving alongside technical expertise.[3] These trends underscore the importance of stackable and modular training pathways that allow Indigenous students to build credentials progressively and update skills in step with industry changes.

Survey and engagement findings reveal strong interest in technology careers among Indigenous youth, paired with a desire for learning that is accessible, culturally grounded, and community-driven. Participants expressed clear preferences for hybrid and community-based delivery models, flexible scheduling, and culturally safe mentorship. However, awareness of the Technology Council's programs remains limited, despite strong alignment between student needs and existing supports.

The ILIT Strategy identifies three central priorities:

1) Strengthening awareness, access, and equity of digital skills courses
2) Building a responsive curriculum as technologies and career pathways evolve
3) Providing opportunities to apply new skills through work-integrated learning

---

[1] *High Technology Sector 2023 Data Highlights*, BC Stats, 2023, https://catalogue.data.gov.bc.ca/dataset/96620a10-8a9f-444d-b3d0-aa719eecdfac/resource/d664b86b-2d31-47e1-b0a4-19d688172cf1/download/bc-stats-newsletter-2025-high-tech-highlights.pdf.

[2] "Addressing the Challenge of Indigenous Representation in Tech", BC Tech Association, 2022, https://wearebctech.com/addressing-the-challenge-of-the-indigenous-representation-in-tech/.

[3] Todd Legere, Sheldon Lopez, Noah Lubendo, *Canada's AI Ecosystem: A Brief Overview of In-Demand Skills and Trends*, Information and Communications Technology Council, 2025, https://ictc-ctic.ca/reports/canadas-ai-ecosystem-a-brief-overview-of-indemand-skills-and-trends.

Together, these actions will enable the Technology Council to scale what has already been working, such as Indigenous mentorship, modular training, and work-integrated learning, while establishing new processes for evaluation, student supports, and continuous curriculum renewal.

This strategy reframes the Technology Council's role from training provider to partner in Indigenous self-determination, supporting Nations and individuals in using technology to strengthen wellbeing, create economic opportunity, and participate fully in the digital world.

Introduction

Purpose of the strategy

The Indigenous Leadership in Technology (ILIT) Strategy is a three-year action plan that provides the First Nations Technology Council with concrete, actionable guidance for delivering digital skills training and career pathways to Indigenous youth aged 18-35 in British Columbia. While the Technology Council has always pursued programming rooted in community needs, this strategy takes a structured approach to outlining the Technology Council's key objectives and focus areas. It is not intended as a curriculum guide that dictates which courses must be offered, nor is it a broad strategic plan focused on governance and mission. Instead, the ILIT Strategy sits at the intersection of these two: a practical recommendations document that helps the Technology Council's Skills Team and governance partners make informed decisions about future programming, operations, and evaluation.

Sources of evidence

Between May and September 2025, the Council collected input from 218 participants across British Columbia:

- **Students and alumni:** Voices from those who have participated in the Technology Council's programs, sharing their lived experiences, barriers, and reflections on the long-term value of training.
- **Potential students:** Survey responses from Indigenous youth considering technology pathways, indicating both interest and hesitation.
- **Training partners:** Feedback from delivery organizations like BrainStation and Jelly Academy on curriculum design, accreditation, and employer linkages.
- **Peer organizations:** Insights from Indigenous-led training providers across Canada, offering lessons on operational models and evaluation practices.
- **Labour market data:** An analysis of Census, WorkBC data, and job postings, along with existing Indigenous Leadership in Technology (2022) research, was used to produce 25 opportunity profiles (found in Appendix C). These profiles highlight career paths with relatively low barriers to entry, providing key insights into the skills, qualifications, and training required for each role. They have been used throughout the ILIT Strategy to ensure that recommendations align with broader market and economic trends.
- **Governance committee:** Guidance from the ILIT Strategy governance committee, ensuring the strategy reflects both funder expectations and community priorities. The composition of the governance committee can be found in Appendix B.

- **Indigenous working group:** Discussions with a group of Indigenous youth and community members in BC, sharing their own lived experiences to guide the strategy's evaluation framework.

A detailed methodology for this work can be found in Appendix A.

Overarching goals

This strategy is designed to create meaningful, long-term pathways for Indigenous youth to thrive in the digital economy. Rooted in Indigenous values and perspectives, the Strategy focuses on developing digital proficiency, enhancing career readiness, and building confidence and leadership among students. Through ongoing research and evaluation, the ILIT Strategy ensures that training programs remain responsive to emerging technologies, shifting labour market needs, and the aspirations of Indigenous communities across British Columbia.

1. **Progressive digital proficiency**

The ILIT Strategy delivers a culturally supportive and technically comprehensive training curriculum tailored for Indigenous youth. It includes a suite of digital skills courses that span foundational and advanced topics from digital literacy and data management to web development, design, and emerging technologies.

2. **Enhanced career readiness for Indigenous youth**

Paid, work-integrated learning opportunities will place Indigenous youth in technology or tech-enabled roles within First Nations bands, economic development corporations, service organizations, Indigenous-owned and -led tech enterprises, and leading technology employers. These experiences provide not only hands-on skills and professional networks but also pathways into sustainable careers that align with students' interests and community priorities.

3. **Ongoing research and evaluation**

The ILIT Strategy embeds research and evaluation as ongoing processes to ensure programming remains current, effective, and impactful. By continually monitoring technological advancements and labour market shifts, the Strategy will adapt course offerings to meet new demands and opportunities. This approach enables the Technology Council to continuously improve outcomes for students and provide funders and partners with evidence of the Strategy's effectiveness and long-term value.

4. **Increasing student confidence and self-efficacy**

Our programs emphasize growth in self-confidence, problem-solving, and leadership, helping students recognize their strengths and build a strong sense of purpose in their career journeys.

Confidence is understood not just as a personal attribute but as a foundation for lifelong learning, collaboration, and innovation.

5. **Strengthening community contribution and reciprocity**

The ILIT Strategy recognizes that digital skills are not only tools for individual success but also for community empowerment. This commitment to reciprocity ensures that the benefits of training flow back to communities, advancing digital sovereignty, cultural continuity, and collective well-being.

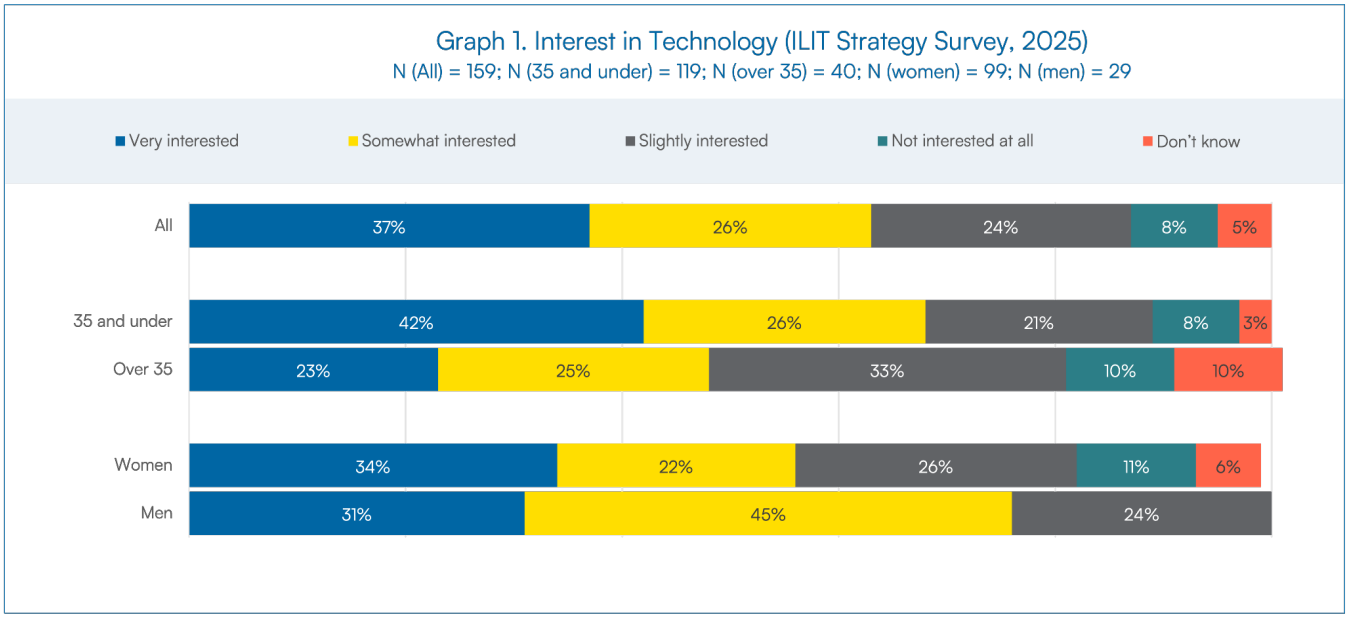
Actionable insights into student and potential student course preferences

A central aim of the ILIT Strategy is to ensure that the Technology Council's programming aligns with what Indigenous youth want to learn and is delivered in ways that meet their needs. To achieve this, the Council engaged both current and prospective students in a series of surveys, focus groups, and interviews. The findings reveal a student population that is highly motivated to explore technology due to perceived labour market opportunities and a desire to connect digital skills to community needs.

Interest in technology careers and skills

Participants engaged in the development of the ILIT Strategy reported a strong interest in technology careers. Over 60% of respondents to the ILIT Strategy survey indicated that they were interested in pursuing work in technology (37% were very interested, and 26% were somewhat interested). Interest was especially high among younger participants, with 42% of respondents aged 18-35 reporting they were very interested, compared to 23% for respondents older than 35.

In the 2021 survey, when asked about opportunities for technology to do good in their community, most respondents identified improving broadband connectivity as a key area for improvement. Respondents reported the highest interest in tech skills with creative and business



applications, including digital marketing, business analysis, workplace technology, and content creation.

Interest was similar in the most recent survey. The majority of respondents were women (71%), followed by men (21%), and two-spirit or non-binary individuals (8%). Respondents had varying levels of formal education; a third had high school or less (35%), slightly fewer had some post-secondary education (28%), and three in ten had completed post-secondary education (31%). Additionally, respondents represented all regions of the province, including the Thompson/Okanagan region (27%), the North Coast (18%), the Mainland/Southwest region (17%), the Vancouver Island/Coastal region (14%), and Cariboo (12%), amongst others, and a mix of on-reserve (39%) and off-reserve residents (56%).

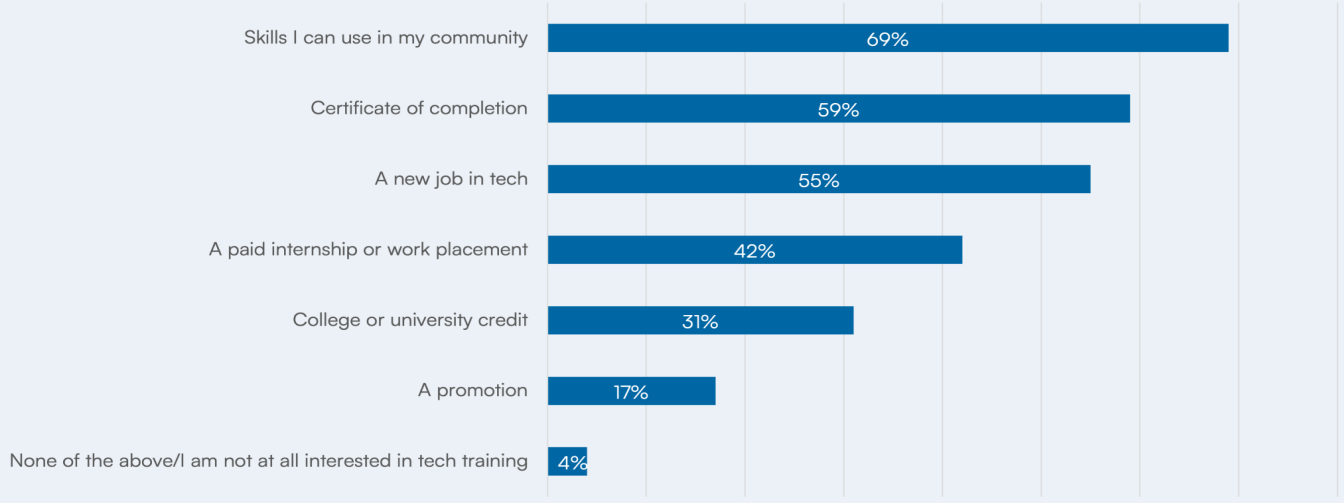
Top skills for this cohort included web and app development (81%), media production (79%), digital marketing (78%), using artificial intelligence (AI) tools (77%), and drones (76%). The least selected skills for this age group were hardware repair (60%), followed by building internet or Wi-Fi connections, project management, GIS, and UX design, all of which were selected by 63% of respondents.

Table 1. Top 10 Skills of interest (ILIT Strategy survey, 2025)

Skill Area	% Interested (Ages 18-35)	% Interested (Ages 18+)
Web and app development	81%	77%
Content creation and multimedia	79%	75%
Digital marketing	78%	75%
Using AI tools	77%	73%
Drones	76%	71%
Office and workplace technology	75%	75%
Building AI tools	74%	72%
AR/VR	74%	68%
Cybersecurity	73%	70%
Basic computer skills	69%	68%
UI design	69%	65%

Further, when asked about their desired results from training, 69% of youth respondents selected skills to use in my community, which was followed by certificate of completion (59%), new job in tech (55%), paid internship/work placement (42%), college/university credit (31%), and a promotion (17%). Only 4% selected that they were not at all interested. In other words, respondents were interested in tech both for its labour market opportunities and for its potential to enable them to benefit their communities.

Graph 2. Desired Results from Training (ILIT Strategy Survey, 2025)
N=112

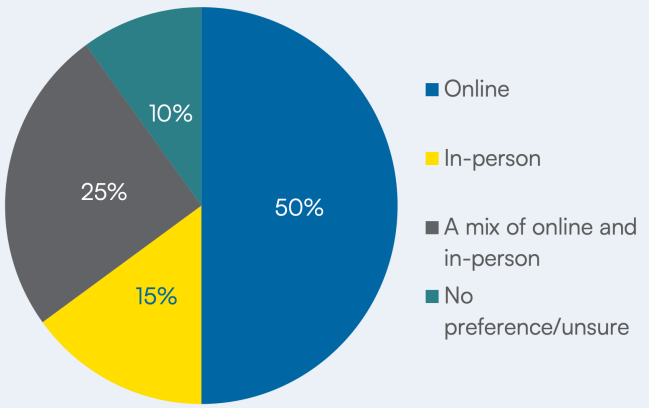


The success of the Technology Council's program delivery should also be defined more broadly than through the lens of immediate employment. It should align with the desired outcomes of students, prospective students, and the needs of their communities.

Program delivery

Evidently, how training is delivered is as important as what is taught, particularly for students facing multiple barriers. Participants engaged in the development of the ILIT Strategy expressed a strong preference for flexible and accessible delivery models: 50% preferred online delivery, 25% preferred hybrid models, and 15% preferred entirely in-person delivery. On the other hand, focus group and interview participants preferred in-person or hybrid approaches, noting that in-person delivery was particularly important for technical courses that involve equipment, and that in-person and hybrid approaches were both more engaging and better for networking.

Graph 3. Delivery Model Preference (ILIT Strategy Survey, 2025)
N=106



These student and potential student responses suggest that while online delivery is necessary, hybrid models may provide the best balance between flexibility, accountability, and realistic supports for students.

Actionable insights into labour market and employability

While understanding student demand is critical, the long-term success of the Technology Council's programming depends equally on whether training translates into employment opportunities. For Indigenous youth, employability outcomes are not only a matter of individual achievement but also of community empowerment. Employment in technology can create pathways to economic stability, leadership, and digital sovereignty. However, this requires that

training programs are firmly aligned with the demands of the labour market and that employers are prepared to provide opportunities in ways that are culturally safe and supportive.

This section draws on labour market research, employer engagement, and alumni perspectives to highlight where opportunities exist, what skills are in highest demand, and what barriers continue to prevent Indigenous youth from successfully transitioning from training to employment.

Labour market trends

British Columbia's technology sector is one of the largest in Canada.[4] As of 2023, the province employed approximately 181,680 people in high technology occupations, a 1.2% increase from the previous year and an addition of roughly 2,200 new jobs.[5] Technology is a cornerstone of BC's economy, representing approximately 7% of total provincial employment and contributing $25.6 billion to provincial GDP.[6] Yet, despite the size of BC's technology sector and projected growth from 2025 to 2035,[7] Indigenous People in British Columbia's tech sector remain underrepresented. Although Indigenous People make up nearly 6% of the province's population, their share of the technology workforce has been reported to be less than 1%.[8]

According to the 2025 BC Labour Market Outlook, several technology occupations stand out as high-opportunity careers based on projected job openings and employer demand. Software engineers and designers, software developers and programmers, and information systems specialists lead BC's tech workforce in employment. Managerial and systems-level roles, such as computer and information systems managers, also show sustained opportunities. Creative and applied digital roles, including graphic designers and illustrators, web developers and programmers, and user support and network technicians, also experienced growth from 2024 to 2025.[9] However, rapidly changing labour market realities requires building skills that can be used flexibly and are responsive to these changes.

---

[4] BC Stats, "Profile of the British Columbia Technology Sector: 2020 Edition," Ministry of Jobs, Economic Recovery and Innovation, 2021, https://www2.gov.bc.ca/assets/gov/data/statistics/business-industry-trade/industry/tech_profile_report.pdf.

[5] "High Technology Sector 2023 Data Highlights."

[6] "High Technology Sector 2023 Data Highlights."

[7] "British Columbia Labour Market Outlook: 2025-2035," Labour Market Development and Immigration Division of the Ministry of Post-Secondary Education and Future Skills, 2025, https://www.workbc.ca/research-labour-market/bc-labour-market-outlook#overview.

[8] "Addressing the Challenge of Indigenous Representation in Tech", BC Tech Association, 2022, https://wearebctech.com/addressing-the-challenge-of-the-indigenous-representation-in-tech/.

[9] "British Columbia Labour Market Outlook: 2025-2035"

In Canada's evolving technology ecosystem, employers are increasingly placing greater emphasis on transferable skills that cut across technical disciplines and job titles. Industry experts highlight that while coding, data management, and algorithmic knowledge remain critical, success in today's tech sector increasingly hinges on soft skills like communication, collaboration, problem-solving, and continuous learning. As organizations adopt AI tools and automation at scale, hiring strategies are shifting toward skills-based approaches, prioritizing adaptable candidates who demonstrate curiosity, resilience, and the ability to learn new technologies quickly over those with narrowly defined credentials.[10]

This shift has direct implications for Indigenous students. Access to foundational training is improving through the Technology Council's efforts. Yet employability outcomes ultimately reflect the job economy, the pace of reconciliation across workplaces, and the extent to which employers open pathways and hire Indigenous talent. Employers have repeatedly reported that what sets apart candidates is not whether they completed a short course or obtained a certificate, but whether they can point to actual products, such as websites built, apps designed, data analyzed, or digital campaigns executed.

Artificial intelligence (AI): opportunity and concern

AI deserves special attention, as it is both a source of excitement and apprehension among Indigenous students. On one hand, 77% expressed interest in AI training, with many highlighting its potential for language revitalization and creative applications. On the other hand, participants voiced concern that automation could eliminate entry-level jobs, further limiting opportunities for new entrants to the tech sector. Unfortunately, these concerns are not entirely misplaced and necessitate careful consideration for Indigenous-focused training organizations, such as the Technology Council.

Recent research shows that Indigenous People in Canada are more at risk of job displacement than their non-Indigenous counterparts, "Indigenous employment is more concentrated in the top five industries at high risk from automation (accommodation and food services, retail trade, construction, transportation and warehousing, and management, administration, and other services)." Of the industries considered by the Future Skills Centre (33 in total), "approximately 250,000 jobs held by Indigenous workers are at high risk of automation." Further, median wage data reveals that the top industries most at risk of automation account for nearly $2.5 billion in Indigenous wage revenue—something that would be disastrous both for Canada and for

[10] Todd Legere, et. al. "Canada's AI Ecosystem: A Brief Overview of In-Demand Skills and Trends."

Indigenous communities if lost. In response to these concerns, training programs must consider the threat posed by AI to entry-level professionals in technology.[11]

The risks associated with widespread AI adoption, however, also underscore the importance of AI skills training. The tech sector is undergoing a structural transformation due to AI uptake. 28% of companies globally, and nearly 14% of Canadian professional, scientific, and technical firms, report using AI tools to automate parts of production and service delivery. Over half of Canadian ICT workers report using AI tools to design or develop technology products or services, while 31% say AI has automated tasks they previously performed.[12]

These shifts are altering the composition of Canada's technology labour market. Routine or entry-level tasks in programming, data, and IT support are increasingly being automated, while demand is rising for mid- and senior-level professionals with oversight, cybersecurity, and product management skills. Roles in cybersecurity, user-experience design, and back-end or full-stack engineering remain in strong demand, even as front-end development positions show slower growth.[13]

For British Columbia, this evolution underscores the need for training programs that emphasize adaptability, critical thinking, and continuous upskilling. The growing use of automation and generative AI tools underscores the need for organizations like the Technology Council to maintain flexible, modular training programs that enable learners to rapidly update their skills and obtain stackable credentials aligned with emerging roles. As the province's digital economy continues to expand, such models will be essential to ensuring Indigenous students are not only job-ready but positioned to shape and lead BC's digital economy.

The classroom-to-career gap

Both students and alumni emphasized a persistent gap between classroom training and employability. For many, completing a course is not enough to secure a job, particularly if that course was their introduction to the subject matter. What is missing is the opportunity to apply skills in a work environment, to learn professional etiquette, and to gain confidence in navigating the labour market.

---

[11] "Digital Differences: The Impact of Automation on the Indigenous Economy in Canada," Future Skills Centre, 2020, https://fsc-ccf.ca/research/digital-differences-the-impact-of-automation-on-the-indigenous-economy-in-canada/.

[12] Mairead Matthews, Faun Rice, "Automation and the Future of Tech Careers in Canada: What Students Need to Know."

[13] Mairead Matthews, Faun Rice, "Automation and the Future of Tech Careers in Canada: What Students Need to Know."

Work-integrated learning (WIL), which combines real-world workplace experience and classroom instruction through initiatives like internships, co-op programs, and practicums, was identified as the most impactful support, with 45% of participants citing it as their top need. Working group participants made it clear that these opportunities should be paid, as unpaid internships are often misaligned with the needs of adult students. Governance committee members also emphasized the need for career navigation supports, as did 21% of survey respondents.

At the same time, peer organizations, governance committee members, and the Technology Council's partners noted that curriculum must be continuously updated to reflect rapid changes in technology, and that these course offerings should ladder into other courses or programs. For instance, digital marketing tools evolve on a near-monthly basis, while AI platforms are advancing even more quickly. If training lags behind or is not forward-looking, graduates may enter the workforce with skills that are outdated or no longer relevant to the labour market's needs.

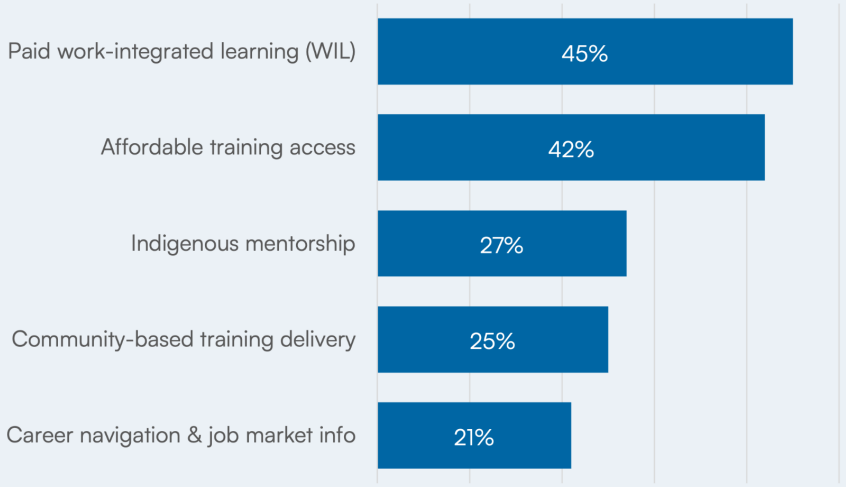
As well, peer organizations, delivery partners, and alumni engaged for the development of the ILIT Strategy highlighted that for training organizations like the Technology Council, stackable and modular course design is essential to maintaining flexibility, scalability, and also for laddering students into employment. Alumni in particular emphasized that the Technology Council's course design and offerings made it possible for them to pivot and or follow non-conventional career pathways. Expanding this through partnerships could allow students to pause, re-enter, or specialize according to their career goals.

Desired employment supports

The 2025 ILIT Strategy survey identified several key supports that students see as essential for successful employment transitions.

The importance of these supports cannot be overstated. They illustrate that employability is not just about course content but about the ecosystem that surrounds training. Without WIL, career guidance, mentorship, and accessible delivery, even the most relevant curriculum will struggle to produce meaningful outcomes, particularly in cases where students may be coming to the classroom with multiple and persistent barriers.

Graph 4. Top 5 Most Helpful Employment Supports
N=106



Actionable insights into balancing flexibility, awareness, and credibility

This section examines the operational decisions for the Technology Council, drawing on engagement with Indigenous People, alumni, and peer organizations. It considers operational questions, including accreditation, awareness of Technology Council programming, preferred delivery models, and barriers to participation. Together, these insights inform a set of recommendations that strike a balance between credibility and flexibility.

Awareness of Technology Council training

Survey data revealed a mixed picture of awareness: 54% of youth respondents reported familiarity with the Technology Council, while 40% had never heard of them before the survey. For an organization with provincial reach and more than a decade of active programming, this finding underscores a persistent visibility gap. Indigenous youth and alumni repeatedly mentioned that awareness of training opportunities was limited to word-of-mouth or social media. Several engagement participants suggested that the Technology Council increase its engagement with Friendship Centres, secondary schools, and local employment service providers. Further, alumni interviews reinforced this theme. Multiple graduates described discovering the Technology Council's programs by chance or through a friend. These student accounts indicate that while the Technology Council's training is highly valued by those who

access it, awareness remains dependent on informal networks and word-of-mouth rather than institutional outreach.

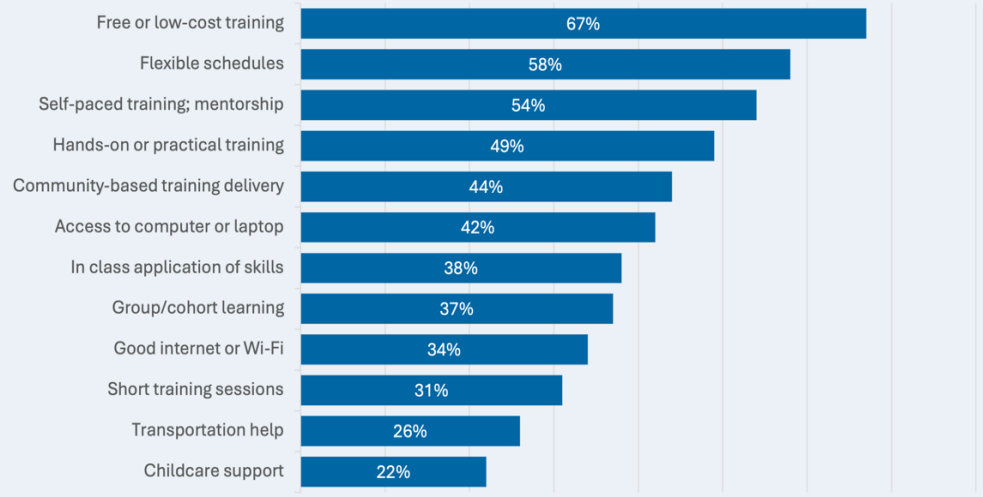
Enablers to engaging in training

At present, the Technology Council is already doing much to support students with multiple barriers. The Technology Council provides a stipend for training and equipment, most of which students can keep after the course. Career services include resume building and interview preparation, an internship program, a mentorship network, and trauma-informed support for all Indigenous People who participate in their programs, among other supports and enablers. The importance and value of these supports were not missed by participants engaged in the development of this strategy. Working group members, governance committee members, and focus group participants all stressed the vital importance of enabling supports that mitigate the impact of barriers.

Another important, but difficult to capture enabler that engagement participants identified was cultural safety and trauma-informed approaches in the classroom. Alumni engaged reported that trust and cultural safety were critical enablers during their experiences with the Technology Council. Participants also highlighted the value of culturally grounded instructors and peer relationships, which all contributed to a wider sense of belonging and community.

Similarly, survey respondents also noted the importance of supports and enablers. The most selected supports were free or low-cost training (67%), schedule flexibility (58%), self-paced training and mentorship training, both with 54%. Other notable enablers cited included local training, access to hardware, and a good internet connection.

Graph 5. Training Access Enablers (ILIT Strategy Survey, 2025)
N=106



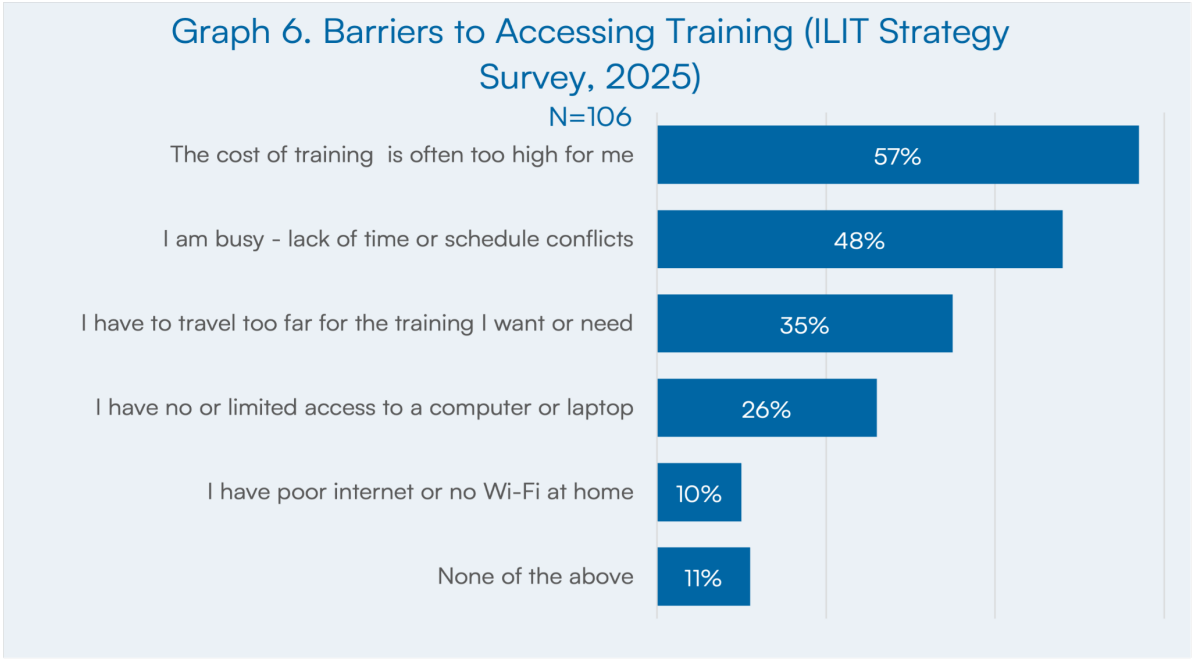
It is important to note that synergy already exists between the Technology Council's offerings to students and many of the cited needs of survey respondents, underlining the importance of building Indigenous youth awareness of the Technology Council, their work, their programs, and their support.

Barriers to engaging in training

Despite the Technology Council providing a wide variety of crucial supports, barriers to access persist for students and potential students. Several peer organizations and delivery partners noted that students frequently rely on mobile devices to complete coursework. One instructor explained, "You'll get people [to] turn their cameras on, and they're on the couch doing the whole course on their phone." Another emphasized that "some programs have to be done in person; they don't translate well online." These accounts suggest that students may not have the right equipment, or the course content may not be suited to online learning. Complementing online courses with offline access options may be a way to resolve these issues.

Beyond access to technology, time, cost, and distance emerged as critical barriers to engaging in training. Of survey respondents, 57% cited cost, 48% cited scheduling conflicts, 35% cited travel distance, and 26% cited access to hardware as key obstacles to accessing training. Although only 10% of respondents cited connectivity as a barrier, working group members and focus group participants both highlighted poor internet connectivity as a significant barrier. For those from northern and remote communities, connectivity issues were considerably more disruptive and included power outages, internet disruptions, and poor infrastructure.

Graph 6. Barriers to Accessing Training (ILIT Strategy Survey, 2025)



Alumni we engaged provide a personal lens on these challenges. Several noted that while the Technology Council's financial and equipment supports were necessary enablers that allowed them to pursue technology training, they also noted that application and intake processes were sometimes confusing or inconsistent. Others highlighted the value of culturally safe instructors but emphasized that program navigation could be improved through clearer communication and ongoing student check-ins.

Collectively, these insights highlight a set of operational priorities that extend beyond recruitment. Strengthening Indigenous youth awareness of the Technology Council's offerings will require more than advertising. Working group members and peer organizations noted that building Indigenous youth awareness depends on building lasting relationships with Indigenous communities and relevant organizations. This includes formal partnerships with Friendship Centres, schools, and employment agencies, as well as sustained community presence. Addressing delivery barriers will involve more in-community learning opportunities, maintaining device lending and stipend programs, and ensuring all online offerings have downloadable or offline components for students with unreliable connectivity.

In short, the evidence across all engagement streams shows that while the Technology Council's programming is widely respected and valued, many potential students still do not know it exists, and among those who do, infrastructure and accessibility challenges continue to limit participation. Reducing these barriers is essential to achieving the strategy's broader goal of equitable access and participation in the digital economy.

Accreditation models: peer insights and options

Accreditation is currently an operational question that the Technology Council is facing. On one hand, accreditation increases institutional credibility, ensures students' credentials are portable, and opens new funding streams. On the other hand, it can also slow curriculum responsiveness, impose administrative burdens, and reduce the flexibility that has allowed the Technology Council to innovate quickly in emerging areas of particular interest to their students, like GIS and digital storytelling.

Peer organizations provide valuable lessons. Jelly Academy explored direct accreditation but ultimately rejected it, citing the rigidity and administrative requirements. Instead, it pursued partnership licensing with Memorial University and Saskatchewan Polytechnic. This arrangement enables Jelly Academy students to receive accredited recognition while the organization maintains the flexibility to rapidly update courses in areas such as digital marketing and social media management. Other training providers also confirmed the risk of reduced agility.

Table 2. Accreditation models: direct vs. partnership

Model	Pros	Cons	Relevance
Direct accreditation	Increased credibility and recognition	High administrative burden (compliance, audits)	Less suitable near-term Risks slowing responsiveness
	Direct access to government/institutional funding	Curriculum agility reduced (slow updates)	
	Ensures credentials are portable	Resource-intensive for a small non-profit	
Partnership licensing	Students gain accredited recognition through partner institutions	Recognition tied to the partner, not the Technology Council directly	More suitable near-term Balances recognition with flexibility
	Retains flexibility for rapid curriculum updates	Limits independence	
	Lower administrative and financial burden		
	Builds institutional partnerships		

Evaluating the success of the ILIT Strategy

As the Technology Council continues to advance digital skills training for Indigenous youth across British Columbia, a meaningful evaluation framework offers an important opportunity to deepen understanding of impact, improve program design, and communicate results with clarity and confidence. Evaluation is more than a reporting tool, it is a way to reflect on what's working, celebrate achievements, and guide continuous improvement. By building an approach that is intentional, efficient, and community-informed, the Technology Council can demonstrate the value of its work to students, partners, and funders alike.

The proposed evaluation framework is designed to balance rigour with practicality. It focuses on capturing the outcomes that matter most, those that reflect both Indigenous aspirations and broader labour market realities, while ensuring the process remains efficient and respectful of participant time and staff capacity.

Priorities for the evaluation framework

1. Collect benchmarking data and draw on existing labour market information

The framework will establish clear benchmarks and integrate regional and national labour market data to contextualize outcomes, helping to demonstrate how the Technology Council's programs contribute to broader employment and digital economy goals.

2. Track outcomes across time while reducing participant burden

By aligning reporting processes with delivery partners, the framework will enable the Technology Council to monitor short-, medium-, and long-term outcomes, including employment, career growth, and community impact, without creating additional demands on alumni.

3. Focus on meaningful analysis and high-impact storytelling

Designed to be resource-efficient, the framework emphasizes actionable insights and compelling outputs. Key statistics, visual summaries, and case studies will be developed for use in funder reports, community updates, and external communications such as newsletters and impact stories.

4. Bridge Indigenous priorities with labour market outcomes

Evaluation tools and indicators will reflect the outcomes that Indigenous People across BC have identified as most important, while also connecting these to key labour market trends and success measures. This ensures that data collection remains both culturally relevant and strategically aligned.

Proposed evaluation and data collection frameworks

A tiered evaluation framework that tracks outcomes over time, from immediate post-program results to long-term career and community impact, would meet the outlined priorities and overarching goals, while not over-burdening alumni.

Table 3. ILIT Strategy evaluation framework

Timeline	Indicators	Data collection	Purpose
Short-term (0—6 months)	Course completion rates Certificate attainment	Exit surveys	Demonstrates immediate

	Self-reported confidence in applying skills Satisfaction with supports and cultural safety	Instructor assessments	program quality and student readiness
Medium-term (6—12 months)	Participation in WIL placements Employment within 6 months Further education pursued Continued engagement with alumni networks Access to mentorship	Alumni follow-up at three and six months Employer feedback	Tracks early employability outcomes and student transitions
Long-term (1—3 years)	Career progression Further education pursued Entrepreneurship (% starting businesses/freelance) Application of skills in community projects Indigenous leadership in technology roles	Annual alumni survey Community interviews Case studies	Captures long-term impact for both careers and communities
Cross-cutting measures	Equity (gender, geography, neurodiverse students) Cultural impact	Disaggregated survey data	Ensures accountability to both funders and Indigenous communities

Alumni tracking framework

Table 4. Alumni tracking framework

Timeline	Indicators	Data sources
3 months after course completion	Employment secured WIL completion Transition satisfaction Confidence Outlook on own employability	Alumni survey Employer check-ins
6 months after course completion	Employment retained Further education pursued Mentorship engagement Confidence	Alumni survey Mentorship program data

	Outlook on own employability	
12 months after course completion	Career progression Further education pursued Entrepreneurship (% freelancing or starting businesses) Application of skills in community Outlook on own employability Sense of job stability	Alumni survey Case studies Community interviews

Recommendations for sustainable data collection

Based on engagement and peer benchmarking, a multi-pronged approach to evaluation and data collection is recommended to ensure that the Technology Council is collecting sufficient data to demonstrate progress towards intended outcomes, without overburdening staff or alumni.

1. Multi-stage alumni tracking

Conduct structured follow-ups at 3 months, 6 months, and 12 months post-program. Track employment, further education, entrepreneurship, and community application of skills. Create a centralized alumni database to reduce survey fatigue and ensure continuity.

2. Disaggregated data collection

Collect outcomes by gender, age, geography, and neurodiverse status while respecting OCAP® principles (Ownership, Control, Access, Possession).[14] Students must give informed consent and be able to access their own data.

3. Prioritizing soft outcomes alongside hard outcomes

Include measures of soft outcomes such as mentorship quality, cultural safety, and confidence in applying skills alongside hard outcomes such as the number of people securing employment after training. This will enable the Technology Council to provide a fuller picture of the impact of the work they do.

4. Benchmarking

[14] First Nations Information Governance Centre (FNIGC), "The First Nations Principles of OCAP®," 2025, https://fnigc.ca/ocap-training/

Align key outcome measures with peer organizations. For example, Jelly Academy tracks three-month employment outcomes. This provides funders with comparable data while allowing the Technology Council to highlight unique cultural impacts.

5. Transparent Reporting

Regularly share outcomes with funders, interest holders, students, and communities. Reporting should be accessible, visual, and transparent.

Weaving it all together: pathways to impact

Engagements for the development of this strategy revealed grounded lessons and insights for the Technology Council. In particular, survey respondents, working group members, and focus group participants showed that interest in technology careers is high among students and potential students. Alumni accounts illuminated the importance of Indigenous-focused training as several described the Technology Council as the catalyst that helped them move from uncertainty to confidence. Engagements showed that much of the Technology Council's support and programming aligns with student needs and goals. The development of this strategy revealed that success for the Technology needs to consider more broadly factors outside of employment gains, such as community benefits, confidence built, and continued education, among other factors.

Engagements, however, also highlighted opportunities for growth and key themes and considerations for the Technology Council's ILIT strategy, namely, the need to strengthen awareness of the Technology Council, access to its programs and supports, and program inclusivity, and the need for responsive curriculum design and industry collaboration.

Strengthening awareness, access, and equity

The 2025 ILIT Strategy survey revealed that despite high interest in technology careers amongst surveyed Indigenous youth, strong alignment in student delivery preferences and the Technology Council's current delivery models, and synergy between barriers faced by students, and supports offered by the Technology Council, awareness of the Technology Council's programs continues to limit impact and program uptake.

Further, while the Technology Council's training model is well positioned to meet the needs of students and potential students, ensuring that integral accessibility supports are expanded and

strengthened, and improving equity and inclusion by continuing to apply trauma-informed approaches, but marrying these with more granular data collection to ensure that students have similar outcomes despite their location, gender, ability, etc., are all essential to carrying out the stated goals of the ILIT strategy.

Pathways to impact

- **Awareness**: Invest in communication strategies that reach students where they are, through community networks and partnerships with schools, employment agencies, and Indigenous community organizations. Increase visibility by sharing success stories and alumni outcomes.

- **Access**: Continue to reduce barriers such as cost, scheduling, and connectivity through free or low-cost training, flexible hybrid and community-based delivery, and equipment loan programs. Strengthen partnerships with Indigenous communities to deliver localized training that supports learning close to home.

- **Equity**: Create inclusive learning environments by embedding supports for neurodiverse students and continue applying trauma-informed and culturally grounded approaches. Strengthen Indigenous mentorship opportunities.

Responsive curriculum and industry collaboration

Governance Committee feedback highlighted that employability and adaptability are built through transferable skills and industry-connected learning. Members highlighted the need to "stay ahead of industry shifts" and to design programs and course offerings that balance technical skills with teamwork, communication, and problem-solving.

Across all feedback, partnerships were continuously highlighted as necessary for scale and sustainability. Employers, delivery partners, and alumni described the Technology Council as "a bridge between community and industry," and consistently emphasized the need for multi-year collaboration and coordinated reporting systems. Governance committee members echoed this, calling for deeper engagement with entrepreneurs and post-secondary institutions to "support the Indigenous tech ecosystem."

Pathways to impact

- **Responsive curriculum**: Establish regular curriculum review cycles to ensure programs remain aligned with emerging technologies and labour market needs. Integrate feedback from students, alumni, and employers, and embed Indigenous worldviews and priorities into course design. Expand modular and stackable pathways that allow students to earn

micro-credentials and certificates progressively, creating flexible entry and advancement points.

- **Industry collaboration**: Strengthen partnerships with employers to expand WIL opportunities such as paid internships and project-based collaborations. Strengthen partnerships with post-secondary institutions to better ladder Technology Council courses into larger institutions. Expand partnerships with service providers that provide employment services and/or serve students with disabilities for access to wage subsidy programs and additional supports for students with disabilities.

Recommendations

Building on these survey insights and engagement findings, the ILIT Strategy's recommendations hinge on sustaining what already works well, expanding supports that can mitigate the classroom-to-career gap, and embedding evaluation mechanisms.

Continue doing what works:

- **Prioritize dual-value courses:** Focus on skills that align with student goals and employability, such as AI for language revitalization, GIS for land stewardship, and cybersecurity for data sovereignty.
- **Adopt modular, stackable pathways:** Enable students to earn credentials at multiple stages, from micro-credentials to certificates, creating clear ladders from entry to advanced levels.
- **Embed Indigenous mentorship:** Pair youth with Indigenous professionals in technology and integrate Elders/Knowledge Keepers into curriculum design.
- **Work-Integrated Learning:** Expand paid internships, apprenticeships, and industry-linked projects, with explicit targets for employer participation.
- **Develop transferable workforce skills:** Embed communication, teamwork, and entrepreneurship into all technical courses. Provide targeted career coaching (resumes, LinkedIn, interviews).
- **Expand employer partnerships with cultural safety supports:** Partner with employers to support culturally safe and inclusive WIL opportunities, such as internships.
- **Leverage alumni networks:** Establish mentorship programs linking graduates to current students. Create digital platforms for job sharing and peer support.

To do in the next 6-12 months:

- **Expand hybrid and community-based delivery:** Work collaboratively with First Nations to deliver in-community training, supported by instructors and equipment loan programs.

- **Design for inclusivity:** Incorporate supports for neurodiverse students, ensure accessibility features like captioning and transcripts, and adopt trauma-informed approaches.
- **Formalize accreditation pathways through partnerships:** Pursue formal credit transfer agreements with post-secondary institutions to enable students to apply the Technology Council certificates toward diplomas or degrees.
- **Build instructor capacity and retention systems:** Develop a structured Instructor Training and Retention Framework, including professional development on Indigenous pedagogy, trauma-informed practices, and technology updates.
- **Community presence and partnerships:** Expand formal partnerships with Friendship Centres, schools, and employment agencies, and strengthen sustained community presence to build Indigenous youth awareness and foster lasting relationships with Indigenous communities and related organizations.
- Update surveys and evaluation processes and put in place processes for regular reporting.

To do regularly:

- **Stay ahead of industry shifts:** Create ongoing curriculum review cycles that include checking labour market data. Engage alumni in evaluation work and conduct labour market research to ensure course topics and content remain relevant.
- **Strengthen data and evaluation infrastructure:** Integrate accreditation metrics into the Technology Council's centralized alumni and student tracking system, aligning with OCAP® principles. Track completion rates, job placements, and credential recognition over time to demonstrate measurable impact to funders and partners. Produce regular impact reports for staff and community partners, ensuring transparency and continuous feedback loops.

Fundraising strategies

As the Technology Council is entirely grant-funded and does not receive any core funding, it is important to consider fundraising strategies to ensure the implementation of the ILIT Strategy and the continued delivery of our digital skills training, career support, research and evaluation.

Since 2018, the Technology Council has trained over 2,000 students. Based on this track record, fundraising strategies have successfully brought in funding from private foundations, government funding bodies and the private sector to continue delivering our digital skills training and career support. Based on our experiences delivering this work for nearly eight years, we

have accurate cost estimates to support funding applications. There aren't currently any gaps in funding to deliver this element of the ILIT Strategy.

There is currently a gap in funding to deliver the evaluation and research elements of the ILIT Strategy. The table below outlines an initial budget on the funding required to close this gap, and the Technology Council will pursue funding from private foundations, government funding bodies and the private sector.

Table 5. Funding required to implement the ILIT Strategy from 2026 to 2029

Focus	Activities	Budget
Improving data collection processes that align with the principles of OCAP®	Data collection design Updates to CRM, learning management platforms and data storage processes	$210,000
Research to ensure our courses and career support continue to adapt to changes in tech, job markets and Indigenous priorities	Continued input from employers and delivery partners Analysis of current job openings and the number of roles that require at least one digital skill Research on rapidly changing tech, such as AI and cybersecurity, to ensure our training remains relevant	$300,000
Evaluating the impact of our work on our alumni, leadership, funders and others	Regular surveys and data collection Case studies and reports Benchmarking data collection	$200,000

Bibliography

BC Stats. *High Technology Sector 2023 Data Highlights*. 2023. https://catalogue.data.gov.bc.ca/dataset/96620a10-8a9f-444d-b3d0-aa719eecdfac/resource/d664b86b-2d31-47e1-b0a4-19d688172cf1/download/bc-stats-newsletter-2025-high-tech-highlights.pdf.

BC Stats. "Profile of the British Columbia Technology Sector: 2020 Edition". Ministry of Jobs, Economic Recovery and Innovation, 2021. https://www2.gov.bc.ca/assets/gov/data/statistics/business-industry-trade/industry/tech_profile_report.pdf.

BC Tech Association. "Addressing the Challenge of Indigenous Representation in Tech." 2022. https://wearebctech.com/addressing-the-challenge-of-the-indigenous-representation-in-tech/.

Future Skills Centre. "Digital Differences: The Impact of Automation on the Indigenous Economy in Canada". 2020. https://fsc-ccf.ca/research/digital-differences-the-impact-of-automation-on-the-indigenous-economy-in-canada/.

Labour Market Development and Immigration Division of the Ministry of Post-Secondary Education and Future Skills. "British Columbia Labour Market Outlook: 2025—2035". 2025. https://www.workbc.ca/research-labour-market/bc-labour-market-outlook#overview.

Legere, Todd, Sheldon Lopez, and Noah Lubendo. *Canada's AI Ecosystem: A Brief Overview of In-Demand Skills and Trends*. Information and Communications Technology Council, 2025. https://ictc-ctic.ca/reports/canadas-ai-ecosystem-a-brief-overview-of-indemand-skills-and-trends.

Matthews, Mairead, and Faun Rice. "Automation and the Future of Tech Careers in Canada: What Students Need to Know". Information and Communications Technology Council, 2024. https://ictc-ctic.ca/reports/automation-and-the-future-of-tech-careers-in-canada.

Appendix A: Methodology

The ILIT Strategy was developed through a mixed-methods approach that combined quantitative survey analysis, qualitative engagement, and secondary research to best reflect both the lived experiences of Indigenous students and the evolving conditions of British Columbia's technology labour market.

1. Data collection and participant overview

Between January and March 2025, the First Nations Technology Council conducted the ILITS 2025 Strategy Survey to capture insights on training experiences, learning preferences, and employment aspirations among Indigenous learners and alumni. A total of 159 respondents completed the survey, representing participants from across British Columbia, including urban, rural, and remote First Nations communities. Respondents included current and former Technology Council students, prospective students, Indigenous community members, and industry partners.

In addition to survey data, targeted interviews and engagement sessions were held with employers, students, prospective students, delivery partners, community members, and Indigenous organizations. These discussions focused on aligning training delivery models with employment opportunities and identifying barriers to participation in the tech sector. The ILIT Strategy was also developed with input from the Working Group and Governance Committee.

2. Secondary research

Secondary research was conducted to provide a broader context of current labour market trends and workforce development priorities for the development of the ILIT Strategy. This review examined employment growth, emerging occupational demands, and employer skill preferences. By synthesizing data from recent labour market analyses, institutional reports, and sector studies, this research provided critical context for aligning the ILIT Strategy with real-world trends to ensure relevant recommendations.

3. Limitations

While the survey achieved strong provincial representation, participation skewed toward women aged 18-35 and respondents with prior engagement in the Technology Council's programming. As such, the findings may underrepresent non-participating Indigenous communities or Indigenous male youth learners.

Concerning secondary research, the labour market projections used in the strategy draw on the most recent public datasets available at the time of analysis (2023—2025), which may shift as new data are released.

4. Ethical and cultural considerations

All data collection and analysis adhered to OCAP® principles (Ownership, Control, Access, and Possession). Participants provided informed consent, and results reported are de-identified and reported in aggregate to maintain confidentiality.

Appendix B: Governance committee members

- Senior Program Manager, Ministry of Post-Secondary Education and Future Skills
- Founder & CEO, Animikii
- VP Partnerships and Ecosystem Development, Innovate BC
- President, Invest Vancouver
- Manager of Reconciliation Strategy, Telus
- Director of Engineering & Productivity, Telus
- Co-Founder, Jacknife Consulting
- Executive Director of Future Workforce Development Strategy, TechNation

Appendix C: Opportunity profiles

Opportunity Profiles

First Nations Technology Council

Business Analyst

A Business Analyst conducts data analysis to identify the best outcomes for their organization, develops implementation plans, and communicates recommendations to stakeholders. Collaborating with IT and other departments, Business Analysts help develop solutions aligned with organizational goals and support project management by tracking progress, risks, and deliverables. Comparable titles include Management Analyst, Data Analyst, Business Systems Analyst, and Product Manager.

This job title is found across two different Government of Canada occupation groups. In 2021, **12,475 people were employed under NOC 11201** (Professional occupations in business management consulting), and **3,830 people were employed under NOC 21221** (Business systems specialists) across BC. In 2023, there were **1,363 job posts** for Business Analysts in BC. The main types of companies posting business analysis jobs were in telecommunications, healthcare, staffing services, and the public sector. Business Analysts are primarily concentrated in the Mainland/Southwest region.

Qualifications

To become a Business Analyst in BC, a **bachelor's degree or college diploma in business administration** (often with a focus on information systems or operations), commerce, or computer science is typically required. Some roles may also value specific industry certifications or vendor-approved software training due to the fast pace of technological advancements. Relevant BC programs include Capilano University's Bachelor of Business Administration, focusing on business information and analytics, BCIT's Business Operations Management Diploma, and Thompson Rivers University's Computing Science Diploma, each offering essential skills in business analysis, project management, and data analysis.

Pathways

Business Analysts often start in entry-level roles like **Junior Business Analyst** or transition from positions such as **Systems Administrator** or **Quality Assurance Analyst**, progressing with experience and certifications to senior roles like S**enior Business Analyst**, **IT Director**, or even executive positions like **Chief Information Officer**.

1,363 Business Analyst job posts in BC for 2023

In Demand Technical Skills

- Data analysis and visualization
- Business process modelling
- Information systems
- Change management
- Business systems analysis
- Agile and Scrum methodologies
- Software development life cycle knowledge
- Python/R/SQL
- Project management

In Demand Soft Skills

- Communication skills
- Teamwork
- Planning
- Leadership
- Problem-solving
- Interpersonal skills
- Decision-making
- Flexibility
- Organizational skills
- Time management
- Attention to detail
- Analytical thinking

In Demand Tools & Technologies

- Microsoft Office Suite
- PowerBI/Tableau
- Project management tools (e.g., Trello, Asana, Smartsheet, etc.)
- Business process modelling tools (e.g. Microsoft Visio, Lucidchat, etc.)
- Customer Relationship Management Tools
- Enterprise Resource Planning Systems

Opportunity Profiles

First Nations Technology Council

CAD Operator

Computer-Aided Design (CAD) Operators produce technical drawings and detailed plans for engineering, construction, and manufacturing projects, drafting designs for machinery, buildings, and systems while ensuring adherence to regulatory standards and specifications. They work across sectors such as engineering, construction, manufacturing, and architecture, collaborating closely with project managers, designers, and engineers to ensure accurate and precise representations of the intended designs. Alternative titles for CAD Operators include Drafting Technician, CAD Technologist, Design Technologist, and Architectural Draftsperson.

In 2021, **3,935 people were employed** under the Government of Canada occupation group 22212 (Drafting technologists and technicians) across BC. In 2023, there were **259 job posts** for CAD Operators specifically. The main types of companies posting CAD operator jobs were utilities, design and drafting services, land surveying, engineering, and consulting. CAD Operators are concentrated primarily in the Mainland/Southwest region.

Qualifications

CAD Operators in BC typically need **technical training** and **hands-on experience**, with most employers expecting a **diploma or degree in CAD technology**, **engineering**, **or drafting**. Programs such as BCIT's CAD Technology Associate Certificate and Vancouver Island University's Integrated Engineering Technologies Diploma cover essential skills in AutoCAD, 3D modelling, and engineering design. In contrast, options like Camosun College's Engineering Graphics Technician Certificate include practical experience through internships. Additionally, the First Nations Technology Council also offers a funded CAD Certificate for eligible Indigenous learners, expanding access to CAD training. Certifications like AutoCAD and SolidWorks are also valued for those aiming to enhance their technical credentials.

Pathways

With experience, CAD Operators can advance to roles such as **Senior CAD Operators** or **Design Engineers**. With additional certifications, they may progress into senior positions like **Project Managers** or **CAD Managers**, either through traditional education or by transitioning from related fields like technical drawing or construction.

In Demand Technical Skills

- CAD Software (AutoCAD, SolidWorks)
- Technical Drawing
- Blueprint Reading
- 3D Modelling
- Geometric Dimensioning and Tolerancing (GD&T)

In Demand Soft Skills

- Attention to Detail
- Problem-Solving
- Communication
- Time Management
- Teamwork

In Demand Tools & Technologies

- AutoCAD
- SolidWorks
- MicroStation
- Geographic Information Systems
- ETAP

259

CAD Operator job posts in BC for 2023

Opportunity Profiles

First Nations Technology Council

Computer Network Technician

Computer Network Technicians are responsible for implementing, maintaining, and troubleshooting computer networks, including network configuration, performance monitoring, and ensuring network security to support an organization's IT processes. They work across diverse sectors, including healthcare, telecommunications, finance, and government, and collaborate closely with IT support teams and system administrators to maintain secure and efficient IT infrastructure.

In 2021, **7,085 people were employed** in the Government of Canada occupation group 22220 (Computer network and web technicians) across BC. In 2023, there were **189 job posts** for Computer Network Technicians in BC. The main types of companies posting network technician jobs were manufacturing, educational technology, IT services, and graphic design. Computer Network Technicians are concentrated mainly in the Mainland/Southwest region.

Qualifications

Typical education for Computer Network Technicians in BC combines **formal education** with **practical experience**. Relevant programs include BCIT's Network Administrator Technician Certificate and Camosun College's Cybersecurity & Networking Technology Diploma, which cover foundational skills in network configuration, cybersecurity essentials, and cloud systems. Programs vary in length and focus, from the five-week Network Technician program offered by the First Nations Technology Council, which is free for eligible Indigenous students, to the one-year IT and Networking Certificate at the College of New Caledonia, providing flexible pathways for learners aiming to build expertise in network infrastructure, maintenance, and security.

Pathways

Computer Network Technicians can progress to roles like **Network Engineer**, **Network Architect**, or **Senior Network Technician**, with pathways that may include formal education and certifications or transitions from adjacent IT roles, eventually leading to **senior positions in IT infrastructure** or **network management**.

In Demand Technical Skills

- Network Configuration
- Network Troubleshooting
- Wireless Networking
- IP Networking
- Security Protocols (VPN, Firewalls)

In Demand Soft Skills

- Troubleshooting
- Communication
- Teamwork
- Problem-Solving
- Attention to Detail
- Time Management

In Demand Tools & Technologies

- VMWare
- Linux
- Microsoft Active Directory
- Cloud Computing
- SQL
- Cisco Networking (Routers, Switches)
- Firewalls (Cisco ASA, Fortinet)

189 **Computer Network Technician job posts** in BC for 2023

Opportunity Profiles

First Nations Technology Council

Cybersecurity Specialist

Cybersecurity Specialists protect organizations' networks and systems from online threats by identifying vulnerabilities, stress-testing systems, and implementing security measures, requiring them to stay current on the latest threats and tactics used by malicious actors. They work across various industries, as any business with an online presence can be vulnerable to attacks, such as phishing attempts targeting employees. Cybersecurity Specialists collaborate with IT teams and organizational leadership to secure data, and their roles may also be titled Cybersecurity Analyst, Systems Analyst, or Senior Cybersecurity Analyst.

In 2021, **1,350 people were employed** in the Government of Canada occupation group 21220 (Cybersecurity specialists) across BC. In 2023, there were **167 job posts** for Cybersecurity Specialists in BC. The main types of companies posting Cybersecurity jobs were in cybersecurity, the public sector, banking, and telecommunications. Cybersecurity Specialists are concentrated primarily in the Mainland/Southwest region of BC.

Qualifications

Typical education for Cybersecurity Specialists in BC involves a **mix of formal education**, **certifications**, **and practical experience**, with most employers expecting candidates to hold a bachelor's degree in cybersecurity, information technology, or a related field. Certifications such as Certified Information Systems Security Professional (CISSP) are highly regarded; BCIT's Digital Forensics Cybersecurity Advanced Certificate and UBC's cybersecurity certificates provide foundational skills in digital forensics, ethical hacking, and risk management. The First Nations Technology Council's online cybersecurity program enables students to build essential cybersecurity expertise.

Pathways

Cybersecurity Specialists can advance into **specialized roles** like **Penetration Tester**, **Security Analyst**, or **Security Architect**, progressing to **senior management roles** such as **Chief Information Security Officer (CISO)** or **Director of Information Security**, with career pathways that may include formal education and certifications or transition from IT roles through on-the-job experience and additional certifications.

In Demand Technical Skills

- Network Security
- Information Security Management
- Ethical Hacking
- Risk Assessment
- Incident Response

In Demand Soft Skills

- Analytical Thinking
- Problem-Solving
- Attention to Detail
- Communication
- Collaboration

In Demand Tools & Technologies

- Firewalls (Palo Alto, Cisco)
- Security Information and Event Management (SIEM) systems
- Intrusion Detection Systems (IDS)
- Virtual Private Networks (VPNs)
- Encryption tools

167
Cybersecurity Specialist job posts
in BC for 2023

Career Feature

Ian Doornbosch

Ian's career journey reflects his determination to pursue his career ambitions. Today, Ian works as a Cybersecurity Analyst at the Vancouver International Airport (YVR). His work includes monitoring alerts, responding to security incidents, attending weekly meetings, and providing cybersecurity training to others in the organization, among many other tasks. However, Ian began his career journey in the manufacturing industry, making anodes for boats. He was dissatisfied working in this role, stating, *"It was pretty tough, needless to say, standing next to molten pots of metal. And I definitely wanted a change."*

Ian has a longstanding passion for technology, having built his first computer at 13. Thus, he decided to start transitioning away from the manufacturing industry and into the tech industry. Since his employer provided the opportunity to do so, Ian took several tech-related courses, such as Intro to Software Development, at the British Columbia Institute of Technology (BCIT). Ian took a break from schooling for a while until a friend motivated him to return. He was inspired to enroll in a RED Academy boot camp to study Full Stack Web and App Development. Shortly after returning, he discovered the support available to him through the Technology Council, which provided him with the financial aid and school supplies necessary for him to succeed.

Since Ian graduated in March 2020, near the onset of the COVID-19 pandemic, work opportunities were limited and difficult to find. As a result, Ian worked as a freelancer for some time, creating websites for businesses and providing other software development services. In 2023, the Technology Council approached Ian with an opportunity for a cybersecurity internship at YVR Airport. While his study area was not cybersecurity, he had always been interested in it, stating, *"It's definitely just cool. I've always been a fan of reverse engineering, especially. I tried to build my own yoyo when I was six years old or something like that. It didn't really work out for me, but I tried, right? And [cybersecurity] is also in the same vein; it's also cool to break stuff in terms of getting things to do stuff they're not supposed to."*

He accepted the internship and began working. Ian enjoyed the work and his team, stating, *"I got along swimmingly with my team. I felt a little bit of imposter syndrome, but I always felt like I was welcome there. I always had support."* After continuing his internship for some time, he was offered a cybersecurity job at YVR in March 2024, where he continues to work today.

One of the aspects of his job that surprised Ian was how non-technical it was and that many people he encountered entered the field without prior formal cybersecurity training. In fact, he emphasized that many cybersecurity professionals follow non-traditional pathways and have diverse professional backgrounds. Also, Ian highlighted that cybersecurity work provided a variety of avenues for career development. *"You can go into red teaming, and you could become the guy they pay to try to exploit their environment. Or you could go into operational technology, so securing baggage systems would be an example, stuff like that which requires computerized things. So industrial controllers and things like that. You could do secure software development, or you could be a security engineer and create security tools. You can be a security architect where you create cool frameworks and stuff like that. There are so many different fields you can go into."*

Opportunity Profiles

First Nations Technology Council

Data Analyst

Data Analysts collect, process, and analyze data to help organizations make informed decisions, using data interpretation to identify trends, write reports, and present findings to support teams, stakeholders, and other departments. They are crucial in transforming complex raw data into actionable insights that guide business strategy and operational improvements. Employed across diverse fields such as consulting, government, finance, healthcare, and technology, Data Analysts collaborate with business analysts, IT teams, and data scientists to ensure data accuracy and usability. Alternative titles for this role include Database Analyst, Database Administrator, Data Warehouse Analyst, and Data Administrator.

In 2021, **2,400 people were employed** in the Government of Canada occupation group 21223 (Database analysts and data administrators) across BC. In 2023, there were **470 job posts** for Data Analysts in BC. The main types of companies posting data analysis jobs were in the public sector, entertainment, staffing and recruitment, healthcare, e-commerce, finance, and education. Data Analysts are primarily concentrated in the Mainland/Southwest region.

Qualifications

Data Analysts in BC typically require a **strong foundation in mathematics**, **computer science**, **statistics**, and **practical experience** to meet employer expectations for this multifaceted role. Educational pathways include programs like BCIT's Applied Data Analytics Program and UFV's Data Analysis Post-Baccalaureate Certificate, which provide skills in data modelling, SQL, Python, and data visualization. For more advanced study, UBC Okanagan offers a Master of Data Science focusing on data retrieval, privacy, and cloud computing, while programs such as UVic's Population Health Data Analysis address specific analytical skills in health data. Options like the Data Analytics Certificates from the First Nations Technology Council, which offer funded access for Indigenous students, provide flexible and accessible training for individuals aiming to build expertise in data analytics across sectors.

Pathways

Data Analysts can advance to roles like **data engineering** or **data science**, progressing from junior positions to **senior data analyst** or **analytics director**. These pathways may include formal education and certifications or transitions from related fields such as business analysis or IT support.

In Demand Technical Skills

- Data Analysis
- Data Visualization
- SQL (Structured Query Language)
- Statistical Analysis
- Data Cleaning

In Demand Soft Skills

- Critical Thinking
- Problem-Solving
- Communication
- Attention to Detail
- Teamwork

In Demand Tools & Technologies

- Microsoft Excel
- SQL
- Python/R for Data Analysis
- Tableau/Power BI
- Google Analytics

470
Data Analyst job posts
in BC for 2023

Opportunity Profiles

First Nations Technology Council

Digital Marketer

Digital Marketers develop and implement online marketing strategies to promote brands and products. They handle tasks like managing digital ad campaigns, search engine optimization, web traffic analysis, social media content creation, and conversion rate optimization. They can work in-office or remotely as part of a company or freelancers. Alternative titles for Digital Marketers include Advertising Consultant, Marketing Specialist, Communications Specialist, Digital Marketing Consultant, Event Marketing Specialist, and Digital Marketing Coordinator.

In 2021, **20,420 people were employed** in the Government of Canada occupation group 11202 (Professional occupations in advertising, marketing and public relations). In 2023, there were **2,100 job posts** for Digital Marketers in BC. The main types of companies posting digital marketing jobs were in the public sector, technology, and marketing. Digital Marketers are primarily concentrated in the Mainland/Southwest region.

Qualifications

In BC, Digital Marketers typically need a **high school diploma**, **formal digital marketing education**, **experience**, or **a strong portfolio**. Programs such as the Digital Marketing Foundations Certificate at BCIT and the First Nations Technology Council's digital marketing courses for Indigenous students cover essential skills like SEO, social media strategy, and analytics. For specialized training, options like North Island College's Digital Content Production Micro-credential and UBC's Writing Skills for Digital Content Micro-certificate focus on content creation, website management, and video production. These educational pathways equip digital marketers with strategic and technical skills applicable to various digital marketing roles.

Pathways

Digital Marketers can progress from entry-level roles like **Marketing Copywriter** to mid-level positions such as **Digital Marketing Specialist** and eventually advance to senior roles like **Senior Marketing Manager**, with opportunities to specialize in areas like **SEO**, **social media marketing**, **email marketing**, or **conversion rate optimization** as they gain experience and training.

In Demand Technical Skills

- Digital Marketing
- Project management
- Customer service
- Key performance indicators
- Analytical skills
- Budgeting
- Lead generation
- Graphic design

In Demand Soft Skills

- Communication
- Teamwork
- Attention to detail
- Planning
- Writing
- Flexibility
- Working in a fast-paced setting
- Organizational skills

In Demand Tools & Technologies

- Google Analytics
- WordPress
- Google AdWords
- Adobe Photoshop
- Microsoft Excel
- Microsoft Office

2,100
Digital Marketer job posts
in BC for 2023

Opportunity Profiles

First Nations Technology Council

Drafting Technician

Drafting Technicians create technical drawings and detailed plans for manufacturing, engineering, and construction projects, translating designs from engineers and architects into blueprints that comply with regulatory standards. Their role is essential across various sectors, including manufacturing, civil and mechanical engineering, and architecture, ensuring public safety and adherence to guidelines. Drafting Technicians work closely with project managers, engineers, and architects to produce accurate, regulation-compliant designs. Similar job titles include Architectural Draftsperson, Electrical Drafter, and CAD Technologist.

In 2021, **3,935 people across BC were employed** in the Government of Canada occupation group 22212 (Drafting technologists and technicians). In 2023, there were **249 job posts** for Drafting Technicians in BC. The main types of companies posting drafting technician jobs were in the engineering and energy sectors. Drafting Technicians are primarily concentrated in the Mainland/Southwest region.

Qualifications

Drafting Technicians in BC typically need a **blend of technical training and practical experience**, with most employers expecting a **diploma or degree in CAD technology**, **engineering**, **or drafting**. Relevant programs include BCIT's Architectural and Building Technology Diploma and the Architectural Drafting Technician Program at the University of the Fraser Valley, which cover essential skills in CAD software, technical drawing, and building codes. Certifications like AutoDesk's Revit or AutoCAD and SolidWorks are highly valued, and accessible programs such as the First Nations Technology Council's CAD Certificate offer flexible, funded training for Indigenous students. These educational pathways equip Drafting Technicians with the technical proficiency needed to excel in architecture, engineering, and construction sectors.

Pathways

With experience, Drafting Technicians can progress to roles like **Senior Drafting Technician** or **Design Engineer**. With additional certifications and experience, they may advance into senior positions like **Project Manager**, either through traditional education or by transitioning from related fields like construction or design.

In Demand Technical Skills

- Technical Drawing
- CAD Software (AutoCAD, Revit)
- Blueprint Reading
- 3D Modeling
- Geometric Dimensioning and Tolerancing (GD&T)

In Demand Soft Skills

- Attention to Detail
- Problem-Solving
- Communication
- Time Management
- Teamwork

In Demand Tools & Technologies

- AutoCAD
- Revit
- SolidWorks
- MicroStation
- 3D Printing Technologies

249

Drafting Technician job posts in BC for 2023

Opportunity Profiles

First Nations Technology Council

Electronic Service Technician

Electronic Service Technicians assemble, install, and troubleshoot various electronic devices for homes, businesses, and field environments. They handle tasks like testing, diagnosing, and repairing items like computers and A/V systems. They often interact with customers to provide cost estimates and support, working across manufacturing, telecommunications, utilities, and retail industries. Alternative titles for this role include Alarm Systems Technician, Audio/Visual Services Technician, Computer Services Technician, Household and Business Equipment Technician, and Security Systems Technician.

In 2021, **7,260 people were employed** under NOC 22311 (Electronic service technicians). In 2023, there were **477 job posts** for Electronic Service Technicians in BC. The main types of companies posting electronic technician jobs were in retail, utilities, security, and consumer electronics. Electronic Service Technicians are primarily concentrated in the Mainland/Southwest region.

Qualifications

Electronic Service Technicians in BC typically need **secondary education**, **relevant work experience**, **and may require a driver's license for fieldwork**. While some employers accept entry-level experience alone, certificates or diplomas give applicants an advantage. Aspiring Electronic Service Technicians can pursue diplomas such as BCIT's Electronics Technology Diploma, which provides comprehensive training in circuit analysis, programming, and industrial controls, or North Island College's Instrumentation and Electrical Automation Technician Diploma, which includes industrial electronics and circuit analysis. There are also shorter-term credentialing options, such as the Electronics Certificate at the University of the Fraser Valley, which focuses on diagnostics and circuitry, or the First Nations Technology Council's Networking Technology Certificate, which combines electronics with networking skills.

Pathways

Electronic Service Technicians can advance by specializing in areas like **computer services** or **IT support**, progressing to **supervisory** or **project management** roles. They may further expand their career options by obtaining Red Seal certification as an **Industrial or Construction Electrician**.

In Demand Technical Skills

- Repairs/Corrective Maintenance
- Machinery/Equipment Repairs
- Technical Support
- Report Preparation
- Blueprint Reading
- Installation of Machinery/ Equipment
- Project Management
- Documentation

In Demand Soft Skills

- Customer Service
- Troubleshooting
- Communication
- Flexibility
- Teamwork
- Organizational Skills
- Attention to Detail
- Interpersonal Skills
- Time Management

In Demand Tools & Technologies

- Microsoft Office
- CCTV Systems
- CSS (Cascading Style Sheets)
- PLC (Programmable Logic Controllers)
- TCP/IP (Transmission Control Protocol/Internet Protocol)

477 **Electronic Service Technician job posts** in BC for 2023

Opportunity Profiles

First Nations Technology Council

Finance and Accounting Technician

Finance and Accounting Technicians manage financial records, reconcile accounts, prepare financial statements, process payroll, and handle tax-related tasks such as preparing tax returns and submitting government forms. They may work in offices or remotely, either for businesses or as self-employed professionals, with duties that vary depending on company size—larger firms may focus their role on bookkeeping, while smaller firms may require broader responsibilities. As technology advances, staying updated on tools like mobile apps, accounting software, and cloud databases is essential for efficiency. Alternative titles for this role include Accounting Bookkeeper, Accounting Technician, Bookkeeper, and Finance Technician.

In 2021, **24,080 people were employed** in the Government of Canada occupation group 12200 (Accounting technicians and bookkeepers). In 2023, there were **302 job posts** for Finance and Accounting Technicians in BC. The main types of companies posting finance technician jobs were in accounting and professional services, forestry, and the public sector. Finance and Accounting Technicians are concentrated mainly in BC's Mainland/Southwest region.

Qualifications

In BC, while no specific license is required to work as a Finance and Accounting Technician, employers often seek candidates with **hands-on experience**, which can be gained through co-op programs, volunteer work, or similar roles. **Educational programs** such as the Accounting Certificate at the University of the Fraser Valley or Kwantlen Polytechnic University equip students with foundational skills in management accounting, tax preparation, and financial management. North Island College's Computing Accounting Assistant Certificate focuses on practical software skills in Excel and Access, while the College of New Caledonia offers a more comprehensive Accounting and Finance Diploma that includes business law, economics, and computer applications, providing well-rounded training for aspiring technicians.

Pathways

Finance and Accounting Technicians can advance into roles like **Payroll Specialists** or **Financial Analysts**, with opportunities for senior positions, by obtaining professional designations such as **CPA**, **CMA**, **CFP**, or **CFA**, which broaden their career options and potential for advancement.

In Demand Technical Skills

- Accounting
- Customer service
- Financial reporting
- Records management
- Report preparation
- General ledger
- Event planning
- Auditing

In Demand Soft Skills

- Teamwork
- Attention to Detail
- Communication
- Flexibility
- Organizational skills
- Interpersonal skills
- Decision making
- Time management

In Demand Tools & Technologies

- Microsoft Excel
- Microsoft Word
- Accounting software
- Microsoft Office
- Intuit QuickBooks
- Sage
- Microsoft Outlook

302 **Finance and Accounting Technician job posts** in BC for 2023

Opportunity Profiles

First Nations Technology Council

Forestry Technician

Forestry Technicians use surveying, mapping, and technology skills to manage forest health, including preparing sites for planting, harvesting trees, taking inventory, and managing pests and forest fires. They may work in private and public sectors, such as forestry companies, consulting firms, government agencies, and research facilities, often spending significant time outdoors or in field camps. However, some also work in offices or labs. Alternative job titles include Conservation Technician, Cruising Technician, Enforcement Officer, Extension Ranger, Fire Suppression Officer, and Forest Fire Technician.

In 2021, **2,225 people were employed** in the Government of Canada occupation group 22112 (Forestry technologists and technicians). In 2023, there were **39 job posts** for Forestry Technicians in BC. The main types of companies posting forestry technician jobs were in the forestry services, social services, and the public sector. Forestry Technicians are primarily concentrated in BC's Vancouver Island/Coast, Thompson Okanagan, and Cariboo regions.

Qualifications

In BC, Forestry Technicians need a **two-year college program in forestry technology**, **renewable resources**, **or a forest ranger program**, along with **registration through the Association of BC Forest Professionals** (ABCFP) as a **Trainee Forest Technologist** (TFT) or **Allied Science Trainee Forest Technologist** (ASTFT). This registration requires completing core competency training, a 24-month articling period, and passing the RFT registration exam. Relevant programs, such as the Environmental Resources Technology Certificate from Nicola Valley Institute of Technology and the Applied Environmental Science and Planning Technology Diploma from Selkirk College, cover essential skills in GIS, mapping, ecology, and resource management, while the First Nations Technology Council offers accessible training in GIS/GPS mapping and drone stewardship for Indigenous students.

Pathways

Experienced Forestry Technicians can progress to **supervisory** or **managerial roles** overseeing field crews and projects. With additional education, they may transition to **specialist** or **consultant positions**, advising businesses, governments, and research institutions on forestry practices.

In Demand Technical Skills

- Project management
- First aid
- Public relations
- Auditing
- Budgeting
- Customer service
- Teaching and training
- Reports preparation
- Occupational health and safety

In Demand Soft Skills

- Teamwork
- Communication
- Planning
- Decision-making
- Interpersonal skills
- Leadership
- English language
- Time management
- Flexibility

In Demand Tools & Technologies

- GIS systems
- CSS
- Microsoft Excel
- Microsoft Office
- Microsoft Word
- Microsoft PowerPoint
- LIDAR systems
- ESRI ArcGIS software
- Mapping software
- Python

39 **Forestry Technician job posts** in BC for 2023

Opportunity Profiles

First Nations Technology Council

Geographic Information System (GIS) Technician

GIS Technicians use technology to gather, analyze, and apply geospatial information for fields such as geology, land use planning, and environmental research. They develop customized GIS applications to manage data, address system compatibility, and transfer information efficiently. They combine GIS software with spreadsheets and statistical tools, perform data entry and system maintenance, and are employed by governments, utilities, engineering, and consulting firms. Alternative job titles include Mapping Technician, Aerial Survey Technician, GIS Data Technician, GIS Technologist, and Remote Sensing Technician..

In 2021, **1,740 people were employed** in the Government of Canada occupation group 22214 (Aerial survey and remote sensing technologists and technicians). In 2023, there were **55 job posts** for GIS Technicians in BC. The main types of companies posting GIS technician jobs were consulting services and the public sector. GIS Technicians are primarily concentrated in the Mainland/Southwest region.

Qualifications

GIS Technicians in BC typically need to **complete secondary school** and a **college program in geomatics**, **cartography**, **remote sensing**, or **GIS**. Programs such as the GIS Certificate at the University of the Fraser Valley provide training in geospatial data management and software skills, while BCIT's Bachelor of Technology in GIS focuses on software design, data analysis, and GIS customization. For Indigenous students, the First Nations Technology Council offers GIS/GPS Mapping programs that cover GIS analysis and project plan development. Additionally, the University of Victoria's Geomatics Bachelor of Science program integrates GIS tools with GPS and satellite imagery, preparing students for roles in geospatial technology and data analysis across various sectors.

Pathways

GIS Technicians can advance to roles such as **GIS Analyst** or **GIS Developer** with further training in programming and data analysis, and with experience and additional credentials, they may move into management positions like **GIS Manager** or **GIS Coordinator**, overseeing projects for government and business sectors.

In Demand Technical Skills

- Information systems
- Data analysis
- Project management
- Analytical skills
- Quality assurance
- Customer service
- Technical support
- Research skills

In Demand Soft Skills

- Planning
- Communication
- Teamwork
- Attention to detail
- Organizational skills
- Flexibility
- Decision-making
- Time management

In Demand Tools & Technologies

- GIS systems
- EMR systems
- ESRI ArcGIS software
- Python
- Autodesk AutoCAD

55 **GIS Technician job posts** in BC for 2023

Career Feature

Angela D'Amato Van Den Hout

Angela's career journey is marked by a dedication to community that has helped her navigate the job market without compromising her core values. Today, Angela is the CEO of Blueberry River Restoration Society, where she manages one of the largest provincial trusts in British Columbia's history in service of Blueberry River First Nations. Her focus is on responsible trust management and the establishment and management of a $200M cultural and ecological restoration program, expected to span a minimum of 10 years.

Angela began her career as an executive assistant in the mining industry. This role exposed Angela to high-level operations and allowed her to attend industry conferences on behalf of her employer. A pivotal moment occurred when she attended a workshop organized by the Prospectors and Developers Association of Canada (PDAC). This experience sparked a strong interest in environmental sustainability and the intersection of mining with environmental change. Motivated by this new interest, Angela returned to school at the University of British Columbia, earning a BA in Environment and Sustainability, with a particular focus on the impacts of climate change in northern climates.

After completing her degree, Angela continued working in the mining industry, where she transitioned into work as a GIS (Geographic Information Systems) analyst. This role involved analyzing and managing geographic data crucial to mining operations, particularly for exploration projects. During this time, Angela became increasingly involved in First Nations relations within the industry, serving as a GIS analyst and a First Nations liaison.

In her role, Angela learned the importance of transparency and accuracy in representing geographic information, especially within an industry where data can sway stock prices or influence the course of large-scale resource development projects. Eventually, driven by her personal connection to Indigenous history and its influences on today's communities, Angela shifted her career focus toward supporting Indigenous communities more directly.

"I really started to gain some momentum around the idea that I felt I was serving on the wrong side of those negotiations. [...] Here I was speaking on behalf of the mining company trying to make things better, but what's the impact there? At best I'm doing something good for the mining company and maybe a Nation or a couple, but if I moved to the other side of the table and actually started supporting Nations in their negotiations with mining companies, what's the impact there? Right? And that's where I really add value — in Indigenous environments, not in the corporate environment."

She recognized the imbalance in the mining industry's engagement with Indigenous groups at the time and became an advocate for building respectful, mutually beneficial relationships between Indigenous communities and mining companies. Angela eventually fully transitioned her career to support Indigenous communities exclusively, helping them negotiate with industries, start businesses, and advance economic and community-building initiatives.

Opportunity Profiles

First Nations Technology Council

Graphic Designer

Graphic Designers create visual content to convey messages, utilizing elements like imagery, colour theory, layout, and typography to develop designs for print and digital media, including logos, brochures, websites, and social media graphics. They collaborate with clients or teams to align designs with project goals, target audiences, and branding guidelines, translating these needs into creative concepts that achieve the desired impact. Graphic Designers may also work under titles such as Graphic Artist, Digital Designer, or Brand Designer, with skills that often overlap with UX/UI Designers and Web Designers.

In 2021, **15,095 people were employed** in the Government of Canada occupation group 52120 (Graphic designers and illustrators) across BC. In 2023, there were **448 job posts** for Graphic Designers in BC. The main types of companies posting graphic design jobs were in visual effects and animation, retail, and printing services. Graphic Designers are primarily concentrated in the Mainland/Southwest region.

Qualifications

In BC, Graphic Designers often rely on **professional experience** and a **strong portfolio** rather than specific credentials; however, several **educational programs help build essential design skills** and familiarity with industry-standard tools. Programs like Selkirk College's Digital Arts Diploma provide a comprehensive foundation in graphic design, motion graphics, and web design, while BCIT's Graphic Design Foundations Certificate focuses on Adobe Creative Cloud and client communication. Okanagan College offers a Graphic Design Essentials Micro-credential for shorter-term options, and the First Nations Technology Council provides free UX/UI design and CAD certifications for Indigenous students, emphasizing human-centric design and digital asset creation. These pathways help aspiring designers develop the technical and creative skills needed to thrive in diverse design roles.

Pathways

Graphic Designers can advance to senior roles such as **Senior Graphic Designer**, **Art Director**, or **Creative Director**, with options to specialize in **UX/UI or web design** to enhance their technical skills or transition into **communications strategy** to leverage their understanding of audience needs and brand messaging.

In Demand Technical Skills

- Graphic design
- Customer service
- Project management
- UI design
- Web design
- Digital Marketing
- Video editing
- Public relations

In Demand Soft Skills

- Teamwork
- English language
- Attention to detail
- Communication
- Working in a fast-paced setting
- Working under pressure
- Self-motivated
- Interpersonal skills

In Demand Tools & Technologies

- Adobe Photoshop
- Microsoft Office
- Adobe Creative Suite
- Adobe Illustrator
- WordPress
- Microsoft PowerPoint

448
Graphic Designer job posts
in BC for 2023

Opportunity Profiles

First Nations Technology Council

Help Desk Technician

Help Desk Technicians provide frontline technical support, diagnosing and resolving technical issues while maintaining records and delivering patient customer service, acting as the first point of contact for users experiencing technical difficulties. They play a vital role in a business's IT infrastructure by ensuring positive user experiences and work across various industries, such as technology, government, education, and healthcare. Help Desk Technicians collaborate with IT teams and administrators to ensure quick issue resolution and user satisfaction. Alternative titles include Help Desk Analyst, Client Support Representative, and Technical Support Agent.

In 2021, **6,715 people were employed** in the Government of Canada occupation group 22221 (User support technicians) across BC. In 2023, there were **66 job posts** for Help Desk Technicians in BC. The main types of companies posting help desk technician jobs were IT services, telecommunications, education, and retail/food services. Help Desk Technicians are primarily concentrated in the Mainland/Southwest region.

Qualifications

Help Desk Technicians in BC typically need a **blend of technical education and customer service experience**, with **programs like BCIT's Technology Support Professional Program** and **NEC's IT Support Technician Certificate** offering essential skills in network creation, troubleshooting, cloud computing, and security. These programs range from 24 to 40 weeks and provide hands-on experience in managing IT infrastructure and assisting users with technical issues, while options like the College of New Caledonia's IT and Networking Certificate offer comprehensive installation and network configuration training. Additionally, the First Nations Technology Council offers a Networking Technology Certificate for Indigenous students, supporting accessibility to the field with targeted training and funded opportunities.

Pathways

Help Desk Technicians have varied career pathways, with many transferable skills enabling them to advance to senior roles like **IT Support Manager** or specialize further, aided by certifications and experience; they may follow traditional educational routes or transition from non-technical roles like customer service.

In Demand Technical Skills

- Technical Support
- Troubleshooting
- Analytical Skills
- Quality Assurance
- SQL
- Active Directory
- Linux

In Demand Soft Skills

- Communication
- Problem-Solving
- Customer Service
- Teamwork

In Demand Tools & Technologies

- Operating Systems (Windows, MacOS)
- JavaScript
- HTML
- Cisco
- VMWare

66

Help Desk Technician job posts in BC for 2023

Opportunity Profiles

First Nations Technology Council

Indigenous Support Worker

Indigenous Support Workers provide culturally sensitive advocacy and assistance tailored to Indigenous individuals and communities, addressing mental and physical health needs, housing, education, and employment and delivering social assistance programs. They often work in settings like social service agencies, mental health organizations, shelters, and schools. They integrate cultural, spiritual, and historical contexts into their work, coordinate community outreach, promote wellness through traditional healing practices, and collaborate with Elders and community leaders to tackle issues such as poverty, trauma, and systemic inequality. Additionally, they handle crisis intervention, develop action plans, and manage records for program evaluation. Indigenous support workers require digital skills for database management, data analysis, and specialized software.

In 2021, 28,760 people were employed in the Government of Canada occupation group 42201 (Social and community service workers) across BC. In 2023, there were 868 job posts for Indigenous Support Workers in BC. The main types of companies posting Indigenous support worker jobs were in community and social services. Indigenous Support Workers are primarily concentrated in the Mainland/Southwest region.

Qualifications

In BC, Indigenous Support Workers typically need a college or university program in social work, child and youth care, Indigenous studies, psychology, or a related field. Okanagan College's Social Service Worker Certificate or College of New Caledonia's Indigenous Community Support Worker Certificate provides foundational skills for working in social services and includes practical experience in community organizations. Some roles may also require workers to be registered with the British Columbia College of Social Workers.

Pathways

Advancement in this career path requires ongoing professional development and strong community relationships, with opportunities to transition into senior roles like Indigenous Program Manager or Indigenous Policy Advisor or professional social services roles like a social worker or counsellor.

868 **Indigenous Support Worker job posts** in BC for 2023

In Demand Technical Skills

- Client management
- Database management
- Process design
- Budgeting and accounting
- Data analysis
- Reports preparation
- Inventory management
- Project management
- Records management

In Demand Soft Skills

- Customer service
- Communication
- Attention to detail
- Organizational skills
- Interpersonal skills
- Flexibility
- Teamwork

In Demand Tools & Technologies

- Microsoft Office Suite
- Video conferencing tools
- Intuit QuickBooks
- CRM and Case Management Software
- Sage
- Telehealth platforms
- Digital libraries and cultural resources

Opportunity Profiles

First Nations Technology Council

IT Technical Project Manager

IT Technical Project Managers are responsible for overseeing the planning, implementation, and successful delivery of technical projects within organizations. They manage timelines, budgets, and team coordination to ensure projects meet deadlines and technical requirements. They operate across various industries, including technology, healthcare, telecommunications, and government, and their role requires strong communication skills as they collaborate closely with IT support teams, executives, network engineers, and software developers to achieve project goals.

In 2021, **10,375 people were employed** in the Government of Canada occupation group 20012 (Computer and information systems managers) across BC. In 2023, there were **92 IT Technical Project Managers job posts** in BC. The main types of companies posting technical project management jobs were staffing and recruitment, utilities, healthcare, the public sector, and telecommunications. IT Technical Project Managers are primarily concentrated in the Mainland/Southwest region.

Qualifications

IT Technical Project Managers in BC generally need a **blend of formal education in information technology or computer science and hands-on project management experience**. Relevant programs include BCIT's Bachelor of Technology in Technology Management, which covers project management, IT systems, and finance principles, providing a strong foundation for technical project leadership. Certifications like Certified ScrumMaster (CSM) from Scrum Alliance and the Product Management Certificate offered by the First Nations Technology Council are valuable for building expertise in Agile and Lean methodologies, conflict resolution, and cross-functional teamwork. These programs equip IT Technical Project Managers with essential skills to lead complex projects across various industries.

Pathways

IT Technical Project Managers can advance to executive roles such as **Chief Information Officer**, **Chief Technology Officer**, or **IT Director** and may also transition into **strategic consulting**. Career pathways include formal project management education and certifications or transitions into technical roles like **software development** or **network administration**.

In Demand Technical Skills

- Project Management
- Enterprise Resource Planning
- Cloud Computing
- SAP
- IT Infrastructure Knowledge

In Demand Soft Skills

- Leadership
- Communication
- Problem-Solving
- Time Management
- Teamwork

In Demand Tools & Technologies

- JIRA
- Agile Software Development
- Budgeting Tools (Excel, Power BI)
- Scrum
- Risk Management Software

92

IT Technical Project Managers job posts in BC for 2023

Opportunity Profiles

First Nations Technology Council

Lab Technician

Lab Technicians are responsible for receiving, processing, and analyzing samples in environmental science, public health, mining, and the chemical and pharmaceutical industries. Their tasks include setting up and conducting experiments, operating laboratory equipment, preparing solutions, and maintaining records for analytical studies. They also ensure quality standards by developing sampling and analysis programs and handling administrative duties, such as documentation and managing orders. Lab Technicians provide technical support across diverse fields, including oil and gas, geophysics, mining, chemical research, industrial chemistry, quality control, and environmental protection.

In 2021, **830 people were employed** in the Government of Canada occupation group 22100 (Chemical technologists and technicians), and **990 people were employed** in 22101 (Geological and mineral technologists and technicians) across BC. In 2023, there were **101 job posts for Lab Technicians in BC**. The main types of companies posting lab technician jobs were in healthcare, testing and analytical services, and research. Lab Technicians are primarily concentrated in the Mainland/ Southwest region.

Qualifications

In BC, Lab Technicians **typically need a college diploma in geological technology**, **mining**, **chemical or environmental technology**, with **some opting for a university degree**. Relevant programs, such as BCIT's Mineral Exploration and Mining Technology and Chemical and Environmental Technology diplomas, provide instrumental analysis, organic chemistry, and geology training. The Certified Technician (CTech) designation offered by ASTTBC requires two years of industry experience and completion of an accredited program, along with ongoing fees for registration and renewal. Programs like the Environmental Resource Technician Certificate at Nicola Valley Institute of Technology equip students with skills in GIS mapping, ecology, and Indigenous perspectives, while Camosun College's Applied Chemistry and Biotechnology Diploma builds a foundation in modern biotechnology techniques.

Pathways

Lab Technicians typically begin as **Lab Assistants** or **Junior Lab Technicians**, advancing to **full Lab Technician roles** and potentially to **managerial positions** with experience. While mobility varies within the field, additional certifications can support career progression to **senior or executive roles**.

In Demand Technical Skills

- Quality assurance
- Occupational health and safety
- Analytical skills
- Data analysis
- Records management
- Reports preparation
- Equipment cleaning and maintenance
- Process design
- Instrumentation skills
- Current Good Manufacturing Practice (GMP/cGMP)

In Demand Soft Skills

- Attention to detail
- Teamwork
- Ability to work in a fast-paced setting
- Communication skills
- Flexibility
- Leadership
- Organizational skills
- Self-starter
- Troubleshooting
- Working under pressure
- Problem-solving

In Demand Tools & Technologies

- Laboratory Information Management Systems (LIMS)
- Spectrometers
- Titrators
- Material Safety Data Sheets (MSDS)
- Inclinometers
- Navigation equipment
- Water baths
- Analytical balances
- Conductivity meters

Opportunity Profiles

First Nations Technology Council

Office Administrator

Office Administrators ensure the smooth operation of an organization by managing various administrative tasks such as scheduling, document preparation, record-keeping, budgeting, project management, and inventory control. They collect and analyze data, prepare reports, oversee budgets, handle basic financial tasks like invoicing and payroll, order supplies, and liaise with vendors. Additionally, they may organize events, arrange travel, and facilitate communication among leadership, staff, and stakeholders. Comparable titles include Administrative Officer, Administrative Assistant, Office Manager, and Records Analyst.

In 2021, **35,185 people were employed** in the Government of Canada occupation group 13100 (Administrative officers) across BC. In 2023, there were **3,967 job posts** for Office Administrators in BC. The main types of companies posting office administration jobs were in financial services, healthcare, automotive repair, retail, recruitment and staffing, and the public sector. Office Administrators are primarily concentrated in the Mainland/Southwest region.

Qualifications

In BC, Office Administrators **generally need a high school diploma**, although **many employers prefer additional education** such as a **diploma**, **certificate**, **or degree in office**, **business**, **or public administration**. Relevant programs, like BCIT's Office Administrator with Technology Certificate and Douglas College's Office Administration Diploma, provide essential skills in business technology, bookkeeping, organizational management, and communication. For career advancement, certifications like the Canadian Certified Administrative Professional (CCAP) designation from the Association of Administrative Professionals can be beneficial, requiring a combination of experience, coursework, and validation of core competencies.

Pathways

Office Administrators often begin in roles like **receptionist** or **administrative assistant**, progressing to positions such as **Office Manager**, **Executive Assistant**, or **Administrative Officer** with experience and education, and advancing to roles like **Operations Manager** or **Administrative Services Manager**. They can achieve roles like **Chief Operations Officer** (COO) at the executive level, especially with an MBA or advanced leadership training.

3,967 **Office Administrator job posts** in BC for 2023

In Demand Technical Skills

- Customer service
- Process design
- Budgeting, accounting and invoicing
- Reports preparation
- Data entry and management
- Document management and organization
- Task and workflow management
- Records management
- Scheduling

In Demand Soft Skills

- Communication
- Attention to detail
- Organizational skills
- Interpersonal skills
- Flexibility and adaptability
- Teamwork and collaboration
- Ability to work under pressure
- Time management
- Multi-tasking and coordination
- Discretion and confidentiality

In Demand Tools & Technologies

- Microsoft Office Suite
- Project management software
- Accounting software (e.g. Intuit QuickBooks)
- Filing systems
- Sage
- Customer Relationship Management software
- Enterprise Resource Planning software
- Adobe Photoshop
- HTML5, CSS3 and/or WordPress

Opportunity Profiles

First Nations Technology Council

Pay and Benefits Administrator

A Pay and Benefits Administrator manages payroll and benefits processing, handling tasks such as maintaining employee records, calculating pay and entitlements, preparing earnings statements, and processing various payroll-related payments. They ensure the accurate administration of benefits, prepare tax statements, records of employment, and other required filings while also resolving payroll discrepancies and providing payroll information within their organization. They often develop technology-related skills in data entry, analysis, and software use, including payroll systems, HR information systems, and cybersecurity practices to safeguard employee data. Pay and Benefits Administrators are employed across finance and HR departments in diverse industries, with alternative titles like Payroll Officer, Benefits Officer, and Pay Advisor.

In 2021, **5,615 people were employed** in the Government of Canada occupation group 13102 (Payroll administrators) across BC. In 2023, there were **296 job posts for Pay and Benefits Administrators in BC**. The main types of companies posting Pay and Benefits Administrator jobs were in healthcare, recruitment and staffing, facilities management, and construction. Pay and Benefits Administrators are primarily concentrated in BC's Mainland/Southwest region.

Qualifications

To become a Pay and Benefits Administrator in BC, candidates **typically need a high school diploma**, **a college-level course in accounting**, **payroll**, **or bookkeeping**, **or relevant experience in administrative or financial support roles**. Professional certifications, such as the Payroll Compliance Practitioner (PCP), are commonly required by employers, with advanced certifications like Payroll Leadership Professional (PLP) or Certified Payroll Manager (CPM) aiding career progression. Programs like BCIT's Payroll Administration Certificate cover essential skills in payroll compliance, accounting, and human resources, while Douglas College offers pathways for PCP and PLP certifications, developing proficiency in payroll calculations, compliance legislation, and management skills.

Pathways

With experience and certifications, Pay and Benefits Administrators can advance to **supervisory roles** or transition into related positions like **Human Resources Officer**, **Employment Insurance and Revenue Officer**, or **Finance Supervisor**. Further progression leads to managerial roles such as **Pay and Benefits Manager** or **Compensation and Benefits Director**.

In Demand Technical Skills

- Accounting mathematics
- Analytical skills
- Records management
- Report preparation
- Data analysis
- Financial reporting
- Monitoring
- Office Administration
- Data entry
- Auditing
- Budgeting

In Demand Soft Skills

- Communication
- Attention to detail
- Customer service
- Teamwork
- Time management
- Organizational Skills
- Problem-solving
- Active listening
- Reading comprehension
- Critical thinking
- Decision-making

In Demand Tools & Technologies

- Filing systems
- Microsoft Office Suite
- Ceridian / Payroll software
- Sage
- HRIS (e.g., Oracle)
- ERP software
- Intuit QuickBooks

Opportunity Profiles

First Nations Technology Council

Product Manager

Product Managers lead cross-functional teams in product design, strategy development, implementation, and delivery, ensuring products meet end-user needs and align with business goals. They work across various industries, including technology, retail, finance, and manufacturing, collaborating closely with marketing, engineering, and sales teams to deliver quality products on schedule. Alternative titles for Product Managers include Computer Systems Manager, Systems Manager, and Data Centre Manager.

This job title is found across two different Government of Canada occupation groups. Across BC, **10,375 people are employed** in the Government of Canada occupation group 20012 (Computer and information systems managers), and **3,830 were employed** in 21221 (Business systems specialists). In 2023, there were **60 job posts** for Product Managers in BC. The main types of companies posting product management jobs were in e-commerce, financial services, and educational technology. Product Managers are primarily concentrated in the Mainland/Southwest region.

Qualifications

Product Managers in BC **typically need formal education combined with relevant industry experience**. They often hold a **certificate**, **diploma**, **or degree in fields like marketing or technology or specialized certification in product management**. Programs like UBC Sauder's Product Management Certificate and BCIT's Bachelor of Technology in Technology Management provide skills in product lifecycle management, prototyping, and IT systems. Additionally, certifications like ScrumMaster (CSM) from Scrum Alliance enhance team coordination and Agile methodologies.

Pathways

Product Managers can advance to roles such as **Senior Product Manager** or **Director of Product Management** and, with sufficient experience, can move into executive positions like **Chief Product Officer** (CPO), either through traditional education and certifications or by transitioning from related fields like marketing, engineering, or business analysis.

In Demand Technical Skills

- Cloud Computing
- Enterprise Resource Planning
- Artificial Intelligence
- Data Analytics
- Budgeting
- Process Design
- Operations Management

In Demand Soft Skills

- Leadership
- Communication
- Problem-Solving
- Critical Thinking
- Team Collaboration

In Demand Tools & Technologies

- JIRA
- Enterprise Resource Planning (ERP) Systems
- SQL
- Tableau
- Linux
- Amazon Web Services

60
Product Manager job posts
in BC for 2023

Opportunity Profiles

First Nations Technology Council

Project Manager (Non-Technical)

Non-technical Project Managers oversee projects such as organizational change, event planning, marketing, HR, and business operations by coordinating activities, managing budgets, and maintaining schedules to ensure timely and compliant project delivery. Related job titles include Projects Officer, Project Coordinator, Project Leader, and Administrative Planning Officer.

In 2021, 35,185 people were employed in the Government of Canada occupation group 13100 (Administrative officers) across BC. In 2023, there were 69 job posts for Non-technical Project Managers in BC. The main types of companies posting non-technical project management jobs were in utilities, construction, technology, and the public sector. Non-technical Project Managers are primarily concentrated in the Mainland/Southwest region.

Qualifications

INon-technical Project Managers in BC generally require secondary chool completion and often a college diploma or university degree in business or public administration. While the occupation is unregulated, some employers may prefer candidates with project management certifications, such as the CAPM or PMP offered by the Project Management Institute. Programs like UNBC's Project Management Core Certificate and SFU's Project Management Certificate provide essential leadership, budgeting, and scheduling skills. Other relevant programs, such as UFV's Business Administration Diploma, provide foundational marketing, accounting, and management knowledge.

Pathways

Non-technical Project Managers often start in roles like administrative assistant or project coordinator and progress to Junior Project Manager or Assistant Project Manager. With experience and certifications, they advance to positions like Program Manager or Portfolio Manager and eventually, with additional training, to executive roles such as Director of Operations.

69 **Project Manager (Non-Technical) job posts** in BC for 2023

In Demand Technical Skills

- Budgeting
- Process design
- Inventory management
- Data analysis
- Reports preparation
- Resource allocation
- Teaching and training
- Office Administration
- Planning and scheduling
- Writing
- Gantt charts
- Risk management

In Demand Soft Skills

- Interpersonal skills
- Communication skills
- Organizational skills
- Flexibility
- Attention to detail
- Working under pressure
- Teamwork
- Time management
- Multi-tasking
- Supervisory skills

In Demand Tools & Technologies

- Microsoft Office Suite
- Project management software (e.g., Asana, Trello)
- Time tracking and resource management software
- Budgeting and financial tools
- Database software (e.g., PowerBI)
- Agile or Scrum tools
- Gantt Chart tools
- CRM software
- Human resources software

Opportunity Profiles

First Nations Technology Council

System Administrator

System Administrators manage the daily operations of an organization's computer systems and networks, handling tasks such as installing, configuring, and maintaining IT infrastructure to ensure reliability and security. They play a crucial role in supporting the organization's technology backbone, working closely with network engineers, cybersecurity specialists, and IT support teams across industries like technology, government, finance, and education. Alternative titles for this role include Application System Administrator, System Network Administrator, and Network Administrator.

In 2021, **7,085 people were employed** in the Government of Canada occupation group 22220 (Computer network and web technicians) across BC. In 2023, there were **309 job posts** for System Administrators in BC. The main types of companies posting system administration jobs were in staffing and recruitment, education, software and technology, and the public sector. System Administrators are primarily concentrated in the Mainland/Southwest region of BC.

Qualifications

Typical education for System Administrators in BC includes a **combination of formal education and hands-on experience**, with **employers generally requiring a diploma or degree in information technology**, **computer science**, **or a related field**. Programs like BCIT's Computer Information Systems Administrator (CISA) program and Vancouver Island University's Systems Administration and Networking Diploma cover essential skills in network routing, operating systems, and cloud systems. Longer programs, like the University of Northern BC's Management Information Systems degree, provide a broader education that includes data visualization and technology implementation. The Networking Technology Certificate from the First Nations Technology Council offers targeted networking technology training for Indigenous students.

Pathways

System Administrators can advance to **specialized roles in cloud or network administration and IT management**, progressing from junior positions like **IT Support Specialist** to senior roles such as **Senior System Administrator**, **IT Manager**, or **IT Director**, with pathways that may include formal education and certifications or transition from technical support roles through experience and targeted certifications.

In Demand Technical Skills

- System Administration (Windows/Linux)
- Network Administration
- Virtualization (VMware, Hyper-V)
- Cloud Computing (AWS, Azure)
- Scripting (PowerShell, Bash)

In Demand Soft Skills

- Problem-Solving
- Communication
- Attention to Detail
- Time Management
- Teamwork

In Demand Tools & Technologies

- Microsoft Active Directory
- VMware/Hyper-V
- Microsoft Exchange
- Cisco
- Routers
- Backup and Recovery Solutions
- Monitoring Tools

309

System Administrator job posts in BC for 2023

Opportunity Profiles

First Nations Technology Council

Technical Support Specialist

Technical Support Specialists assist customers and end-users struggling with hardware, software or technical issues. Their role involves diagnosing errors, troubleshooting, and providing solutions to users. Technical Support Specialists work in a wide range of industries, including but not limited to technology, finance, and retail. Further, they work closely with network and system administrators and IT teams to ensure that service and technical problems are quickly resolved for users.

In 2021, **6,715 people across BC were employed** under NOC 22221 (User support technicians). In 2023, there were **202 job posts** for Technical Support Specialists in BC. Technical Support Specialists are primarily concentrated in the Mainland/Southwest region.

Qualifications

Education for Technical Support Specialists in BC typically combines **formal training and practical experience**, with many employers looking for **education in IT or related fields**. Programs like BCIT's Technology Support Professional Program and the NEC's IT Support Technician Certificate offer foundational skills in network configuration, troubleshooting, and cloud computing, providing pathways for new professionals. Options like the First Nations Technology Council's Networking Technology Certificate for Indigenous Peoples also allow professionals to enhance their qualifications and signal technical proficiency to employers.

Pathways

Technical Support Specialists can advance by specializing in areas like **systems administration**, **cybersecurity**, or **network support**, progressing from entry-level roles such as **Help Desk Technician** to senior positions like **IT Support Manager** or **Systems Administrator**, with career pathways that may include formal education and certifications or transitions from customer service roles through experience.

In Demand Technical Skills

- VMWare
- Linux
- Microsoft Active Directory
- Cloud Computing
- SQL
- Cisco
- Amazon Web Services

In Demand Soft Skills

- Troubleshooting
- Communication
- Customer Service
- Teamwork
- Problem-Solving
- Planning
- Flexibility

In Demand Tools & Technologies

- Routers
- Network Switches
- Intrusion Detection Systems
- Imaging Systems
- Access Control Systems

202 **Technical Support Specialist job posts** in BC for 2023

Career Feature

Josh Nilson

Josh's past career as an IT support specialist reflects a journey of adaptation and self-driven learning. Growing up in a small, blue-collar town in northern British Columbia called Willow River, industries like forestry and rail surrounded him. Technology was not a common career path in his community or family, but his interest in video games and early computing experiences sparked his passion for tech.

Josh initially worked in hospitality but found himself wanting to explore a career in tech. As a result, Josh eventually transitioned into IT by enrolling in an intense one-year information technology program at Capilano College (now Capilano University). This program provided him with technical skills and taught him how to thrive in a fast-paced tech environment, manage tight deadlines, and learn continuously—skills that became critical throughout his IT career.

After completing the program, Josh's entry into tech began with support roles at companies like Radiant Communications, where he helped with modem and ADSL support. He worked his way up from these support roles by learning on the job and continuing to develop his technical skills. His first tech job set the foundation for future roles in more complex technical positions.

After gaining some experience, Josh transitioned into a role at Relic Entertainment, marking the start of a long career in the gaming industry. For more than 20 years, he has worked in various roles, including building and supporting technical infrastructure. His time at Relic gave him in-depth experience in everything from breaking down computers and assembling workstations to handling complex networking and security systems.

One of the major highlights of Josh's career was co-founding Eastside Games, one of Canada's largest homegrown game studios. As a co-founder, general manager, and studio head Josh played a major role in developing strategic partnerships, securing major intellectual property deals, and launching multiple successful games. His leadership and vision contributed to the studio's growth, helping it become a well-respected name in the gaming industry.

Under his leadership, Eastside Games prioritized inclusivity by promoting Indigenous Peoples and women in tech. He helped initiate various programs to foster diversity and representation in the tech space, reflecting his commitment to creating a more inclusive industry.

Today, Josh's work with Maskwa Investments centers on helping Indigenous tech companies grow and succeed — a mission close to his heart. He works with large corporations to streamline programs for Indigenous entrepreneurs, ensuring that resources are available. Further, in addition to his investment work, he continues to be an active speaker at conferences, sharing his expertise in tech and entrepreneurship.

Opportunity Profiles

First Nations Technology Council

Telecommunications Equipment Technician

Telecommunications Equipment Technicians install, troubleshoot, maintain, configure, and repair devices and infrastructure that enable data exchange over distances, including television, radio, telephone, and internet connectivity equipment. Their work may involve field tasks like laying cable, and they often work for cable, satellite, internet, and phone companies, assisting clients with personal or business devices or managing large-scale infrastructure projects. Related job titles include Communication Technician, Cable Technician, Field Service Technician, Telephone Installer and Repairer, and Telecommunications System Technician.

In 2021, **2,120 people were employed** under the Government of Canada occupation group 72205 (Telecommunications equipment installation and cable television service technicians). In 2023, there were **173 job posts** for Telecommunications Equipment Technicians in BC. The main types of companies posting telecommunication equipment technician jobs were in construction, utilities, and telecommunications. Telecommunications Equipment Technicians are primarily concentrated in the Mainland/Southwest region.

Qualifications

Telecommunications Equipment Technicians in BC generally need **secondary education and relevant work experience**. Employers often prefer candidates who have completed **technical certificates** or **diplomas**. Programs like BCIT's Telecommunications System Technician Diploma cover essential networking, electrical theory, and wireless communications skills, while certifications like Cisco's CCNA emphasize network access and security fundamentals. The First Nations Technology Council offers a Networking Technology Certificate focused on LAN/WAN troubleshooting and network security for Indigenous Peoples in BC, providing accessible pathways to build critical technical skills. A driver's license is commonly required for fieldwork roles in this career.

Pathways

Telecommunications Equipment Technicians can advance to **supervisory roles** or transition to **IT specializations** with transferable skills that enable lateral moves within the industry. They may also pursue **Red Seal Trade credentials**, such as **Industrial or Construction Electrician**, to expand their career options.

In Demand Technical Skills

- Repairs/corrective maintenance
- Systems Integration
- Blueprint reading
- Preventative maintenance
- Mechanical aptitude
- Computer skills
- Technical support

In Demand Soft Skills

- Customer service
- Attention to detail
- Teamwork
- Troubleshooting
- Leadership
- Problem-solving
- Flexibility

In Demand Tools & Technologies

- Knowledge of routers, modems, CCTV, Microsoft Office, fiber technology

173

Telecommunications Equipment Technician job posts in BC for 2023

Career Feature

Daryl Silva

Daryl Silva works with technology for fun; in his spare time, he's building a language app that uses AI computer vision to scan objects and pronounce words in the Squamish language. By day, Daryl works for the First Nations Technology Council teaching courses such as Foundations in Technology, Artificial Intelligence, and Python.

Daryl began his career in fishing and forestry, then started his journey in the technology sector as an Electrician. However, as a young man, a workplace injury prevented him from continuing along that career path. With support from the Squamish Nation, he went to BCIT to take a two-year program in Computer Systems Technology. He got his first computer, also from his nation: *"Back in 1997, it had a big screen, it was like a giant tower with all kinds of goodies inside of it. I fell in love. Absolutely fell in love with hardware, software, how it came together."*

As a part of his two-year diploma, Daryl took certifications from organizations like Cisco and CompTIA, which he still recommends to his students today. Daryl loved studying and graduated from BCIT with a high GPA and a portfolio of certifications, while building computers for fun. When he graduated, he started working for Shaw Cable as a Cable Technician, installing telecommunications equipment. He enjoyed that role because *"I love technology, and I really love meeting people,"* — at the time, running cable meant being in lots of different spaces and helping people problem-solve.

As the *"cable guy,"* as Daryl puts it, you are expected to document a client transaction, provide customer service sometimes by going to a client's house, and hook up wireless routers and cable lines. *"In the old days, we would have to take your computer apart and install network cards. Everything is wireless now."* But he also says that to do good work with cable, *"you have to have a certain craft: you have to not be afraid of ladder work at all: dirt, dust, climbing behind computers, under desks. You also have to be able to communicate well with people. I very much loved the job."* In his career in telecommunications, he worked in five different roles at Shaw: *"service, installation, as a foreman, in a warehouse, and at cellphone towers."* Overall, he recommends craftsmanship, some math skills, and a love of education as the core competencies someone needs to succeed in a career in telecommunications.

Now, Daryl brings his skills and passion for computer and telecommunications work to his students at FNTC, teaching the basics of Internet of Things, switching, routing, and wireless essentials. With the right infrastructure, Daryl explained, telecommunications skills can be applied in peoples' home communities to support broadband access for First Nations communities across BC. If Canada fulfils its commitment to bring 50/10 Mbps broadband access to all rural and remote communities by 2030, Nation members with network technician skills can help connect a central satellite dish to servers and extend internet access across Nation government buildings and community households. Once local network technicians are trained, Daryl comments, they can help with ongoing network troubleshooting, testing routers and personal computers. *"Theoretically you'd have to have at least two people for every community that has internet services. You need those people all the time. Maybe not 24 hours a day, but certainly seven days a week."*

Opportunity Profiles

First Nations Technology Council

User Experience/User Interface (UX/UI) Designers

UX/UI Designers are responsible for creating and enhancing the user experience and interfaces of digital products like websites, mobile apps, and software by understanding user needs and making improvements. UX designers focus on a product's functionality and overall experience, while UI designers concentrate on its visual appeal and layout. They work across various industries, collaborating closely with product managers, developers, and other designers to ensure user-friendly and visually engaging products. Although distinct from Web and Front-End Designers, UX/UI roles share overlapping skills, allowing for lateral career movement within related fields.

In 2021, **2,265 people were employed** in the Government of Canada occupation group 21233 (Web designers) across BC. In 2023, there were **20 job posts** for UX-UI Designers in BC. The main types of companies posting UX-UI Design jobs were in e-commerce, creative technology, and telecommunications. UX-UI Designers are primarily concentrated in the Mainland/Southwest region.

Qualifications

Typical education for UX and UI Designers in BC includes a **mix of formal training and practical experience**, with **many employers seeking candidates who have completed a college diploma or certification in design**, **human-computer interaction**, **or a related field**. Programs such as BCIT's UX/UI Design Certificate and Emily Carr University's User Experience Design Certificate offer courses in areas like UX research, responsive design, and interface design, providing foundational skills in the role's user experience and user interface aspects. Options like UNBC's UX Foundations Micro-Credential and the UX Design Certificate by the First Nations Technology Council cater to flexible, targeted skill-building. They are particularly accessible to those looking to quickly gain UX/UI expertise through intensive, hands-on learning.

Pathways

UX/UI Designers can advance by specializing in fields like **interaction design** or **information architecture**, progressing to roles such as **Lead UX Designer** or **UI Design Manager**, and moving into product management or executive positions like **Chief Experience Officer** (CXO).

In Demand Technical Skills

- User Interface Design
- Adobe Systems (Photoshop)
- HTML, CSS, JavaScript
- SQL
- Graphic Design

In Demand Soft Skills

- Communication
- Teamwork
- Attention to Detail
- Organizational Skills
- Problem-Solving

In Demand Tools & Technologies

- Adobe Creative Suite (Photoshop, Illustrator, XD)
- Atlassian JIRA
- jQuery
- JavaScript
- iOS

20
UX-UI Designer job posts
in BC for 2023

Opportunity Profiles

First Nations Technology Council

Web Developer

Web Developers create and maintain websites and web applications, working on both the front end (client side) and back end (server side) to ensure sites are functional, intuitive, and engaging. They collaborate closely with web designers and other developers and are employed across diverse industries, from advertising to IT consulting. The field is typically divided into Front-End Developers, who design user interfaces and experiences; Back-End Developers, who ensure functionality and efficiency; and Full-Stack Developers, who handle both aspects.

In 2021, **7,395 people were employed** under the Government of Canada occupation group 21234 (Web developers and programmers) across BC. In 2023, there were **634 job posts** for Web Developers in BC. The main types of companies posting web development jobs were in cybersecurity, software, consulting, creative technology, and the public sector. Web Developers are primarily concentrated in the Mainland/Southwest region.

Qualifications

Web developers in BC typically require **two-to-four years of training and/or up to two years of experience**. However, many enter the field through **non-traditional pathways such as self-study**, **short certificate programs**, **boot camps**, or **portfolio-building wor**k. Programs like BCIT's Full-Stack Web Development Diploma and Selkirk College's Web Development Certificate offer comprehensive front-end and back-end development, project management, and design training. Shorter-term options, such as Northern Lights College's Front-End Web Developer program and First Nations Technology Council's Web Development Focus Certificate, provide accessible entry points for Indigenous students with limited time.

Pathways

Career pathways for web developers include a structured route through formal education, such as a two-year diploma at BCIT leading to i**ndustry internships** and roles as **Full-Stack Developers**, or an alternative path starting from high school with self-study and portfolio-building, progressing from **Junior Web Developer** to **Senior Front-End Web Developer**.

634 **Web Developer job posts** in BC for 2023

In Demand Technical Skills

- Animation
- Process Design
- Report Preparation
- Information Systems
- Quality Assurance
- Software Development Life Cycle (SDLC)
- User Interface Design
- Graphic Design
- Process Optimization
- Agile Software Development
- Project Management

In Demand Soft Skills

- Organizational Skills
- Attention to Detail
- Teamwork
- Communication Skills
- Interpersonal Skills
- Self-Starter
- Customer Service
- Decision-making
- Problem-Solving
- Troubleshooting

In Demand Tools & Technologies

- HTML
- JavaScript
- Editing Software
- Animation Software
- PHP
- Python
- MySQL
- Adobe Systems
- WordPress
- Java
- Git
- Microsoft Office
- SQL
- jQuery
- Linux

Career Feature

Ryan Voght

Ryan's career journey reflects adaptability, resilience, and a deep commitment to community. His path from automotive mechanics to web development, combined with his work in Indigenous language preservation, showcases how technical skills can be used to create meaningful and long-lasting impacts on community development.

Ryan's career path initially brought him to automotive mechanics, where he thrived in diagnostic work and became proficient in vehicle electrical systems. However, after two back injuries, he recognized it was time for a change and started considering a career in the tech industry. Despite having no formal background in computer science, he enrolled in a three-month boot camp with BrainStation, where he rapidly learned web development skills in a fast-paced, intensive program.

This intensive training paved the way for his entry into the tech world, demonstrating how non-traditional educational pathways, such as coding boot camps, are valuable and can lead to success in the industry. Throughout his time in the boot camp, Ryan learned about the importance of asking questions, seeking mentorship, and leveraging networks to overcome knowledge gaps.

Ryan's first major role in web development was with Culture Foundry, where he contributed to Indigenous language revitalization projects. This work was deeply personal for Ryan, who had grown up listening to his grandmother emphasize the importance of preserving the Salish language. Ryan's uncle also used to make tape recordings of the Salish language.

At Culture Foundry, Ryan helped create online resources for Indigenous languages, ensuring that future generations could access language data. Although he was new to the specific programming languages used in the project, his dedication and passion for the cause helped him quickly adapt and excel in the role. This project focused on building tools that could help Indigenous communities document and learn their languages, significantly impacting cultural revitalization efforts.

When asked what kind of advice he would give someone hoping to transition their career into web development, Ryan remarked that self-belief trumps all. *"Don't let anybody crush your dreams. Like, don't. Don't let somebody tell you you can't do something. And most of all, don't let yourself get in the way. We're all capable of great things if we just actually let ourselves be capable of great things."*

Ryan emphasizes the importance of aligning one's work with personal values. His experience working on language revitalization projects, which were both personally meaningful and technically challenging, highlights how web development can be more than just coding—it can be a powerful tool for cultural preservation and community empowerment.

70 Orwell St. Unit 102,

North Vancouver, BC V7J 3R5

604-921-9939

technologycouncil.ca

First Nations
Technology Council