



SHAPING A DIGITAL FUTURE FOR INDIGENOUS PEOPLES

ALBERTA LABOUR MARKET STUDY

Prepared by the Information & Communications Technology Council (ICTC)

In partnership with the First Nations Technology Council



First Nations
Technology Council

ABOUT THE PROJECT

This labour market study is a multi-year initiative designed to identify opportunities and challenges for Indigenous job seekers, training institutions, and employers within Alberta's growing digital sector. The initiative seeks to understand and expand opportunities for Indigenous Peoples in Alberta's digital economy in roles such as software development, cybersecurity, AI architecture, and IT support – careers that are shaping the future of every industry. The primary goal of the research was to listen to Indigenous voices to understand current gaps in training, explore culturally safe work environments, and uncover how the ecosystem can collectively support Indigenous talent in tech.



About ICTC

The Information and Communications Technology Council (ICTC) is a not-for-profit, national centre of expertise for strengthening Canada's digital advantage in a global economy. Through trusted research, practical policy advice, and creative capacity-building programs, ICTC fosters globally competitive Canadian industries enabled by innovative and diverse digital talent. In partnership with an expansive network of industry leaders, academic partners, and policy makers from across Canada, ICTC has empowered a robust and inclusive digital economy for over 30 years.



About the First Nations Technology Council

The First Nations Technology Council is an Indigenous-led, innovative non-profit mandated by First Nations leadership in British Columbia. The First Nations Technology Council works to advance digital literacy, improve internet connectivity, and provide guidance on data and digital technology for all 204 First Nations across the province of British Columbia.



About Engage Delaney

Engage Delaney provides training, consulting and coaching services to individuals and organizations so that together, we can make better decisions that move communities forward. Drawing on their extensive experience of working with diverse groups in urban and regional settings across Canada, Engage Delaney takes pride in informing decision making and designing processes that enable their clients to achieve stronger project outcomes.

To Cite this Report

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The Province of Alberta is working in partnership with the Government of Canada to provide employment support programs and services.

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CONTENT WARNING & DISCLAIMER

The following report covers topics including but not limited to colonial violence and workplace discrimination. The information and material presented here may trigger unpleasant feelings or thoughts. This content warning applies to the whole report, especially to the section on **Systemic Barriers (page 32)**.

The Hope for Wellness Helpline is available 24/7 to all Indigenous People across Canada. You can talk to someone on the phone at 1-855-242-3310 or online at www.hopeforwellness.ca.

While third-party data citations are used throughout this report, its authors recognize the systemic gaps in many areas and disciplines of data collection and contextual usage related to Indigenous peoples. While outside of the scope of this research project, the report's findings aim to contribute to important baseline understandings of the lived realities of Indigenous peoples, and how these types of systemic gaps can be acknowledged and narrowed in future research.

EXECUTIVE SUMMARY

Alberta's technology and innovation sector is expanding rapidly, creating a significant opportunity to advance Indigenous economic participation and reconciliation. This report analyzes labour market trends; barriers to participation; and best practices for recruiting, retaining, and training Indigenous talent across Alberta's digital economy. The research was conducted with approximately 650 participants, including Indigenous community members, employers, and regional stakeholders, guided by Indigenous methodologies and the OCAP® framework (Ownership, Control, Access, and Possession).

ALBERTA'S DIGITAL ECONOMY AND LABOUR MARKET CONTEXT

Alberta's digital economy grew by over 60,000 jobs between 2020 and 2025, reaching an estimated 227,300 workers, approximately 8.9% of all provincial employment. Despite this growth, Indigenous Peoples remain significantly underrepresented: while comprising roughly 5% of Canada's population, they account for only about 1% of the digital workforce and are employed in technology-related roles at roughly half the rate of non-Indigenous Canadians.

Disparities are particularly pronounced for on-reserve First Nations communities, where the employment rate is 40.4% (34 percentage points below non-Indigenous Albertans), the median income gap is nearly \$23,200, and nearly one in three individuals live in low-income households. In 2024, the unemployment rate for Indigenous people in Alberta overall was 11.9%, with First Nations Peoples facing the highest rate at 17.5%. These figures reflect structural inequities that extend well beyond the labour market.

KEY BARRIERS TO PARTICIPATION

Indigenous Peoples face a layered and interconnected set of barriers to participation in Alberta's digital economy. At the systemic level, racism and discrimination remain the most fundamental challenges, often limiting Indigenous workers to entry-level roles regardless of capability. Chronic underfunding of Indigenous communities has produced persistent gaps in broadband

connectivity (80% of Indigenous communities lack reliable high-speed internet), unequal access to STEM education, and inadequate basic services including housing and clean water. High poverty rates compound all other barriers.

At the organizational level, employers frequently rely on recruitment tools (such as LinkedIn) that do not reach Indigenous job seekers, apply generic DEI frameworks that fail to address Indigenous-specific needs, and lack culturally safe workplace practices necessary for retention. At the individual level, self-efficacy barriers rooted in the intergenerational impacts of colonialism shape which opportunities Indigenous workers perceive as realistic and pursue.

OPPORTUNITIES FOR GROWTH

Indigenous youth already possess strong foundational digital skills and growing interest in emerging technologies including AI, cybersecurity, data analytics, and entrepreneurship. Employers identified IT support, cybersecurity, and network administration as their top areas of hiring need. Approximately 70% of Indigenous job seeker survey respondents described themselves as either somewhat or fully prepared for tech roles.

Indigenous entrepreneurship represents a significant and growing driver of economic sovereignty. The Indigenomics Institute projects Canada's Indigenous economy could reach \$100 billion, with Indigenous-owned small and medium-sized enterprises identified as a key catalyst. Alberta is home to 9.6% of all Indigenous SMEs nationally. Indigenous-owned businesses characteristically balance profitability with community job creation, environmental stewardship, and social investment.

BEST PRACTICES FOR STRENGTHENING INDIGENOUS PARTICIPATION

Fourteen priority areas were identified through employer interviews, community surveys, and advisory committee engagement.

1

Address Foundational Needs First

Poverty, housing, food security, and basic literacy must be addressed before digital career pathways can be accessible or meaningful for Indigenous job seekers.

2

Invest in Digital Infrastructure

Reliable broadband, up-to-date devices, and consistent technical support in rural and northern Indigenous communities are essential prerequisites, not optional add-ons.

3

Develop Culturally Relevant Training and Clear Pathways

Programs co-designed with Indigenous communities, grounded in Indigenous values and learning styles, with visible step-by-step progressions from initial interest through to employment.

4

Strengthen Education and Skills Pathways

Start digital skills development in K-12 settings. Offer flexible delivery including hybrid, evening, and condensed formats that accommodate work, caregiving, and community obligations.

5

Create Culturally Safe Workplaces

Mandatory Indigenous cultural awareness training at all levels, spaces for ceremony and cultural practice, Elder access, paid spiritual days, and culturally inclusive benefits are necessary for retention.

6

Provide Mentorship, Sponsorship, and Role Models

Prioritize sponsorship (active career advocacy) over mentorship alone. Cohort-based onboarding and visible Indigenous role models in digital roles normalize Indigenous presence in the sector.

7

Build Long-Term, Trust-Based Community Partnerships

Effective initiatives require early, sustained, and co-created engagement with Indigenous communities. Partnerships must be relational rather than transactional, and centre Indigenous-led decision-making.

8

Provide Wrap-Around Financial and Social Supports

Living allowances, transportation assistance, childcare, Elder guidance, and equipment access are often the decisive factors enabling Indigenous learners to access and complete training programs.

9**Build Confidence Through Mentorship and Role Models**

Culturally grounded mentorship and Indigenous professionals in visible senior roles counter internalized barriers rooted in colonialism and signal to Indigenous youth that digital careers are within reach.

10**Reform Attraction and Recruitment Practices**

Reach Indigenous candidates through Facebook and community networks rather than relying solely on LinkedIn. Use inclusive language in job postings and include Indigenous representation on hiring committees.

11**Adapt Interview and Assessment Processes**

Train interviewers on cultural differences in communication. Value community-oriented contributions alongside individual achievement. Allow oral or interactive evaluations and adapt resume requirements.

12**Improve Retention Through Equitable Career Development**

Provide equitable access to professional development, internal committees, and succession planning. Supervisors who model flexibility, empathy, and servant leadership improve Indigenous employee experience.

13**Treat Indigenous Reconciliation as Distinct from General DEI**

Indigenous inclusion requires its own framework, developed separately from broader diversity initiatives and grounded in Truth and Reconciliation Commission of Canada's (TRC) Call to Action 92, treaty obligations, and rights-based approaches.

14**Enable Remote and Flexible Work Arrangements**

Championing remote and hybrid roles allows Indigenous workers to remain connected to their communities, expanding accessible job opportunities without requiring relocation to urban centres.

INTRODUCTION

Alberta's technology and innovation sector is rapidly expanding, creating new opportunities for economic growth and workforce development. Within this context, increasing Indigenous participation in the province's tech ecosystem is both a critical priority and a pathway toward economic reconciliation. Most employers interviewed for this study expressed strong support for on-ramping more Indigenous talent into Alberta's tech sector. However, they also acknowledged the persistence of systemic barriers that limit access and participation. These barriers include anti-Indigenous stereotypes and unconscious bias within the tech industry, a lack of systematic data collection on Indigenous representation within organizations, the absence of institutional infrastructure to engage with Indigenous people (similar to what exists in sectors like oil and gas), and ongoing connectivity and digital infrastructure challenges in many Indigenous communities.

This report was developed to address these challenges and identify actionable strategies for fostering inclusive growth in Alberta's digital economy. It provides a comprehensive analysis of labour market trends; barriers to participation; and best practices for recruitment, retention, and training of Indigenous talent. The project is grounded in the principles of respect, collaboration, and reciprocity, and seeks to inform employers and community leaders about the steps needed to create meaningful pathways for Indigenous talent.

For clarity, this report uses the term “Indigenous” as an umbrella term that refers to First Nations, Métis, and Inuit Peoples in Canada. Within the Alberta context, the perspectives of First Nations and Métis people are central to this research, while acknowledging the presence of Inuit Peoples in

the province. Due to limited data availability, Inuit-specific perspectives are not extensively captured in this report. Definitions of **First Nations**, **Métis**, and **Inuit** are provided in the following section to recognize the distinct histories, cultures, and governance structures of these groups, and to ensure that their unique identities are respected throughout the analysis.

By situating this work within the broader goals of Reconciliation and economic inclusion, the report underscores the importance of addressing systemic exclusion and creating culturally safe, sustainable pathways into Alberta's digital economy. The findings and recommendations presented here aim to support employers, governments, and Indigenous Peoples in building a future where technology serves as a tool for innovation, and shared prosperity.

INDIGENOUS REPRESENTATION IN THE RESEARCH

Indigenous is an all-encompassing term often used globally to include the Indigenous Peoples living in what is now known as Canada and other countries. Within the context of this report, the terms Indigenous and Indigenous Peoples are used to represent the three populations of Indigenous Peoples within Canada and Alberta: First Nations, Inuit, and Métis Peoples. Significantly, pan-Indigenous research has limited effectiveness. As such, this report maintains uses terms specific to a population group where possible. This research incorporates First Nations and Métis data. Despite the presence of Inuit peoples in Alberta, Census data shows that Inuit people were 0.1% of the population of Alberta in 2021.¹ Data on the Inuit population group is limited and subsequently, not captured in this report.

First Nations is a term used to describe Indigenous Peoples of Canada who belong to distinct and independent First Nations (political governance entities made up of members of the First Nation community) and are neither Métis nor Inuit. First Nations peoples have a significant diversity of cultures, languages, and political ideologies and vast geographical dispersion across the land known as Canada. Many levels of government across Canada have acknowledged that First Nations people have the right to self-determination and to identify with their ancestral Indigenous origins rather than a federally regulated reserve status. According to the Census, First Nations people were 3.5% of the population of Alberta in 2021.

Métis are part of a distinctive cultural group with a specific social history in Canada. The term initially

referred to the children of Indigenous and European relationships. Still, over generations, it has come to refer to the collective of cultures and ethnic identities that emerged as Métis communities developed. Distinct Métis communities developed² along the routes of the fur trade and across the Northwest within the Métis Nation Homeland, including Manitoba, Saskatchewan, and Alberta, as well as parts of Ontario, British Columbia, the Northwest Territories, and the northern United States.³ According to the Census, 3.1% of the population of Alberta was Métis.

ALBERTA LAND ACKNOWLEDGEMENT

What became known as the Province of Alberta in 1905 is also the traditional and ancestral home to many Indigenous Peoples with whom we have been honoured to share this land since Treaties 6, 7, and 8 were entered into. Treaty 6 is the ancestral and traditional territory of the Cree, the Nakoda Sioux, the Dene, the Saulteaux, and the Métis and Inuit, who have lived in and cared for these lands for generations.

Treaty 7 territory is the traditional and ancestral territory of Siksikaitsitapi – the Blackfoot Confederacy, which includes the Kainai Nation, Piikani Nation, Amskapi Piikani, and the Siksika Nation. Treaty 7 is also home to the Tsuut'ina Nation and the Stoney Nakoda. Treaty 8 territory includes over 41 First Nations across Saskatchewan, Alberta, and British Columbia. Alberta is also the historical Northwest Métis Homeland – which includes the North Saskatchewan River Territory, the Peace River Territory, the Lesser Slave Lake Territory, the Battle River Territory, and the Lower Athabasca Territory.



We acknowledge and respect the histories, languages, and diverse cultures of the many First Nations, Métis, and Inuit. We are grateful for the traditional Knowledge Keepers and Elders who are still with us today and those who have gone before us. We make this acknowledgement as an act of reconciliation and gratitude to those whose territory we reside on or work within.

¹ Government of Alberta. (2021). 2021 Census of Canada: Indigenous people. Treasury Board and Finance. <https://open.alberta.ca/dataset/487a7294-06ac-481e-80b7-5566692a6b11/resource/257af6d4-902c-4761-8fee-3971a4480678/download/tbf-2021-census-of-canada-indigenous-people.pdf>
² First Nations and Indigenous Studies, University of British Columbia. (2009). Métis. Indigenous Foundations. <https://indigenousfoundations.arts.ubc.ca/metis/>
³ Métis National Council. (2024). About. <https://www.metisnation.ca/about/about-us/>



Figure 1. Map of First Nations Treaty areas, Métis Regions, and Indigenous language groupings in Alberta. Source: Alberta Teachers Association, First Peoples Map of Alberta, 2019.

RESEARCH APPROACH

The project context and approach for this labour market study were designed to include the perspectives of both Indigenous Peoples and employers in Alberta. By incorporating both perspectives, the research targeted greater understanding of how to increase Indigenous participation in the technology and innovation sectors from multiple angles. This work encompassed identifying barriers, surfacing opportunities, and building evidence-based, culturally informed pathways that strengthen Indigenous inclusion in Alberta's digital economy.

This research project was conducted with attention to Indigenous research methodologies and principles of respect, control, community focus, collaboration, partnership, sharing, and social return. Furthermore, the research team consulted the Ownership, Control, Access, and Possession (OCAP®)⁴ framework and attempted to follow these protocols by sending participants their raw data and providing continued updates and report-backs.

In keeping with the spirit and letter of the above principles, the approach emphasized transparency, reciprocity, and Indigenous community-led guidance throughout the research cycle—from instrument design and outreach to analysis and reporting. Clear goals shaped the work: to capture lived experiences alongside employer practices; to align inquiry with OCAP® and Indigenous research ethics; and to translate findings into actionable recommendations for recruitment, retention, training, and relationship-building that reflect the priorities of First Nations and Métis communities in Alberta.

Expert guidance for this research was provided by an Advisory Committee. The Advisory Committee provided strategic guidance and subject matter expertise throughout the duration of this research.

The Advisory Committee was comprised of Indigenous entrepreneurs, community leaders, industry, and other relevant stakeholders, and played a critical role in informing the study's methodology and scope. The goal of the Advisory Committee was ultimately to strengthen the relevance, credibility, and impact of this labour market study by ensuring that the research was inclusive, informed by the Indigenous community, and aligned with practical workforce priorities. The Advisory Committee convened a total of five times throughout the course of the research to review progress, provide contextual insight, and offer feedback on emerging findings related to labour market participation, occupational training, connectivity, unemployment, and skills development in Alberta's technology and innovation sectors. Further details about the research methodology can be found in the [Appendix: Analytical Approach](#).

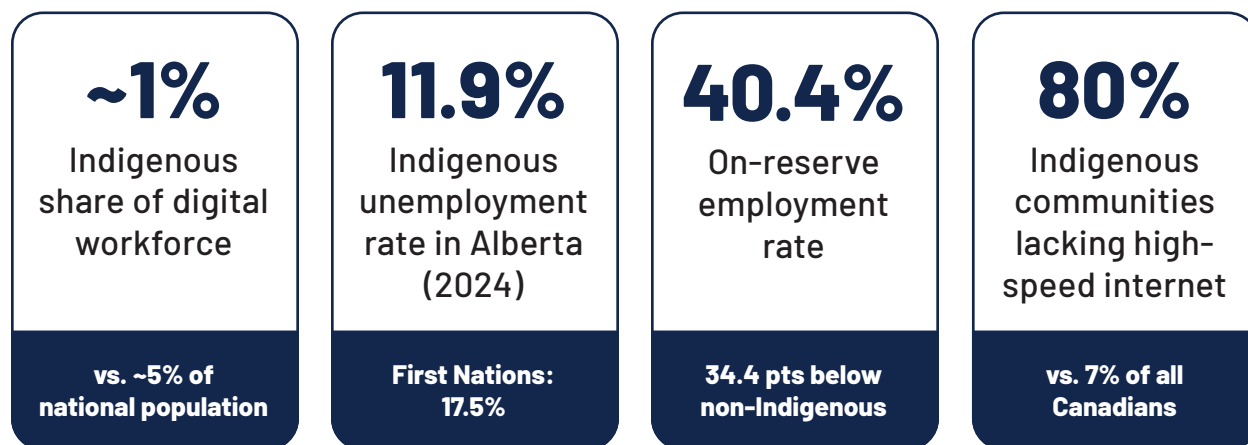
In addition, the generous participation in this research by approximately 650 research participants made this project possible. This included Indigenous perspectives and employer survey respondents, regional session participants, and interviewees who lent their time and insights.

Finally, this report situates the research within reconciliation and economic inclusion, recognizing that increasing Indigenous participation in Alberta's tech ecosystem requires culturally safe methods, sustained collaboration with Indigenous leadership and organizations, and ongoing reporting to participants and partners. These commitments guided not only how evidence was gathered but prioritized and centred Indigenous voices while linking employer insights to practical steps that can foster increased participation of Indigenous people in Alberta's digital economy.

⁴ OCAP® is a registered trademark of the First Nations Information Governance Centre (FNIGC). See First Nations Information Governance Centre, The First Nations Principles of OCAP®, 2025, <https://fnigc.ca/ocap-training/>

KEY FINDINGS

Alberta's digital economy is expanding rapidly, reaching an estimated 227,300 workers by December 2024, roughly 8.9% of all provincial employment. Despite this growth, Indigenous Peoples remain significantly underrepresented:



On-reserve First Nations individuals face a median income nearly \$23,200 lower than non-Indigenous Albertans, with nearly one in three living in low-income households. These gaps underscore that the barriers to digital economy participation are structural, not a reflection of talent or interest.

KEY BARRIERS TO INDIGENOUS PARTICIPATION

Digital Infrastructure & Connectivity

A three-level digital divide limits Indigenous participation. Physical access is unequal: 80% of Indigenous communities lack reliable high-speed internet meeting federal standards, with rural users paying 46% more for installation and 14% more monthly. Limited connectivity depresses digital skill development, and by the time students reach high school the cumulative gap in digital exposure can be significant.

Structural & Systemic Barriers

Racism and discrimination are the most fundamental and persistent barriers. Specific challenges include:

- › Anti-Indigenous bias among employers, confining workers to entry-level roles regardless of capability
- › Limited access to senior-level science and math courses on-reserve, blocking Science, Technology, Engineering and Mathematics (STEM) pathways
- › Educational upgrading requirements of one to two years before Indigenous students can enter post-secondary tech programs
- › Chronic underfunding of community infrastructure, housing, clean water, and food security

Organizational & Recruitment Barriers

Employers overwhelmingly rely on LinkedIn (56%) and Indeed (44%), while Indigenous job seekers primarily find opportunities through Facebook and word-of-mouth. Automated screening tools can disadvantage candidates with non-traditional career paths. Generic Diversity, Equity and Inclusion (DEI) frameworks that do not distinguish Indigenous inclusion as a distinct commitment, grounded in rights, Nationhood, and Treaties, have consistently failed to drive meaningful change.

Individual-Level Barriers

Colonialism and systemic inequity create internalized self-doubt that shapes which roles Indigenous workers believe are realistic for them. Approximately 30% of surveyed job seekers cited limited experience, unclear role expectations, and confidence gaps as key obstacles. Being the only Indigenous person in a workplace frequently leads to isolation and early departure.

OPPORTUNITIES

Despite these barriers, the research finds significant momentum and genuine potential:

Indigenous youth already possess strong foundational digital skills and growing interest in artificial intelligence (AI), cybersecurity, data analytics, coding, and entrepreneurship. Approximately 70% of surveyed Indigenous job seekers described themselves as somewhat or fully prepared for tech roles.

Indigenous people start businesses at nine times the national average; Alberta hosts 9.6% of all Indigenous small and medium-sized enterprises (SMEs) in Canada. Community-led innovation is already underway, including drone technology for environmental monitoring and wildfire response, renewable energy projects, and net-zero housing initiatives. The Indigenomics Institute projects the Indigenous economy in Canada could grow to \$100 billion, with Indigenous-owned SMEs as a key driver.

In-demand roles identified by employers include IT support (53%), cybersecurity (23%), and network administration (22%). Indigenous job seekers most commonly reported skills in data analysis (37%) and business analysis (20%), signalling meaningful alignment between talent and employer need.

BEST PRACTICES & RECOMMENDATIONS

Address Foundational Needs First

Digital inclusion strategies cannot succeed without first ensuring basic living conditions. Programs that assume baseline literacy or reliable connectivity without accounting for systemic barriers risk excluding the very people they aim to serve. Housing, clean water, food security, and foundational education must underpin any digital economy pathway.

Build Culturally Relevant, Indigenous-Led Pathways

Training and employment programs must be co-designed with Indigenous organizations, not developed externally and delivered to communities. Survey respondents prioritized Indigenous-led programs (66%), in-person workshops (51%), and culturally relevant curricula (46%). Programs anchored in Indigenous knowledge systems and ways of learning consistently outperform those that retrofit existing DEI or training models.

Provide Wrap-Around Supports

Approximately 90% of surveyed respondents identified career counselling, mentorship, and networking with Indigenous employers as priorities. Approximately 87% cited transportation assistance and approximately 85% cited funding for training costs. Financial supports, particularly stipends during training, are often the single most decisive factor in program completion. Wrap-around supports are foundational, not supplementary.

Invest in Infrastructure and Remote Work

Sustained investment in broadband, devices, and technical support is essential. Remote and flexible work arrangements can be powerful inclusion tools, reducing the expectation that Indigenous workers must leave their communities to pursue digital careers, but only where connectivity infrastructure exists to make them viable.

Transform Recruitment and Workplace Culture

Effective Indigenous inclusion requires change across every stage of the employment cycle:

- › Recruit through Facebook and community networks, not just LinkedIn and Indeed
- › Remove automated screening bias; accommodate non-traditional career paths and community-oriented interview responses
- › Provide mandatory Indigenous cultural awareness training for all staff, including executives
- › Prioritize sponsorship (active advocacy for career advancement) alongside mentorship
- › Ensure visible Indigenous role models within digital economy organizations
- › Create culturally safe spaces: smudging rooms, Elder access, paid cultural days, and culturally inclusive benefits

Treat Indigenous Reconciliation as Distinct from General DEI

Indigenous peoples are rights-holders. Truth and Reconciliation Commission (TRC) Call to Action 92 directs corporate Canada to provide equitable access to jobs and training, deliver intercultural competency training, and engage in meaningful consultation grounded in free, prior, and informed consent. Lumping Indigenous needs into generic DEI frameworks flattens the distinct histories, Nationhoods, and systemic realities that must be addressed. Inclusion strategies must be Indigenous-specific and Indigenous-led.

Build Long-Term, Trust-Based Partnerships

Effective programs are relational and community-driven. Meaningful partnership requires early, ongoing, and sustained engagement, not consultation only at the project outset. Collaboration across Indigenous communities, employers, all levels of government, and training providers is a prerequisite for systems-level change in Indigenous participation in Alberta's digital economy.

ALBERTA'S CURRENT LABOUR MARKET

THE DIGITAL ECONOMY: A CORNERSTONE OF NATIONAL PROSPERITY

ICTC defines the digital economy as the technology-driven segment of economic activity involving the production and use of digitally enabling infrastructure, digitally ordered transactions, and digitally delivered products.⁵ This sector has become integral not only to productivity and innovation, but also to regional economic performance across the country.⁶ As a cornerstone of national prosperity, Canada's digital economy contributes over 10% of the country's GDP and supports more than 2.4 million jobs.⁷

ALBERTA'S DIGITAL TRANSFORMATION

Against this backdrop, Alberta stands out for its outsized contribution to Canada's overall economic landscape. In 2024, while Canada's GDP grew by 2.0%, Alberta accounted for approximately 15.3% of national GDP despite representing only about 12% of the population, approaching the economic weight of Ontario, the province with the largest population.⁸

Alberta's digital economy has grown remarkably between 2020 to 2025. This growth was partially driven by ongoing efforts to diversify Alberta's economy. With over 60,000 new jobs created by the industry, employment is now almost 36% higher than

it was before the pandemic. An estimated 227,300 people were employed in Alberta's digital economy by December 2024, accounting for 8.9% of all provincial employment, a clear indication of the sector's expanding role in Alberta's economic landscape.⁹

Much like overall employment patterns, Alberta's digital economy is highly concentrated in its two largest cities. Recent ecosystem studies indicate that nearly 90% of the province's tech firms are based in Calgary and Edmonton, with approximately 58% located in Calgary and 30% in Edmonton.¹⁰

Rural Innovation and Economic Diversification

Beyond the two major metropolitan centres, Lethbridge and Cold Lake emerged as regional nodes linking digital innovation and advanced computing with both the defence and agriculture sectors. These examples highlight a broader pattern whereby digital innovation in Alberta is no longer strictly confined to its largest urban centres, and is becoming increasingly rooted in the rural communities that remain essential to Alberta's economy and labour market.¹¹ In fact, Alberta's rural regions made a substantial contribution to the broader provincial economy, with rural areas supporting nearly 250,000 jobs in Alberta's urban centres and generating close to \$16 billion in labour income, and every \$1 of rural economic activity estimated to contribute approximately \$0.74 to urban economic output.¹²

⁵ OECD (2024). OECD Digital Economy Outlook 2024 (Volume 1): Embracing the Technology Frontier, OECD Publishing, Paris, <https://doi.org/10.1787/a1689dc5-en>; Statistics Canada. (2019, May 3). Measuring digital economic activities in Canada: Initial estimates (Catalogue No. 13-605-X). <https://www150.statcan.gc.ca/n1/pub/13-605-x/2019001/article/00002-eng.htm>

⁶ Liu, H. (2021). Economic performance associated with digitalization in Canada over the past two decades. Statistics Canada. <https://doi.org/10.25318/36280001202100200001-eng>

⁷ Anani, N., & Henningsmoen, E. (2025). A roadmap for Canada's digital economy to 2030. Information and Communications Technology Council (ICTC).

⁸ Statistics Canada. (2025, May 1). Provincial and territorial economic accounts, 2024. The Daily. <https://www150.statcan.gc.ca/n1/daily-quotidien/250501/dq250501a-eng.htm>

⁹ Ivus, M., Lindstrom, C., McGeer, H., and Podolna, O. (2025, March). Alberta's Digital Economy: Outlook 2030. Information and Communications Technology Council (ICTC), <https://ictc-ctic.ca/reports/albertas-digital-economy-outlook-2030>

¹⁰ Alberta Enterprise Corporation. (2021). Alberta technology deal flow study 2021. Alberta Enterprise Corporation. <https://www.alberta-enterprise.ca/wp-content/uploads/2021/04/AEC-Deal-Flow-Report-2021-April-21.pdf>

¹¹ Cutean, A., and Matthews, M. (2023, September). "Seeding Rural Innovation: Nurturing the Tech Frontier in Alberta." Information and Communications Technology Council (ICTC), <https://ictc-ctic.ca/reports/seeding-rural-innovation>

¹² Ibid.

Rural employers across Alberta also demonstrate a strong commitment to innovation and digital transformation, viewing technologies like automation, data analytics, and digital platforms as essential for boosting productivity and addressing persistent talent shortages in sectors such as agriculture, energy, and manufacturing.¹³

Policy analysis by ICTC concerning Alberta's Budget 2030 further underscored that investments in rural broadband, including Alberta's Broadband Strategy, aimed at connecting businesses in remote areas, and the Alberta Technology and Innovation Strategy, which seeks to position the province as an internationally recognized technology and innovation hub, are critical enablers that strengthen rural firms' capacity to adopt information and communications technology (ICT), participate in e-commerce, and integrate into provincial and global value chains.¹⁴

INDIGENOUS PARTICIPATION AND ECONOMIC GROWTH

Across Canada, key economic indicators demonstrate the steady expansion of the Indigenous economy between 2012 and 2020. At the national level, Indigenous GDP, overall economic output, and employment demonstrated consistent year-over-year growth throughout this period, with the sole decline occurring in 2020 because of the global COVID-19 pandemic. Similar upward trends were observed across all provinces and territories. In addition, entrepreneurship among Indigenous Peoples increased, with self-employment rates rising among First Nations, Métis, and Inuit populations since 2016.¹⁵

Despite this growth, persistent systemic barriers and gaps remain across Canada and in

Alberta. Across Alberta, Indigenous Peoples are underrepresented in the labour market, have lower economic participation rates than the non-Indigenous population, and are more likely to face barriers to employment.¹⁶

The 2021 Census reported 284,465 Indigenous people lived in Alberta, which represented 6.8% of the province's population, the third largest among the provinces in Canada. The majority identify as First Nations (52.8%), followed by Métis (44.2%) and Inuit (1.0%). According to the Government of Canada, there were over 200,000 Indigenous people living off reserve in Alberta aged 15 and older.¹⁷

In 2024, the unemployment rate for Indigenous people was 11.9%, one of the highest in Canada, while both participation (68.3%) and employment (60.2%) rates declined from the previous year. First Nations Peoples experienced the lowest employment outcomes, with an unemployment rate of 17.5%, compared to 8.2% among Métis. Gender gaps also persisted as Indigenous women experienced slightly lower unemployment (10.6%) than men (13.2%).¹⁸

Educational attainment had a marked impact: Indigenous individuals with post-secondary education had an employment rate of 78.5%, compared to 55.7% among those without. Moreover, substantial disparities between Indigenous and non-Indigenous populations persist in rural areas, where communities face the most pronounced employment challenges, including fewer job opportunities and lower levels of labour market participation compared to those in urban centres and population hubs.¹⁹ These trends highlight the persistent systemic and structural barriers limiting equitable employment opportunities for Indigenous Peoples in Alberta's labour market.

¹³ Ibid.

¹⁴ Matthews, M., Clark, A., Henningsmoen, E., Ratcliffe, J., Legere, T., & Toor, M. (2023, March 7). What budget 2023 means for Alberta's digital economy. Information and Communications Technology Council (ICTC). <https://ictc-ctic.ca/articles/what-budget-2023-means-for-albertas-digital-economy>

¹⁵ National Indigenous Economic Development Board. (2024). The Indigenous Economic Progress Report 2024. Government of Canada. <https://www.naedb-cndea.com>

¹⁶ Office of the Auditor General of Alberta. (2022, May). Indigenous economic participation: Report of the Auditor General. Alberta Indigenous Relations; Alberta Labour and Immigration. <https://www.oag.ab.ca>

¹⁷ Government of Canada. (2025). Transition 2025: Minister Gull-Masty — Indigenous Services Canada overview (Book 2). Indigenous Services Canada.

¹⁸ Government of Alberta. (2024, May). "May 2024 Alberta Indigenous People Living Off-Reserve Package." <https://open.alberta.ca/dataset/2085ed31-71f5-4be0-b29a-dbf6b19ac825/resource/c164092f-c8ee-4dcb-b596-7febe47bd08c/download/jet-lfs-indigenous-package-2024-05.pdf>

¹⁹ National Indigenous Economic Development Board. (2024). The Indigenous Economic Progress Report 2024. Government of Canada. <https://www.naedb-cndea.com>

On-Reserve Labour Market Outcomes in Alberta

Current research on First Nations Peoples living on-reserve in Alberta remains limited, with existing studies often failing to capture the diversity across the province's 138 reserves and 8 Métis settlements.²⁰ According to the 2021 Census, 115,020 First Nations people with status resided in Alberta, with 36.2% or roughly 41,600 people living on-reserve.²¹ Labour market and income data reveal deep and persistent disparities between First Nations peoples living on-reserve and non-Indigenous Albertans. The median income for status First Nations individuals aged 25–64 living on-reserve was \$31,200, nearly \$23,200 lower than that of their non-Indigenous counterparts, underscoring the continuing economic marginalization of on-reserve populations.

Furthermore, almost one in three (30%) First Nations individuals living on-reserve were in low-income households, compared to just 8.6% among non-Indigenous Albertans.²²

Employment outcomes for Alberta's on-reserve First Nations population are similarly inequitable with an employment rate of only 40.4%, despite being the second lowest employment rate among all Canadian provinces and 34.4% below that of the non-Indigenous population. Moreover, educational attainment remains markedly low amongst Alberta's on-reserve First Nations population, with just 53.5% of on-reserve Indigenous People in Alberta having completed high school. Only 7.5% of Indigenous people in Alberta hold a university degree, which is one of the lowest rates nationally.²³

²⁰ Government of Alberta. (2024). Alberta broadband strategy: Investing to connect Albertans and grow the economy. <https://www.alberta.ca/alberta-broadband-strategy>

²¹ Statistics Canada. (2021, September). "Map 1: In 2021, 4 in 10 First Nations people with Registered or Treaty Indian status lived on reserve." <https://www150.statcan.gc.ca/n1/daily-quotidien/220921/mc-a001-eng.htm>

²² Indigenous Services Canada. (2023). An update on the socio-economic gaps between Indigenous Peoples and the non-Indigenous population in Canada: Highlights from the 2021 Census. Government of Canada. <https://www.sac-isc.gc.ca/eng/1690909773300/1690909797208>

²³ Ibid.

INDIGENOUS REPRESENTATION IN THE DIGITAL ECONOMY

While no official statistic currently reports the exact share of Alberta's digital jobs held by Indigenous workers, available evidence points to persistent underrepresentation of Indigenous Peoples in Canada's digital economy. According to research by the Brookfield Institute, Indigenous Peoples are employed in technology-related occupations and industries at roughly half the rate of non-Indigenous Canadians.²⁴ Nationally, data from the Tech and People Network indicate that Indigenous Peoples are employed less in the digital economy than in the broader labour market, accounting for only around 1% of Canada's digital workforce despite comprising approximately 5% of the national population.²⁵

THE DIGITAL DIVIDE: ACCESS, SKILLS, AND OUTCOMES

The digital divide in Canada, and in Alberta specifically, also remains a significant barrier to equitable access to Indigenous participation in the digital economy, especially for Indigenous communities in rural and remote areas. The digital divide can be understood across three levels: (1) unequal access to digital technologies, (2) differences in digital skills and usage, and (3) unequal outcomes resulting from technology use.²⁶

Access to Digital Technologies and Infrastructure

The first-level digital divide refers to inequalities in physical access to the internet and digital infrastructure and reflects a binary perspective

by focusing on accessibility to the Internet and ICT devices or the lack thereof.²⁷ Although more than 93% of Canadians have access to high-speed internet, this divide remains evident in Alberta, where nearly 489,000 residents still lack the speeds needed for remote work and learning.²⁸ The Canadian Radio-television and Telecommunications Commission's (CRTC) defines the "basic service objective" or BSO as the basic level of telephone service that the Commission has determined should be available to the public throughout Canada.²⁹ Notably, 67% of rural Albertans and 80% of Indigenous communities remain without reliable high-speed connections that meet the BSO.^{30,31}

Despite federal investments, connectivity challenges persist in rural and remote areas, including high subscription costs, technical barriers, and slow deployment of next-generation

²⁴ Dobbs, G., & Vu, V. (2023). Digital journeys: A path towards digital economic empowerment for Indigenous youths in Canada. Brookfield Institute for Innovation + Entrepreneurship. <https://brookfieldinstitute.ca>

²⁵ Tech and People Network. (2023, November 28). TAP Network releases 2023 report on diversity within Canada's tech sector [Press release]. Business Wire. <https://www.businesswire.com/news/home/20231128712493/en/TAP-Network-Releases-2023-Report-on-Diversity-within-Canadas-Tech-Sector>

²⁶ Scheerder, A., Van Deursen, A., & Van Dijk, J. (2017). Determinants of Internet skills, uses and outcomes. A systematic review of the second-and third-level digital divide. *Telematics and informatics*, 34(8), 1607-1624.

²⁷ Koch, K. (2022). The territorial and socio-economic characteristics of the digital divide in Canada. *Canadian Journal of Regional Science*, 45(2), 89-98.

²⁸ Government of Alberta, Alberta Broadband Strategy, accessed December 16, 2025, <https://www.alberta.ca/alberta-broadband-strategy>.

²⁹ Canadian Radio-television and Telecommunications Commission. Glossary. Basic service objective (BSO). Definition. https://crtc.gc.ca/multites/mtwdk_exe?k=glossary-glossaire&l=60&w=53&n=1&s=5&t=2

³⁰ Government of Alberta. (2024). Alberta broadband strategy: Investing to connect Albertans and grow the economy. <https://www.alberta.ca/alberta-broadband-strategy>

³¹ Worden, David, and Helen Hambly. (2022). "Willingness to pay and pricing for broadband across the rural/urban divide in Canada." *Telecommunications Policy*, 46(2). <https://doi.org/10.1016/j.telpol.2021.102247>.

networks like fibre-to-the-premises (FTTP). High infrastructure costs contribute to slower progress and lower network speeds. Furthermore, rural users pay significantly more, with installation fees being 46% higher and monthly costs 14% higher than in urban areas, with added expenses from equipment setup and limited data plans.³²

Indigenous communities in rural and northern regions face unique challenges regarding digital technology adoption. As researchers from the University of Calgary explain, these communities have historically been characterized by high poverty, underfunding of essential public services, and high digital infrastructure costs.³³ The economic situation and the high cost of connectivity mean that many Indigenous communities struggle to afford digital technologies. The variation in connectivity levels and infrastructure costs across regions further complicates the scenario, with some communities unable to access funding for broadband development.³⁴

Digital Skills and Capabilities

The second-level digital divide, or digital capability divide, extends beyond basic access to technology and concerns the skills and competencies required to use digital tools effectively – disconnecting those with the competencies and skills to benefit from computer use from those without. This divide reflects inequalities in individuals' ability to navigate, interpret, and apply digital technologies, which depend on factors such as technical skills, digital literacy, knowledge, and access to support networks.^{35,36}

The second-level digital divide is evident among Indigenous Peoples in Canada, whereby limited exposure to digital devices, technologies, and online services (first-level digital divide) restricts opportunities for practice and skill development

and hinders access to the digital skills, resources, and training needed to fully participate in the digital economy.

For example, a 2021 Royal Bank of Canada (RBC) survey on youth confidence in digital literacy revealed a 13% gap between Indigenous and non-Indigenous youth (53% versus 66%).³⁷ This gap is strongly associated with differences in internet access and frequency of use. Research shows that among Indigenous Peoples aged 15 and older, only 76.4% use the internet daily, compared to 91% of Canadians overall, underscoring how limited connectivity and fewer opportunities for digital engagement contribute to the second-level digital divide among Indigenous youth.³⁸

Outcomes and Opportunity

The third-level digital divide, often called the digital outcome divide, shifts the focus from access and skills to the benefits people realize from using ICT. It captures disparities in converting connectivity and digital skills into tangible offline outcomes (e.g., securing employment, accessing information more quickly, maintaining social ties, or obtaining lower prices online), and often arises from second-level skill gaps and broader contextual barriers.^{39,40}

This divide between Indigenous Peoples and the non-Indigenous population in Alberta presents significant challenges to e-learning and employment. However, various initiatives and programs are working to bridge this gap, promoting digital equity and providing Indigenous students and job seekers with the necessary resources and opportunities. Continued efforts to improve broadband connectivity, offer tailored educational programs, and support flexible work arrangements are crucial for supporting pathways to equip Indigenous Peoples for success in the digital age.

³² Worden, D., and Hambly, H. (2022). "Willingness to pay and pricing for broadband across the rural/urban divide in Canada." Telecommunications Policy, 46(2). <https://doi.org/10.1016/j.telpol.2021.102247>; MacKenzie, P. A. C. (2025). Bridging The Digital Divide and Mitigating Cyber Security Risks in Canada.

³³ O'Donnell, S., Beaton, B., McMahon, R., Hudson, H., Williams, D., and Whiteduck, T. (2016, June) "Digital Technology Adoption in Remote and Northern Indigenous Communities in Canada." University of Calgary, <https://susanodo.ca/wp-content/uploads/2017/06/2016-CSA-Digital-Technology-Adoption.pdf>

³⁴ Ibid.

³⁵ Zhang, J., Li, Y., & Fang, Z. (2025). Two digital divides and income inequality: a global perspective. Journal of Applied Economics, 28(1), 2568247.

³⁶ Mathrani, A., Sarvesh, T., & Umer, R. (2022). Digital divide framework: online learning in developing countries during the COVID-19 lockdown. Globalisation, Societies and Education, 20(5), 625-640.

³⁷ Royal Bank of Canada, Building Bandwidth: Preparing Indigenous Youth for a Digital Future, accessed December 16, 2025, <https://www.rbc.com/en/thought-leadership/economics/featured-insights/building-bandwidth-preparing-indigenous-youth-for-a-digital-future/>.

³⁸ Schrumm, A., S. Bell, and T. Smith. (2021, July 13). Building bandwidth: Preparing Indigenous Youth for a Digital Future.

³⁹ Ogbo, E., Brown, T., Gant, J., & Sicker, D. (2021). When being connected is not enough: An analysis of the second and third levels of the digital divide in a developing country. Journal of Information Policy, 11, 104-146.

⁴⁰ Scheerder, A., Van Deursen, A., & Van Dijk, J. (2017). Determinants of Internet skills, uses and outcomes. A systematic review of the second-and third-level digital divide. Telematics and informatics, 34(8), 1607-1624.

BARRIERS TO INDIGENOUS PARTICIPATION IN THE DIGITAL ECONOMY

STRUCTURAL AND GEOGRAPHIC BARRIERS FOR INDIGENOUS JOB SEEKERS

According to the First Nations Technology Council, several factors contribute to low Indigenous participation in the digital economy, particularly for those living on-reserve or in remote areas, where daily experiences and access to resources differ greatly from those in urban centres.⁴¹ Individuals living on-reserve report facing multiple barriers to reaching nearby towns and cities, including poor road and weather conditions, limited transportation options, high cost of travel and accommodation, and a lack of childcare. Additionally, fear of racism in urban settings continues to deter Indigenous People from participation in education and employment opportunities.

BROADBAND CONNECTIVITY AND BARRIERS TO E-LEARNING

Students living in Indigenous communities encounter severe barriers to e-learning, primarily due to gaps in affordable broadband internet and access to necessary hardware. According to an ICTC study on Indigenous e-learning and enabling technologies, many Indigenous nations still lack access to the minimum broadband connectivity set by the Government of Canada at 50/10 Mbps

(download/upload speeds).⁴²

The lack of reliable, high-speed internet significantly hinders students' ability to participate in online education, particularly highlighted during the "emergency remote teaching" of the COVID-19 pandemic.⁴³ Despite these challenges, Indigenous learning professionals are actively working to improve digital equity and to Indigenize learning through technology. Various programs aim to provide digital literacy training, develop culturally relevant educational content, and enhance broadband infrastructure in remote areas.⁴⁴ These initiatives also support preserving Indigenous languages and cultures by providing platforms for digital storytelling and language learning.

EMPLOYMENT BARRIERS FOR INDIGENOUS WORKERS

Accessing and Retaining Employment

Material and socio-economic factors such as gaps in literacy, education, limited broadband connectivity, limited access to transportation networks, and the need for more Indigenous role models are all critical high-level factors which act as barriers to Indigenous employment.⁴⁵ In general, individuals can face multiple employment barriers, which can interact to exacerbate the difficulty in finding and retaining employment. Such barriers can significantly and negatively affect an individual's employment

⁴¹ First Nations Technology Council, Information and Communications Technology Council, & Reciprocal Consulting Inc. (2022). Indigenous leadership in technology: Understanding access and opportunities in British Columbia. Government of Canada.

⁴² Lubendo, N., Rice, F., Toor, M., and Quan, T. (2023, October). Indigenous-led E-learning and Enabling Technologies: A Scan of Programs in Canada, Information and Communications Technology Council (ICTC), <https://ictc-ctic.ca/reports/indigenous-led-e-learning-and-enabling-technologies>

⁴³ Ibid.

⁴⁴ Ibid.

⁴⁵ Brown, P. (2023). "Building Bridges: Addressing Barriers to Indigenous Employment." FDM, <https://www.fdmgroup.com/news-insights/employment-barriers-for-indigenous-peoples/>.

prospects and socioeconomic outcomes in the long term if they are not surmounted.

According to an “Inclusive Growth Dialogue” on economic reconciliation convened by the Canadian Chamber of Commerce in 2023, the overarching barrier facing Indigenous Peoples in Canada consisted of “racism and discrimination that hindered their access to opportunities for advancement in various aspects of life, including education, employment, mentorship and financial services.”⁴⁶ In the Canadian labour market, racism and discrimination manifest themselves in adverse socio-economic outcomes, such as Indigenous people disproportionately confined to minimum wage jobs, with limited chance of advancement or recognition of their potential, as well as Indigenous entrepreneurs and businesses encountering difficulty securing capital and financing, and workers encountering difficulty accessing mentorship opportunities.

The Congress of Aboriginal Peoples 2022 Reconciliation Toolkit for Business Leaders noted that significant social and systemic barriers persisted in the Canadian workplace that continue to exclude Indigenous people.⁴⁷ Social obstacles identified in the toolkit include “False characterizations and stereotyping of Indigenous peoples,” “misconceptions and resentment about ‘special treatment’ for Indigenous job candidates,” and “cultural differences” between the Indigenous and other components of Canadian society that can lead to workplace “distrust, disrespect and misunderstanding.”⁴⁸ Systemic barriers listed in the toolkit include “bias among employers toward candidates with academic credentials and industry-specific experience,” “Lack of awareness amongst Indigenous peoples about employment opportunities,” as well as specific factors such as

low literacy, lack of access to transportation and childcare, and poverty.⁴⁹

In a report on employment gaps for Indigenous youth in Eastern Ontario, the United Way notes seven systemic barriers young Indigenous people faced in finding and retaining employment:⁵⁰

- › Education and job readiness;
- › Financial literacy;
- › Transportation;
- › Childcare and pregnancy;
- › Lack of Indigenous representation in the workplace;
- › Discrimination within the workplace;
- › Precarious work and the gig economy;
- › Workplaces are not trauma-informed and do not have appropriate mental health supports;
- › Workplace belonging and safety;
- › Digital literacy and connectivity.

Employment barriers such as these, particularly when encountered in combination with one another, can prove insurmountable for young people seeking employment in the contemporary Canadian economy. Furthermore, employment barriers can compound over time, negatively affecting multiple generations of Indigenous people within a community.⁵¹ In 2023, the Assembly of Seven Generations found that young Indigenous people in urban Canada experienced significantly higher unemployment when compared to non-Indigenous young Canadians and exacerbated socio-economic barriers when accessing employment.⁵² Common employment barriers for urban Indigenous youth included difficulty accessing childcare, safe and reliable transportation, difficulties with résumés and job interviews, and discrimination by employers.⁵³

⁴⁶ Canadian Chamber of Commerce. (2023). “What We Heard: Economic Reconciliation and Indigenous Entrepreneurship.” Inclusive Growth Dialogue, <https://chamber.ca/what-we-heard-economic-reconciliation-and-indigenous-entrepreneurship-inclusive-growth-dialogue/>

⁴⁷ Congress of Aboriginal Peoples. (2022). “Reconciliation Toolkit for Business Leaders.” <https://abo-peoples.org/wp-content/uploads/2022/11/Reconciliation-Toolkit.pdf>

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ Perkins, A. (2021). “The Employment Gap for Indigenous Youth in East Ontario.” United Way East Ontario, <https://www.unitedwayeo.ca/wp-content/uploads/2023/08/Indigenous-Employment-EN.pdf>

⁵¹ Jewell, E., Doucet, A., Falk, J., and Fyke, S. (2018). “Indigenous Employment Engagement in Niagara: Social Knowing, Discrimination, and the Importance of Indigenous Resources.” Brock University, <https://brocku.ca/social-justice-research-institute/wp-content/uploads/sites/119/Research-Report.pdf>.

⁵² Bach, A., and Fayant, G. (2023). “From Discrimination to Meaningful Work: A Look into the Status of Urban Indigenous Youth Employment.” Assembly of Seven Generations, <https://youthrex.com/wp-content/uploads/2023/07/A7G-%E2%80%93-From-Discrimination-to-Meaningful-Work.pdf>.

⁵³ Ibid.

Employment Barriers for Indigenous Workers in Rural Communities

Data from ICTC's Seeding Rural Innovation report shows a greater concentration of Indigenous Peoples in rural Alberta than in urban centres. Nearly one-fifth (18% to 19%) of households in Wood Buffalo (Cold Lake and Athabasca, Grande Prairie, and Peace River), and nearly one-tenth (8% to 9%) of households in Banff, Jasper, Rocky Mountain House, Red Deer, Camrose, and Drumheller identify as Indigenous, compared to just 3% of households in Calgary.⁵⁴

Indigenous people from 18 First Nations and six Métis settlements live in Alberta's oil sands region, amounting to approximately 23,000 Indigenous people living within proximity to the oil sands.⁵⁵ As a result, Indigenous men are often streamed into roles such as trades, general labour, and heavy equipment operation, and many leave school early to enter work in the oilfield. On the other hand, Indigenous women are typically streamed into traditionally female-dominated professions, such as administrative support, teaching, and social work.⁵⁶

The Parkland Institute found that Indigenous people living off-reserve in Alberta are most likely to work in one of five industries: construction, health care and social assistance, retail trade, forestry, fishing, mining, oil and gas, and accommodation and food services.⁵⁷ The continued lag in educational attainment for Indigenous people means that jobs that require a post-secondary education may not be accessible.

Discrimination and stereotypes exacerbate these challenges, with Indigenous workers frequently starting in unskilled labour positions and facing slower career progression compared to non-Indigenous counterparts. For workers in more rural regions of Alberta who participated in the Parkland study stated, "labourer jobs are the entry point into industry." At the same time, these participants noted

a desire to get out of labourer jobs and a recognition that it is difficult to advance from them.⁵⁸ One worker reflected that he "should have went the education way and got some kind of degree or diploma" because he "was in the mud for a long time." Another explained that "it's hard to move up as a labourer ... you're in maintenance [and] there's nothing higher."

This marginalization is compounded by hiring practices favouring non-Indigenous workers and a regional research focus that overlooks localized issues. For example, research on the oil sands industry tends to be concentrated in areas like Fort McMurray, leading to a lack of comprehensive understanding of the challenges faced by Indigenous communities across the region. This imbalance in research focus means that localized issues may be overlooked, and policy responses may not adequately address the unique needs of Indigenous workers.

Analysis of the rural labour market in Alberta uncovers significant talent shortages across roles. The skilled trades accounted for the most significant demand, with more employers seeking to hire workers in this field than the next three combined: professional services or scientific roles, sales roles, and technology roles. It was noted that the shortage is so acute that many employers highlight it as a top impediment to growth, productivity, and efficiency.⁵⁹

Challenges in retaining youth and attracting new workers are strongly tied to limitations with digital skills training, including a self-propelling cycle whereby a lack of local educators and few youths creates barriers for rural communities to acquire the infrastructure needed to consistently deliver digital skill training locally.⁶⁰ In turn, limited education training opportunities dissuade interested candidates and teachers from staying in rural areas. As a result, the combination of these factors restricts the growth of the local technology ecosystem and subsequent opportunities for Indigenous youth and workers.

⁵⁴ Cutean, A., and Matthews, M. (2023, September). "Seeding Rural Innovation: Nurturing the Tech Frontier in Alberta." Information and Communications Technology Council (ICTC), <https://ictc-ctic.ca/reports/seeding-rural-innovation>

⁵⁵ Beausoleil, D., Munckittrick, K., Dubé, M., and Wyatt, F. (2022, March). "Essential components and pathways for developing Indigenous community-based monitoring: Examples from the Canadian oil sands region," Integrated Environmental Assessment and Management, Special Series: A Decade of Research and Monitoring in the Oil Sands Region of Alberta, Canada, vol. 18, no. 2, 407-427, <https://doi.org/10.1002/ieam.4485>.

⁵⁶ Alook, A., Hussey, I., and Hill, N. (2019, February). "Indigenous Gendered Experiences of Work in an Oil-Dependent, Rural Alberta Community." Parkland Institute, <https://d3n8a8pro7vhmx.cloudfront.net/parklandinstitute/pages/1681/attachments/original/1550688239/indigenousexperiences.pdf?1550688239>

⁵⁷ Ibid.

⁵⁸ Ibid.

⁵⁹ Lubendo, N., Rice, F., Toor, M., & Quan, T. (2023, October). Indigenous-led e-learning and enabling technologies: A scan of programs in Canada. Information and Communications Technology Council (ICTC). <https://ictc-ctic.ca/reports/indigenous-led-e-learning-and-enabling-technologies>

⁶⁰ Cutean, A., and Matthews, M. (2023, September). "Seeding Rural Innovation: Nurturing the Tech Frontier in Alberta." Information and Communications Technology Council (ICTC), <https://ictc-ctic.ca/reports/seeding-rural-innovation>

Indigenous identity has important implications for Alberta's labour force. In areas where there is a high percentage of Indigenous Peoples, employers need to establish close, reciprocal relationships with the community and create valuable training and employment opportunities for Indigenous talent. In areas with a low percentage of Indigenous people, it becomes essential for employers to expand recruitment strategies beyond personal networks and adopt equity, diversity, and inclusion best practices for creating safe and inclusive workplaces. Indigenous talent is an important strength of rural Alberta, but discriminatory practices and unsafe workspaces can prevent employers and Indigenous talent from reaching their full potential.⁶¹

Employment Barriers for Indigenous Workers in Remote Communities

A 2016 report on factors of participation in Indigenous labour market programs identified substantial barriers such as lack of high school diploma; "health, disability and psychosocial issues"; as well as childcare obligations as key barriers for Indigenous people to participate in training and labour market development programs.⁶² The lack of access to banking and difficulty accessing reliable transportation to and from remote communities also prevent Indigenous people from accessing workforce training.⁶³ For Indigenous communities in remote locations, the absence of training venues, lack of qualified trainers, and lack of ICT connectivity represented other significant barriers.⁶⁴

In some Indigenous communities, secondary school students cannot access senior academic-track science and mathematics courses, which are often prerequisites for enrolment in post-secondary-level

science, engineering, and technology degrees.⁶⁵ This is particularly true for fly-in/fly-out communities in the country's most remote parts.

Cultural Barriers to Indigenous Career Growth

Indigenous workers in Canada report barriers to career growth including limited career advancement opportunities, lack of access to training and career development, and insufficient compensation.⁶⁶ Conversely, these career growth barriers encountered by Indigenous workers manifest themselves as retention challenges for employers.

A study by the Future Skills Centre finds a significant disconnect between the "leadership values" of corporate Canada and Indigenous communities, with corporate Canada emphasizing "individual success" and prizing "assertive communication" styles, while Indigenous communities stress "community success, storytelling, collaboration and stewardship."⁶⁷ This creates a situation where Indigenous workers must navigate two different cultural "worlds" with opposing values.⁶⁸ As research from the Banff Centre notes, neoliberal modes of economic production and flawed Western modernization theories can "clash" with Indigenous values and cultural beliefs.⁶⁹

Indigenous workers can find this clash of values and norms between their communities and the Canadian workforce jarring and challenging to navigate.⁷⁰ Indigenous women, who already face gender-based discrimination and prejudice in the workplace, face a dilemma of meeting both their professional workplace responsibilities as well as their commitments to their communities, which can ultimately result in stifled career growth for many female Indigenous workers.⁷¹

⁶¹ Ibid.

⁶² Wannell, T., and Currie, S. (2016). "Determinants of Participation in Indigenous Labour Market Programs." Social Research and Demonstration Corporation, <https://www.srdc.org/wp-content/uploads/2022/07/ilm-determinants-report.pdf>.

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ Tata. (2019). "Digital Directions: Towards skills development and inclusion of Indigenous Peoples in the new economy." Canadian Council for Aboriginal Business and Tata Consultancy Services, https://www.ccab.com/wp-content/uploads/2019/02/Digital-Directions-TCS-Report-Digital-Full-Report_AA-FINAL.pdf

⁶⁶ Howard A., Edge, J., and Watt, D. (2012). "Understanding the Value, Challenges, and Opportunities of Engaging Métis, Inuit, and First Nations Workers." The Conference Board of Canada, <https://www.cbc.ca/toronto/features/hlp/pdf/UnderstandingtheValue-RPT.pdf>

⁶⁷ Cukier W., Zou, C., Alexiou, L., Messiri, O., and Walsh, M. (2024). "Skills for Inclusive Workplaces and the Advancement of Indigenous Peoples." Future Skills Centre, <https://fsc-ccf.ca/research/skills-for-inclusive-workplaces-and-the-advancement-of-indigenous-peoples/>.

⁶⁸ D'Antimo, S. (2021). "Navigating Two Worlds: Paths to Indigenous Career Success." Indspire, <https://indspire.ca/wp-content/uploads/2021/11/Navigating-Two-Worlds-Report-EN-Final-WEB.pdf>.

⁶⁹ Calliou, B. and Wesley-Esquimaux, C., (2015). "A Wise Practices Approach to Indigenous Community Development in Canada," in Voyageur, C., Brearley, L., and Calliou, B. (eds.) Restorying Indigenous Leadership: Wise Practices in Community Development (2nd edition), Banff Centre Press, Retrieved from https://www.banffcentre.ca/sites/default/files/Lougheed%20Leadership/Research/Indigenous/2_Chapter_1.pdf

⁷⁰ Thiessen, S. (2023). "Engaging First Nations People at Work: The Influence of Culture and Context." Administrative Sciences, vol. 13, no. 8, <https://www.mdpi.com/2076-3387/13/8/179>

⁷¹ Cukier W., Zou, C., Alexiou, L., Messiri, O., and Walsh, M. (2024). "Skills for Inclusive Workplaces and the Advancement of Indigenous Peoples." Future Skills Centre, <https://fsc-ccf.ca/research/skills-for-inclusive-workplaces-and-the-advancement-of-indigenous-peoples/>.

BARRIERS TO INDIGENOUS PARTICIPATION FOR EMPLOYERS

SOURCING AND HIRING INDIGENOUS TALENT

Despite concerted efforts in recent years to improve diversity, equity, and inclusion (DEI) and reconciliation, employers continue to face significant challenges in sourcing and hiring Indigenous talent. Recruitment professionals' lack of understanding of Indigenous cultures, histories, and current issues is a critical barrier to sourcing Indigenous talent.⁷²

A 2023 report by the United Way emphasizes the importance of organizations establishing Indigenous committees and bringing in perspectives of those with lived experience to foster genuine relationships and gain insights into First Nation, Métis and Inuit culture. This approach helps ensure that recruitment strategies reflect the unique needs and cultural contexts of Indigenous Peoples. Importantly, direct engagement with Indigenous Peoples is crucial to build trust and ensure culturally sensitive recruitment strategies.

Misconceptions about the availability and location of Indigenous talent also pose significant barriers. While Indigenous talent is primarily located in rural or remote areas, thought leadership by Indigenous Corporate Training Inc. notes that Indigenous populations in urban centres are quickly growing.⁷³ Additionally, reliance on automated screening tools can inadvertently discriminate against diverse

candidates, including Indigenous applicants, due to cultural differences in communication styles and experiences.⁷⁴ If tools are created with bias, they can result in overlooked non-traditional career paths and an undervaluation of the unique skills and perspectives that Indigenous candidates bring to the workforce.

Employers' perspectives on flexible work arrangements can also pose a barrier to hiring Indigenous talent. The Public Service Commission of Canada highlights the importance of flexible work options to accommodate the needs of Indigenous employees and maintain their connection to their communities.⁷⁵ Remote work is a promising option for Indigenous job seekers who prefer to remain in or closer to their communities than move to economic hubs such as Calgary or Edmonton. However, connectivity issues in remote and northern communities can hinder these arrangements.

⁷² Public Service Commission of Canada. (2023). Barriers to Indigenous recruitment. Government of Canada. https://www.canada.ca/en/public-service-commission/services/publications/open-info/barriers-to-indigenous-recruitment.html#_Annex

⁷³ Indigenous Corporate Training Inc. (2023, February 2). 11 community outreach tips for Indigenous recruitment. Working Effectively with Indigenous Peoples. <https://www.ictinc.ca/blog/11-community-outreach-tips-for-indigenous-recruitment>

⁷⁴ Indigenous Corporate Training Inc. (2015, July 8). First Nation recruitment: 8 tips for interviewing candidates. Working Effectively with Indigenous Peoples. <https://www.ictinc.ca/blog/first-nation-recruitment-8-tips-for-interviewing-candidates>

⁷⁵ Public Service Commission of Canada. (2023). Barriers to Indigenous recruitment. Government of Canada. https://www.canada.ca/en/public-service-commission/services/publications/open-info/barriers-to-indigenous-recruitment.html#_Annex

PRIMARY DATA FINDINGS

Primary data collection included an employer survey, a survey of Indigenous community members, two focus groups, and key informant interviews. Further details can be found in [Appendix A](#).

Participants consistently emphasized that Indigenous youth already possess strong “raw” digital skills and high levels of interest in technology. As one participant noted, many Indigenous youths are adept users of phones, tablets, gaming platforms, and social media, and are curious about emerging areas such as AI:

“We find that when it comes to technology, the current generation, the raw skill level, the raw talent level is probably the same as it is in any other population in the world...” – Interview Participant

According to both the employer and community participants, there are meaningful and growing opportunities for Indigenous people in Alberta’s digital economy. While many of these opportunities are already taking shape in communities many others could be significantly expanded with the right supports.

Participants consistently highlighted entrepreneurship as one of the strongest current entry points into the digital economy, as outlined later in the report.

Beyond entrepreneurship, participants pointed to broader, community-level innovation as an important opportunity area, with technology being integrated into everyday life that made its value immediate and visible in some communities. For example, drone technology in Frog Lake First Nations is deployed in environmental monitoring, search and rescue, and wildfire response:

“We use those drones in our community with our security forces... we actually successfully recovered people that were lost in the wilderness... we saved multiple homes with making sure we knew where the wildfire was coming from. So, it further exemplifies how we can incorporate tech career paths.”
– Clifton Cross, Frog Lake First Nations

In another example, some Indigenous communities are leveraging federal partnerships and regulatory flexibility on reserve to lead in renewable energy, housing innovation, and decentralized utilities.

These efforts show how digital tools, data, and advanced technologies can support community-driven visions of net-zero housing and Indigenous-owned infrastructure. Clifton Cross, a council member in Frog Lake First Nation, described this work in detail:

“Within Alberta, they’ve tried to kneecap a bunch of renewable initiatives that Frog Lake in general was trying to take advantage of right off the go when the pandemic slowed down, so that no moratorium limits our entrepreneur initiatives. But within our own borders, we do not have to adhere to all the provincial substandards that are being set forth. I think that our relationship with the federal government can actually implore a lot more initiatives like this in terms of innovation, supply chain involvement.

We are taking on manufacturing in a big way, trying to be a part of that broader vision... Which is why we focus so much on delivery of housing systems towards net zero initiatives, code acceleration programs. We are actually actively working with Canada retrofit on all of these interlocking holistic ideas... we call it the World Indigenous Linked Legacy Operating Systems, or WILLOWS... to work in tandem with the Alberta grid systems and become our own decentralized First Nation utility. That’s how you lead the way, without being overwhelmed by the red tape, the regulation systems. On First Nations, you can do that.”

Most employers interviewed for this research expressed strong support for increasing Indigenous participation in Alberta’s digital economy, as well as Indigenous community members emphasizing the concrete and emerging opportunities for Indigenous people in Alberta’s digital economy. However, participants in this research, both employers and community members, emphasized that barriers operate at multiple levels from individual-level, organizational practices, and broader systemic inequities that collectively shape access, opportunities, and career outcomes.

At the individual-level, participants pointed to a range of attitudinal and psychological barriers that shape Indigenous peoples’ participation in Alberta’s digital economy, with employer attitudes forming an important part of this landscape.

INDIVIDUAL-LEVEL BARRIERS

Employer attitudes play a powerful role in shaping hiring decisions and workplace policies. Research over several decades shows that these attitudes can directly influence whether individuals are welcomed, supported, or excluded in the labour market. Early studies, particularly early work concerning the employment situations of Aboriginal and Torres Strait Islander peoples of Australia, suggested that employer perceptions and behaviours significantly contributed to employment disadvantages experienced by Indigenous peoples.⁷⁶ More recent work continues to highlight that employer attitudes and actions remain a significant factor affecting Indigenous employment outcomes.^{77, 78, 79, 80}

This research, including interviews with employers across Alberta's digital economy and the accompanying employer survey, found that employers hold a spectrum of views about hiring Indigenous people in Alberta. These perspectives can be broadly grouped into **active**, **passive**, and **dismissive** approaches, each shaping recruitment practices in distinct ways.

Active employers described deliberate strategies to increase Indigenous representation. Some emphasized an institutional commitment to ensuring that their workforce reflects the communities they serve. For example, one employer interviewee noted that in their organization, "we have aspirations to make sure that our workforce mirrors our customer base and so we have an intentional focus on bringing in Indigenous talent, much like the rest of the financial institutions in Canada." Another employer noted the creation of targeted hiring pathways, explaining that, "There are roles at our organization that are what we call 'dedicated requisitions' where we are seeking out Indigenous people for specific roles." Another employer reinforced the need for proactive outreach and argued that Indigenous hiring is both a priority and a responsibility.

Passive employers, by contrast, expressed openness to hiring Indigenous candidates but lacked targeted strategies. As one employer explained, "We do

not [have programmes specific to Indigenous peoples], but we do see a number of folks from that demographic through our other programmes." Others framed their approach as talent-neutral, saying, "We're not really locked in on 'we must hire from here or hire from here,' we just look for the best talent to fill the best roles." Some acknowledged room for improvement and noted, "there's a lot more that we can do... we're open, but I think we can do a better job." These employers do not actively seek Indigenous applicants, but they recognize the value of inclusive hiring in principle.

A smaller group expressed **dismissive** attitudes, minimizing organizational responsibility or placing the burden on Indigenous candidates. When asked whether they had adapted hiring practices to better support Indigenous recruitment, one employer responded simply "Short answer, no." Others questioned the readiness of Indigenous applicants, stating, "We just don't find that they have the level of education that we need to fulfil our needs," or "I would love to hire an Indigenous person... I just have not interviewed one that could do any of the jobs that we've had."

Together, these findings show how employer mindsets, from highly proactive to openly dismissive, play a central role in shaping Indigenous participation in Alberta's digital workforce. However, employer attitudes are only one part of the broader picture. Perspectives shared by focus group participants highlight confidence and fear of entering unfamiliar spaces as individual-level barriers that can influence whether Indigenous people pursue or remain in digital careers. Some individuals who participated in the focus groups described how the legacy of colonialism and ongoing systemic inequities can profoundly influence individual self-perception and confidence.

A growing body of literature in the area of vocational psychology demonstrates that self-confidence, also termed 'self-efficacy' or the "belief in the ability to perform and achieve success in a particular task,"⁸¹ is a central driver of job-search behaviour and success, with several studies showing that self-

⁷⁶ Altman, J. C., & Nieuwenhuysen, J. (1979). The economic status of Australian Aborigines. Deakin University.

⁷⁷ Larkin, Steven Raymond. (2014). "Race matters: Indigenous employment in the Australian public service." PhD diss., Queensland University of Technology.

⁷⁸ Tulele, Loraini V. (2020). "Employer Attitude/Behaviour Matters: Impact of Employer Attitude/Behaviour on Indigenous Employees' Skill Acquisition and Employment Experience in the Australian Mining and Finance/Banking Sectors."

⁷⁹ Sammartino, A., O'Flynn, J. L., & Nicholas, S. J. (2003). The employer perspective of Indigenous (un)employment. *Economic Papers*, 22(4), 45-60.

⁸⁰ Caron, J., Asselin, H., & Beaudoin, J.-M. (2019). Attitudes and behaviors of mining sector employers towards the Indigenous workforce. *Resources Policy*, 61, 108-117.

⁸¹ Pham, M., Lam, B. Q., & Bui, A. T. N. (2024). Career exploration and its influence on the relationship between self-efficacy and career choice: The moderating role of social support. *Heliyon*, 10(11).

efficacy beliefs shape whether individuals look for work and which job pathways they regard as realistic and worth pursuing.^{82,83} According to this literature, while career choice is a highly complex process,⁸⁴ individuals with higher self-confidence are more likely to see higher-status, competitive, or non-traditional roles as viable options and to direct their applications toward those kinds of jobs, while those with lower self-efficacy self-select into narrower and often lower-quality opportunities.⁸⁵

A recurring theme that emerged from interviews with Indigenous workers was the impact of low confidence on Indigenous participation in Alberta's digital economy. Participants explained that even when skills and interest are present, feelings of self-doubt, fear of failure, and being "the only one" in certain spaces can discourage Indigenous people from pursuing or advancing in digital careers.

A focus group participant working as an Indigenous program coordinator described how internalized assumptions can shape career aspirations, for them:

"I automatically assume that I would not have the 'natural intelligence' for that sort of role. I would think that others would feel that way as well, because my family and other Indigenous people, we go for cultural work or trades work."
- Focus Group Participant

Others noted that a lack of confidence leads many to settle for lower-paying or lower-status jobs, even when they might be capable of pursuing more advanced roles. One interviewee referenced this manifesting as a "take whatever [you] can get" mindset, stemming from thoughts or feelings of not being "prepared enough" or "good enough" to reach for higher paying or higher status roles. The same interviewee shared their perspective that with digital careers not yet being as popular among Indigenous peoples, "I would imagine people would feel very self-conscious and out of place."

Fear of entering unfamiliar fields was also connected to intergenerational barriers in education. For many, being the first in their families to graduate high school or attend college added pressure and insecurity. Low confidence also emerged in settings such as job interviews, where the lack of networks and intergenerational connections was seen as an additional barrier. Similarly, participants highlighted how the experience of being one of the only Indigenous people in a workplace can reinforce feelings of isolation and insecurity, leading some to leave positions altogether. As summarized by one interviewee, "I think it might be kind of scary ... or might create hardships when in the role, being possibly the only Indigenous person."

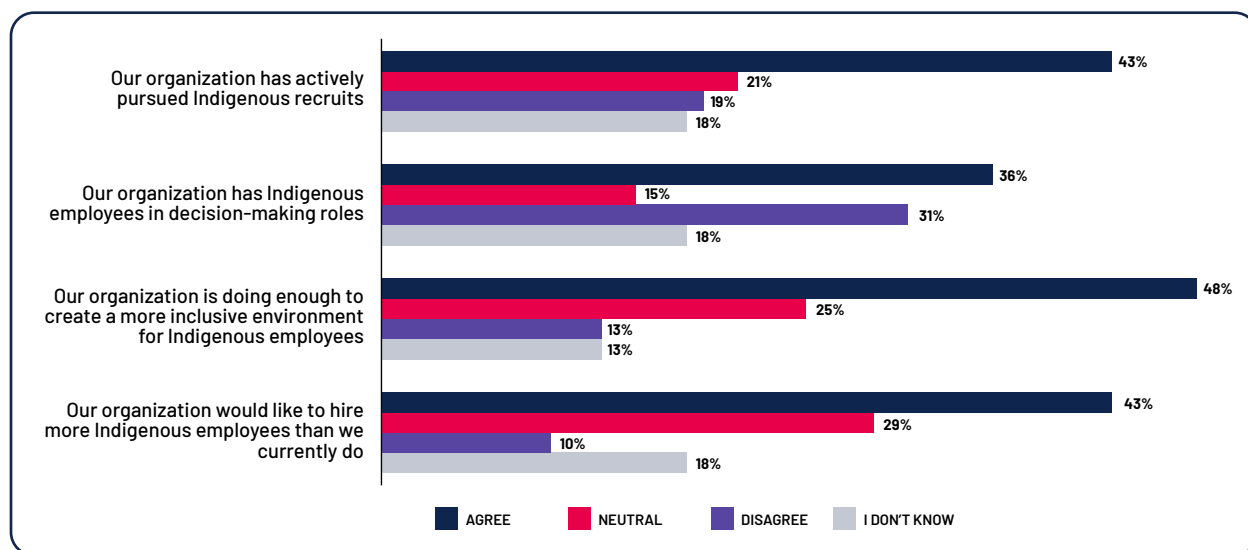


Figure 2. Employer perspectives on Indigenous inclusion. Alberta Labour Market Study Employer Survey, N=500

⁸² Hackett, G., & Betz, N. E. (1995). Self-efficacy and career choice and development. In Self-efficacy, adaptation, and adjustment: Theory, research, and application (pp. 249-280). Springer US.

⁸³ Song, Z., & Chon, K. (2012). General self-efficacy's effect on career choice goals via vocational interests and person-job fit: A mediation model. *International Journal of Hospitality Management*, 31(3), 798-808.

⁸⁴ Pham, M., Lam, B. Q., & Bui, A. T. N. (2024). Career exploration and its influence on the relationship between self-efficacy and career choice: The moderating role of social support. *Heliyon*, 10(11).

⁸⁵ Ibid.

ORGANIZATIONAL BARRIERS

Beyond individual barriers, participants emphasized that organizational, or institutional, barriers also play a significant role in shaping Indigenous peoples' access to Alberta's digital economy. These barriers, created by the company's "formal policies and informal practices," arise from workplace cultures, policies, and practices that can limit entry, advancement, and long-term inclusion.⁸⁶ In this context, organizational barriers arise when recruitment and hiring practices inadvertently limit Indigenous participation, for example, relying solely on digital application systems or conducting interviews in ways that do not reflect or accommodate Indigenous cultural norms.⁸⁷

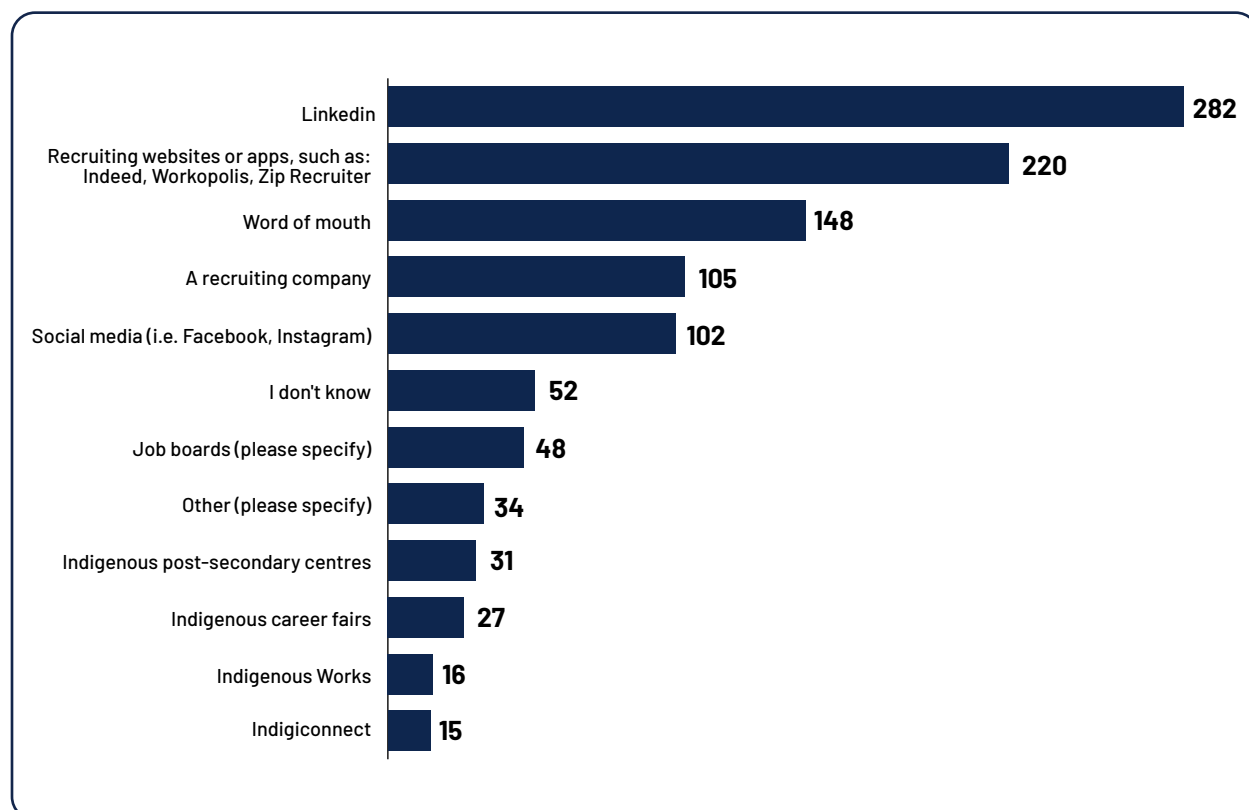


Figure 3. Employer recruitment/advertising strategies. Alberta Labour Market Study Employer Survey N=500

⁸⁶ Merrill, Evelyn H., Patricia L. Kennedy, Susan K. Skagen, and Kathy A. Granillo. (2022). "Personal and institutional barriers to success." Women in wildlife science: building equity, diversity, and inclusion. Johns Hopkins University Press, Baltimore, Maryland, USA: 82-112.

⁸⁷ The Readiness and Resilience: Mapping the Contours of the Indigenous Skills and Employment Ecosystem in Canada report is led by Canadian Council for Aboriginal Business, in collaboration with the Diversity Institute at Toronto Metropolitan University's Ted Rogers School of Management as a research lead for the Future Skills Centre.

RECRUITMENT BARRIERS

In the employer survey, the most commonly used recruitment or job advertising tool was LinkedIn (56%), followed by popular recruiting websites or apps such as Indeed, Workopolis, Zip Recruiter, etc. (44%). Word of mouth (30%) and using a recruiting company (21%) were both more common than using social media (20%) for recruitment and/or advertising purposes. In interviews with Indigenous workers, social media was commonly referenced as popular, especially Facebook.

An interviewee who worked in Indigenous relations shared that “everyone shares good opportunities on Facebook,” as well as word of mouth. An interviewee who identified as Metis described “what some of us colloquially call the ‘moccasin telegraph.’ Word of mouth in our communities is huge...Less

so in the large cities...but you go somewhere like Bonneville, Lac La Viche, Grande Prairie, that’s exactly how you’re going to get people interested in your program, is to talk to the grandmas.” They explained further that “I think what is the greatest and will always be the greatest is the Kokum’s, the grandmas. You let them know about a project coming up and they’ll make sure every one of their kids and grandkids know about it, and then they’ll make sure they do something about it too.”

An employer who completed an interview spoke to the importance of word of mouth and community engagement, that “becoming a familiar face in the community is important so you can build trust. We attend all the job fairs, we’ve done open houses, we’ve done ones that are specific to our company where we talk about like what we’re looking for, the roles, and I think that’s a good way to start.”

BARRIERS TO TRAINING IN TECH

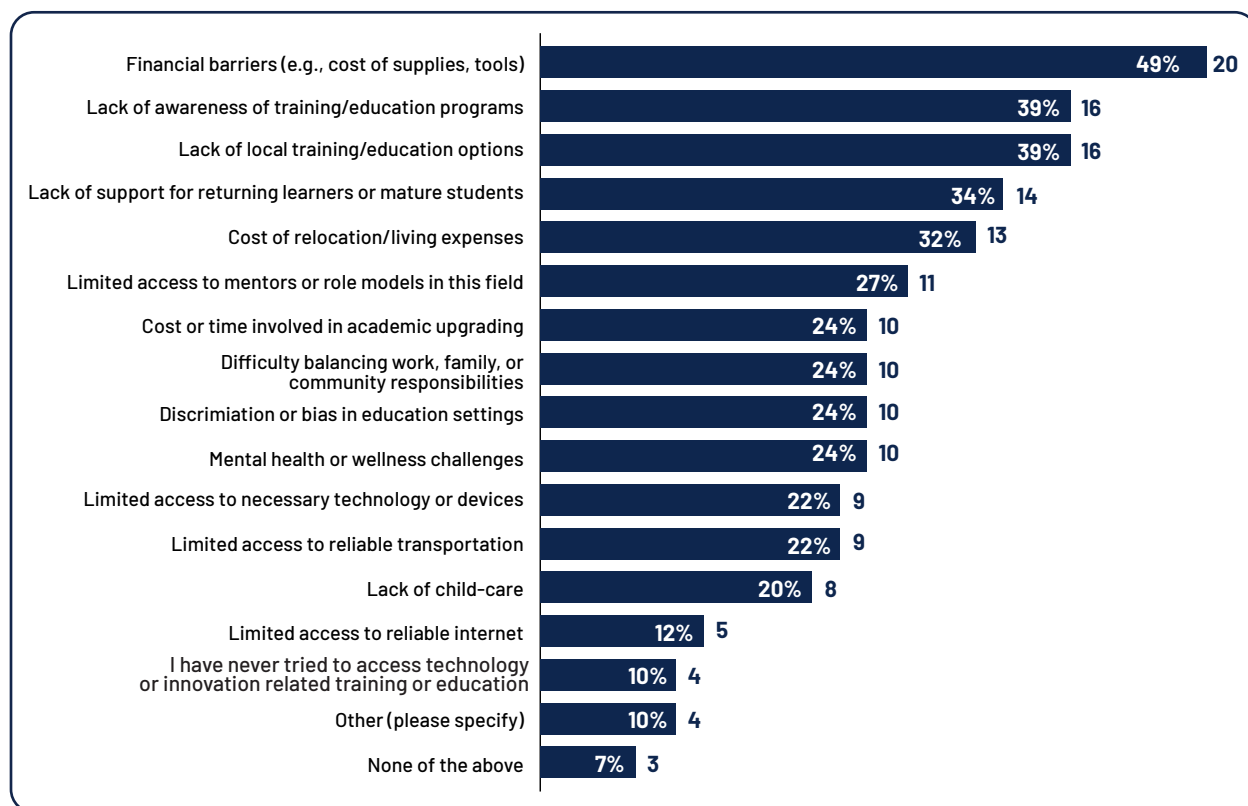


Figure 4. Barriers to accessing tech-related training. Alberta Labour Market Study Indigenous Job Seeker Survey N=55

In the community survey, respondents cited financial barriers (e.g., cost of courses, tools, etc.) (47%), lack of awareness (39%), and lack of local options (39%) as the main three barriers to gaining tech training, as shown in Figure 4. The Indigenous Job Seeker survey's qualitative notes highlight a confidence and clarity gap among some learners, with respondents reporting limited experience, uncertainty about day-to-day role expectations, and concern that basic computer familiarity might not translate into success in tech-specific jobs. Addressing these perceptions with role-realistic previews, guided project work, and near-peer mentors can make pathways more tangible and lower the 'first-step' barrier.

Participants in this research emphasized that several organizational-level barriers continue to limit Indigenous participation in Alberta's digital economy. A recurring barrier identified by many participants was the absence of culturally safe environments within organizations. Employers acknowledged that Indigenous employees experience being singled out, tokenized, or placed in situations where their identity is overly emphasized, rather than integrated respectfully into workplace culture.

Many employers noted that while organizations often reference diversity, equity, and inclusion (DEI) goals, these initiatives frequently fail to meaningfully integrate Truth and Reconciliation Commission (TRC) calls to action or Indigenous-specific commitments, specifically the TRC's Call to Action 92 which directs corporate Canada to "ensure that Aboriginal peoples have equitable access to jobs, training, and education opportunities in the corporate sector, and that Aboriginal communities gain long-term sustainable benefits from economic development projects."⁸⁸

Interviewees and Advisory Committee members noted the common mistake of folding Indigenous issues into generic DEI work, with one participant noting their observation that "a lot of organizations want to lump Indigenous needs in with a diversity lens. And I would say that's a mistake... it needs to remain Indigenous-specific." This interviewee noted that Indigenous inclusion should also be Indigenous-led. Others described efforts to separate Indigenous inclusion from broader DEI

frameworks but acknowledged that not all employers have made this shift. Employers that do have separation between DEI and Indigenous inclusion shared their perspective on the matter as "Truth and Reconciliation and Indigenous inclusion are a separate path and a commitment that we have."

Consistent with a growing body of scholarship and policy guidance, some employers who participated in this research noted the necessity of Indigenous-Specific Strategies and not relying on generic DEI.⁸⁹ Recent scholarship argues that "general equity, diversity and inclusion policies are insufficient"⁹⁰ and that Indigeneity must be distinguished from general DEI efforts.⁹¹ This body of literature argues that Indigenous peoples are rights-holders whose Nationhoods, Treaties, laws, and cultures cannot be "flattened" into generic diversity frameworks, and that treating Indigeneity as simply another DEI category risks erasing these distinct obligations and governance relationships. Instead, according to this research institutions must create Indigenous-specific strategies that support belonging while also respecting and being accountable to Indigenous Nationhood's and Treaties.⁹²

One participant observed that "a lot of organizations sort of want to lump 'Indigenous' and the needs of Indigenous employees in with sort of a diversity lens and perspective. And I would say that that's a mistake... there's lots of nuances as it relates to Indigenous-specific work. And so, it needs to remain Indigenous specific, and it should be Indigenous led."

Another employer reinforced this point, noting their organization treats Indigenous inclusion as a separate and dedicated area of commitment aligned with reconciliation obligations. One employer described how their most successful initiatives were those built explicitly through an Indigenous lens, rather than retrofitting generic DEI or training models:

"The programs that we were able to create that had the most success were really created through the Indigenous lens that translated into a non-Indigenous world... everything tied back to the land, everything had that Indigenous lens, when we're talking about different facets of a business, we related it back to The Medicine Wheel."

⁸⁸ Government of Canada, Delivering on Truth and Reconciliation Commission Calls to Action, Crown-Indigenous Relations and Northern Affairs Canada, accessed March 16, 2026, <https://rcaanc-cirnac.gc.ca/eng/1524494530110/1557511412801>.

⁸⁹ Government of Canada. Business and Reconciliation: Delivering on Truth and Reconciliation Commission Call to Action 92. Crown-Indigenous Relations and Northern Affairs Canada. Last modified August 2021. <https://www.rcaanc-cirnac.gc.ca/eng/1524506030545/1557513309443>.

⁹⁰ Canadian Council for Indigenous Business & TMU Diversity Institute (2024), Skills for Inclusive Workplaces and the Advancement of Indigenous Peoples.

⁹¹ Lee, E.-Y., Dogra, S., Manson, G., Manyanga, T., McGuire-Adams, T., & Yi, D. K. J. (2025). Call to action on indigenization and equity, diversity, inclusion, and accessibility in physical activity and health research: Recommendations for Canadian institutions, tri-agency, and academic societies. *Journal of Physical Activity and Health*, 22(6), 644-649.

⁹² Ibid.

SYSTEMIC BARRIERS

Participants across interviews, both Indigenous community members and employers, emphasized that many of the most significant barriers limiting Indigenous participation in Alberta's digital economy extend far beyond individual attitudes or organizational practices. These **systemic barriers**, or barriers that are "deeply ingrained, widespread obstacles within societal structures that create and maintain unequal opportunities for certain groups" are rooted in the historical and ongoing impacts of the structural conditions that shape access to education, infrastructure, mobility, and opportunity.⁹³

Research has shown that Indigenous employees often experience a range of challenges, including racism and discrimination,⁹⁴ with global evidence suggesting that Indigenous people are more likely to experience harm in the workplace, including various forms of anti-Indigenous racism, unconscious bias, microaggressions, and discrimination.⁹⁵ The participants in this research identified several barriers that, in their view, limit Indigenous peoples' access to employment in Alberta's tech and innovation sectors.

One participant identified continued racism as the primary barrier limiting Indigenous youth and workers from entering Alberta's digital economy. Drawing on their own experience and networks in the sector, they emphasized that exclusion is not just theoretical but something they have repeatedly heard about from business owners in the community:

"I think there's a prevalence of racism around Indigenous [peoples] in Alberta. And I think that's the biggest blocker. Like, yeah, I know business owners that won't come out and say it, but I'm pretty sure they wouldn't hire an Indigenous person."
– Focus Group Participant

Employers who participated in this research also described how stereotypes and unconscious bias

continue to shape perceptions of Indigenous workers. One participant reflected on what they had seen in their industry, noting "They are recognized in the industry, but not from the standard that they should be. The industry really looks at them as [entry] level."

Indigenous people across Canada experience inequities that have been shaped by a long history of colonialism, discrimination, and marginalization. For example, Indigenous groups across Canada are more likely to live in a low-income situation than the non-Indigenous population. Indigenous people are overrepresented in the homeless population in Canada and are substantially more likely to live in substandard, unsafe, or overcrowded housing, including homes with mould, unreliable power, structural deficiencies, or major repair needs.⁹⁶

In 2023, 17.5% of Indigenous people in Canada lived below the poverty line, nearly double the rate of the non-Indigenous population. Indigenous children have a disproportionately high poverty rate, with over 25 percent living in a low-income household as of 2021.⁹⁷ Additionally, many of Canada's Indigenous communities also experience water insecurity on an extreme scale, with problems including water quality, quantity, access, and wastewater and sewage management.⁹⁸ According to the Assembly of First Nations, 75% of the 740 water treatment systems and 70% of the 462 wastewater treatment systems on reserves posed a medium-to-high risk to drinking water and wastewater quality.⁹⁹

Food insecurity is similarly at a crisis level in some Indigenous communities, affecting many of the half million First Nations, Inuit, and Métis children across Canada, particularly in isolated northern regions. Data show disproportionately high rates of moderate to severe food insecurity across all Indigenous groups, with rural and remote communities at particularly high risk, although food insecurity affects Indigenous peoples living on reserve, off reserve, and in urban areas as well.¹⁰⁰

⁹³ Sustainability Directory, "Systemic Barriers," accessed December 2, 2025, <https://pollution.sustainability-directory.com/term/systemic-barriers/>.

⁹⁴ Walker, B. W., Staniland, N. A., Haar, J., Turner, P., Ryburn, G., & Meachen, R. (2025). Indigenous employees' experiences of work: An interdisciplinary review. *Human Relations*, 00187267251394567.

⁹⁵ Capital Regional District. (2023). Indigenous employment project: Wise practices. Capital Regional District.

⁹⁶ Shapiro, G. D., Sheppard, A. J., Mashford-Pringle, A., Bushnik, T., Kramer, M. S., Kaufman, J. S., & Yang, S. (2021). Housing conditions and adverse birth outcomes among Indigenous people in Canada. *Canadian Journal of Public Health*, 112(5), 903–911.

⁹⁷ Indigenous Corporate Training Inc. (2023, April 4). Lower income – #4 of 8 key issues for Indigenous peoples in Canada, <https://www.ictinc.ca/blog/lower-income-4-of-8-key-issues-for-indigenous-peoples-in-canada>.

⁹⁸ Hanrahan, M. (2017). Water (in)security in Canada: National identity and the exclusion of Indigenous peoples. *British Journal of Canadian Studies*, 30(1), 69–89.

⁹⁹ Ibid

¹⁰⁰ Banerji, A., Pelletier, V. A., Haring, R., Irvine, J., Bresnahan, A., & Lavalley, B. (2023). Food insecurity and its consequences in Indigenous children and youth in Canada. *PLoS Global Public Health*, 3(9), e0002406.

Participants also stressed that systemic inequities, clean drinking water, housing, essential infrastructure, shape educational and employment outcomes long before digital careers become an option. As outcomes of, and ongoing contributors to, the colonial relationship between Canada and Indigenous peoples, poverty, inadequate housing, food and water insecurity, and unequal access to healthcare continue to disproportionately affect Indigenous Peoples today.

Some participants emphasized that broader social and economic conditions must first be addressed before meaningful participation in digital-based jobs can occur. They argued that it is unrealistic to promote advanced digital careers without first ensuring access to housing, clean water, food security, and basic literacy. According to one participant:

"Do they have houses to live in? Do they have clean running water? Do they have food they can eat? If those needs are not first addressed, how can we be so blatantly first world colonial to say, 'you should adopt a future transformation strategy,' when people are suffering with lack of housing, lack of water and lack of food." - Interview Participant

Underinvestment in Indigenous and rural communities across the province has resulted in uneven access to stable, affordable, high-speed internet remains one of the most persistent systemic barriers. As discussed in the previous section, many employers stressed that while digital work increasingly requires reliable connectivity, this cannot be assumed in rural and remote Indigenous communities. One employer highlighted that "even reserves that are fairly close to urban centres sometimes they don't have high-speed internet."

Employers noted that unequal access to digital infrastructure does not just limit immediate opportunities for working in tech or running a business, but compounds over time. The result is

a widening skills gap; whereby Indigenous youth may have far less exposure and familiarity with digital tools than their non-Indigenous peers. As one participant explained, "By the time [they're] in grade 12, the amount of time [they've] spent with digital tools... versus someone who doesn't have that same access, the gap will just be enormous." This lack of early exposure makes it harder for Indigenous students to enter post-secondary programs in tech-related fields and to compete for digital economy roles upon entering the workforce.

Beyond infrastructure challenges such as connectivity and internet access, employers who participated in this research frequently pointed to the lack of resources as a barrier limiting Indigenous participation in Alberta's tech and innovation sectors.

Some described the absence of supports for youth as they transition into post-secondary and professional spaces, highlighting the importance of basic life skills and navigation of institutional systems:

"It's sometimes just skills, like life skills of how to navigate a corporate-ish setting, or how to, if you're sick, how do I send an email to my manager? Or... how do I rent? How do I get access to the food bank? There aren't a lot of supports for students, let alone when we're deciding specifically to go into tech."

Several employers reflected on systemic inequities in science, technology, engineering, and mathematics education, observing that the limited science and math opportunities available in some reserve schools create hurdles for pursuing post-secondary programs in technology fields. According to one employer, "They aren't engineers, in general. You can't get good science and you can't get good math on reserve... it's such a barrier to go into a STEM degree because you probably need to upgrade for a year or two, and that's very frustrating."

OPPORTUNITIES

While systemic, organizational, and individual barriers continue to limit Indigenous participation in Alberta’s digital economy, this research also reveals significant opportunities for growth and inclusion. Community members and employers alike emphasized that Indigenous youth possess strong “raw” digital skills and a growing interest in technology, from coding and data analytics to emerging fields like artificial intelligence (AI). These insights point to a clear potential for Indigenous talent to thrive in Alberta’s tech sector—provided that pathways are accessible, culturally relevant, and supported by the right infrastructure and resources.

Building on these opportunities, this section outlines best practices identified through interviews, surveys, and focus groups. These practices reflect both international evidence and local perspectives, emphasizing approaches that are culturally informed, relationship-based, and grounded in reconciliation. From investing in digital infrastructure and creating Indigenous-led training programs to fostering mentorship, entrepreneurship, and culturally safe workplaces, the recommendations presented here offer practical steps for employers, policymakers, and community leaders to advance meaningful inclusion in Alberta’s digital economy.

IN-DEMAND JOBS AND SKILLS

Interviewees highlighted that current opportunities exist across drone technology, entrepreneurship, coding, data analytics, cybersecurity, and project management fields. Beyond technical skills, interviewees also highlighted the importance of soft or interpersonal skills, such as one’s presence (i.e., sharing thoughts in meetings), autonomy, time management, and project management. Similarly, the employer survey results show the top three in-demand roles relating to IT support (53%), cybersecurity (23%), and network administration (22%), followed closely by network technician (18%) and data analyst (17%) roles.

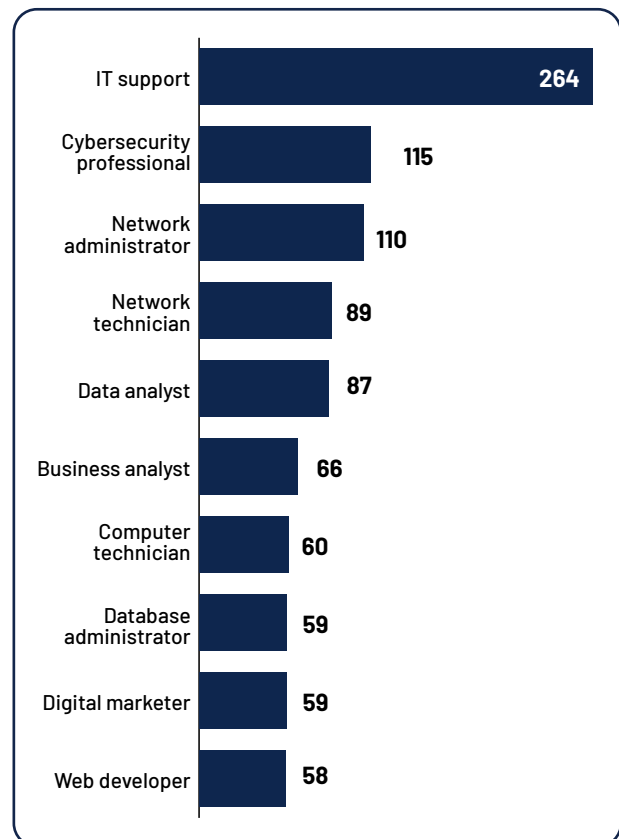


Figure 5. Top in-demand tech roles. Alberta Labour Market Study Employer Survey. N=500

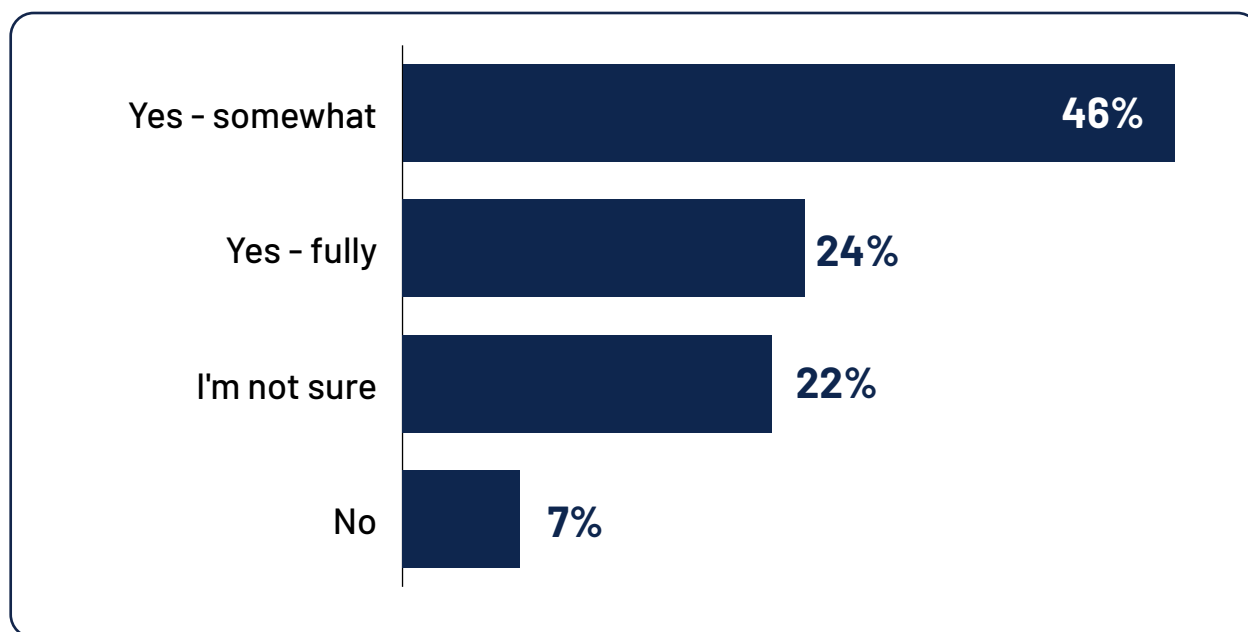


Figure 6. Skill confidence to succeed in a technology-related job. Alberta Labour Market Study Indigenous Job Seeker Survey. N=55

The data from the survey of Indigenous community members suggests a layered readiness profile: approximately 46% felt somewhat prepared for tech roles, 24% felt fully prepared, 22% were unsure, and 7% felt not prepared. Those who felt unprepared typically cited limited experience, a need for clearer role descriptions, and confidence barriers despite having baseline computer skills.

While interviewees emphasized that Indigenous youth possess strong “raw” digital skills and curiosity about areas like AI, phones, gaming, and social media, the survey further clarifies how these interests translate into specific competencies. Respondents to the job seeker survey most commonly reported possessing skills in data analysis (37%), followed by business analysis (20%), computer hardware & troubleshooting (20%), database administration (17%), digital marketing (17%), IT support (17%), and web development/coding (15%); others cited cloud admin, game design, network admin, and cybersecurity, though 22% selected

“none of the skills listed,” underscoring uneven access to training and exposure.

Job-seeker survey respondents also shared why technology resonates for them:

- › “It’s the way of the future – essential knowledge, you have to get involved to ‘keep up’.”
- › “It’s a powerful tool for creativity, connection, and problem-solving. I love how it can amplify our voices, especially in Indigenous communities, and help share our stories with the world.”
- › “The fact that I can have the freedom to work hybrid, which allows me to go and be in community, but also the endless opportunities that tech can provide for youth on reserves who may not have the opportunity or access to opportunities and resources tech can offer.”
- › “Tech is a fast-paced industry, and I find this pace of innovation and business exciting and interesting because of the endless growth opportunities.”

INDIGENOUS ENTREPRENEURSHIP

Indigenous-owned Businesses and Entrepreneurship

Indigenous entrepreneurship and Indigenous-owned businesses have a significant role to play in advancing economic sovereignty and enhancing the well-being of Indigenous communities, as well as acting as a catalyst for innovation, job creation, and economic growth. Driven by the recent growth of Indigenous-owned businesses, the Indigenomics Institute projects that the Indigenous economy in Canada could grow to \$100 billion over the coming years.¹⁰¹

A 2021 white paper by PayPal notes that “Indigenous-owned SMEs are a key factor in achieving the potential estimated \$100 billion that the Indigenous economy can contribute to Canada’s GDP.”¹⁰² PayPal estimates that the Indigenous business community in Canada has over 50,000 individuals and that Indigenous people start businesses at nine times the national average.¹⁰³ Alberta is home to 9.6% of Indigenous small and medium-sized enterprises (SMEs) and 13.3% of SMEs in Canada.¹⁰⁴

The Royal Bank of Canada posits a “quadruple bottom line” framework that many Indigenous businesses operate within.¹⁰⁵ This framework consists of profitability, creating jobs and procurement opportunities within Indigenous communities, protecting the natural environment, and “investing in Indigenous social development,” such as through scholarships for Indigenous students. Indigenous businesses operating within a quadruple bottom line frame of reference create “shared value”

opportunities that address societal issues for their home communities.¹⁰⁶

For example, Indigenous-owned businesses often employ Indigenous people from the business owner’s local community, creating positive economic spillover effects. According to a study by the National Aboriginal Capital Corporations Association, female-owned Indigenous businesses employ an average of three workers, while those owned by males employ an average of 2.8 employees.¹⁰⁷ In an evaluation of the Regional Innovation Network of Southern Alberta by Alberta Innovates, findings showed that Indigenous businesses and entrepreneurs with Alberta’s broader innovation and entrepreneurship ecosystem had positive benefits for Indigenous business owners and communities, as well as the broader innovation ecosystem.¹⁰⁸

Public investment to accelerate Indigenous enterprises in the province is also a critical consideration. The Alberta Indigenous Opportunities Corporation has a mandate to provide financing to Indigenous communities and enterprises through \$3 billion in loan guarantees for projects in the natural resources, agriculture, telecommunications, and transportation sectors.¹⁰⁹

Indigenous entrepreneurs face the same perennial challenges that are familiar to other small business owners and entrepreneurs in Canada, as well as challenges unique to Indigenous-owned businesses. Specific challenges faced by Indigenous entrepreneurs in Canada include more limited access to capital and other business resources, accessing markets, negative cultural stereotypes and overt discrimination, and sometimes challenging local governance scenarios.^{110,111}

¹⁰¹ Hilton, C.A., (2021). Indigenomics: Taking a Seat at the Economic Table. New Society Publishers, <https://indigenomicsinstitute.com/product/indigenomics/>

¹⁰² PayPal. (2021, September). “The Power of Indigenous Entrepreneurship in Canada,” https://publicpolicy.paypal-corp.com/sites/default/files/2021-09/The_Power_of_Indigenous_Entrepreneurship_in_Canada.pdf

¹⁰³ Ibid.

¹⁰⁴ Canadian Council for Aboriginal Business. (2016, October). “Promise and Prosperity: The 2016 Aboriginal Business Survey,” <https://www.ccab.com/wp-content/uploads/2016/10/CCAB-PP-Report-V2-SQ-Pages.pdf>

¹⁰⁵ Amato, D. (2020, June 18). Indigenous entrepreneurship in Canada: The impact and the opportunity. Royal Bank of Canada, <https://www.rbcroyalbank.com/en-ca/my-money-matters/life-events/new-to-canada/starting-a-business-in-canada/indigenous-entrepreneurship-in-canada-the-impact-and-the-opportunity/>

¹⁰⁶ Porter, M. E., & Kramer, M. R. (2011, January–February). Creating shared value. Harvard Business Review, <https://hbr.org/2011/01/the-big-idea-creating-shared-value>

¹⁰⁷ Bobiwash, H. (2020, July). “Indigenous Women Entrepreneurs: Valuable Investments in Their Businesses, Families and Communities,” National Aboriginal Capital Corporations Association, <https://nacca.ca/wp-content/uploads/2020/07/NACCA-IWE-Summary-Report.pdf>

¹⁰⁸ Grant, J., (2022, July). “An Emerging Entrepreneurial Ecosystem – Impact Ripple Effects: A Retrospective Realist Impact Case Study of the Regional Innovation Network of Southern Alberta (RINSA), 2011-2021,” Alberta Innovates, https://albertainnovates.ca/wp-content/uploads/2023/06/RINSA-Impact-Case-Study-Final-Report_2022-07-21.pdf

¹⁰⁹ Alberta Indigenous Opportunities Corporation. “Who We Are,” Retrieved on July 19, 2024, <https://theaioc.com/who-we-are/>

¹¹⁰ Sisco, A. and Stewart, N., (2009, November). “True to Their Visions: An Account of 10 Successful Aboriginal Businesses,” Conference Board of Canada, <https://portal.usask.ca/record/27509>

¹¹¹ Lorefice, S., Boyd, B., & Caron, G. (2017, October). Indigenous policy conference summary report: Beyond reconciliation. University of Calgary School of Public Policy. <https://www.policyschool.ca/wp-content/uploads/2017/10/Indigenous-Policy-Conference-Lorefice-Boyd-Caron.pdf>

This is particularly true for Indigenous women entrepreneurs, who encounter these barriers at an accelerated rate.¹¹² On the theme of Indigenous entrepreneurs encountering negative stereotypes, a report by the Parkland Institute details the everyday discrimination Indigenous businesspeople face when they seek new customers and grow their businesses.¹¹³ Figure 7 below presents a model delineating barriers and contextual factors of success for Indigenous businesses in Canada.

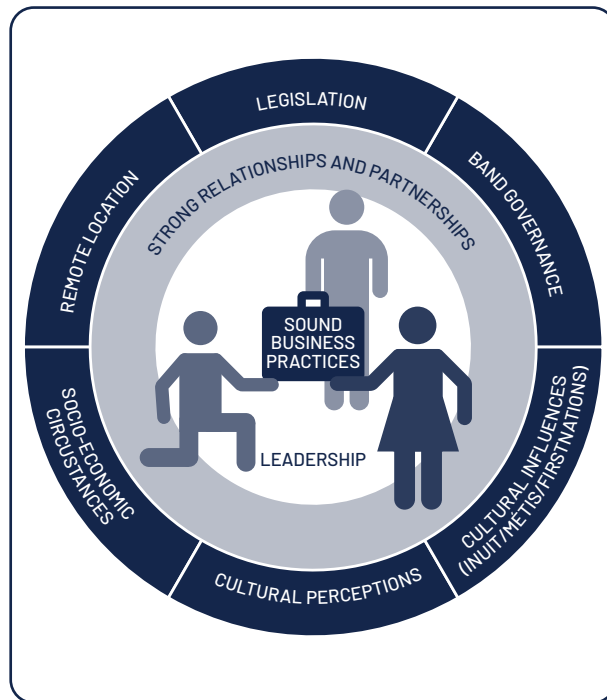


Figure 7. “Aboriginal Business—Context and Keys to Success.” Source: Sisco, A. and Stewart, N., “True to Their Visions: An Account of 10 Successful Aboriginal Businesses,” Conference Board of Canada, November 2009, 3.

Interview Findings

Indigenous entrepreneurship plays a vital role in advancing self-determination, fostering economic independence, and sustaining cultural traditions within Indigenous communities.¹¹⁴ Across interviews, entrepreneurship emerged as a central theme, with participants highlighting both the opportunities and the challenges Indigenous peoples in Alberta

encounter when pursuing entrepreneurial pathways in the digital economy.

For many First Nations and Métis participants in this research, entrepreneurship was tied not only to economic independence but also to cultural continuity, resilience, and self-determination. According to one participant, this vision of Indigenous Entrepreneurship is closely aligned with the principles of *Indigenomics*, where economic reconciliation and entrepreneurship are understood as tools for both cultural preservation and leadership development.

Participants emphasized that Indigenous entrepreneurship is already growing in the digital sector. Participants highlighted emerging opportunities at the intersection of technology, traditional knowledge, and sustainability. Areas such as AI, renewable energy, and digital platforms for cultural preservation were cited as promising entrepreneurial spaces. One participant noted: “If we are thinking of tech and unique opportunities and entrepreneurship, I think there’s something to that AI... That is an opportunity to get ahead of the curve here so if there could be support in starting a business that is Indigenous-owned and led in that skill set and then training programs around it.” However, systemic barriers remain. Access to capital, navigating regulatory frameworks, and overcoming negative stereotypes were repeatedly identified as challenges that hinder Indigenous entrepreneurs. These barriers are compounded for Indigenous women, who often face additional layers of discrimination and resource constraints.

Entrepreneurship was also described as a response to systemic inequities in mainstream workplaces. Several participants expressed that owning a business offers freedom and autonomy, particularly for those who have experienced racism or lateral violence in employment settings. As one interviewee put it: “There is a strong want for entrepreneurship in general for Indigenous people because it creates freedom.” The same interviewee described how entrepreneurship is deeply rooted in Indigenous culture, sharing that “entrepreneurship is very common in our communities and culture, I think naturally.”

¹¹² Diochon, M. (2014). A baseline study of entrepreneurship among First Nations women in the Atlantic region. *Journal of Small Business & Entrepreneurship*, 27(1), 89–112. <https://www.tandfonline.com/doi/full/10.1080/08276331.2014.988050>

¹¹³ Alook, A., Hussey, I., & Hill, N. (2019, February). Indigenous gendered experiences of work in an oil-dependent, rural Alberta community. Parkland Institute. <https://d3n8a8pro7vbm.cloudfront.net/parklandinstitute/pages/1681/attachments/original/1550688239/indigenousexperiences.pdf?1550688239>

¹¹⁴ Padilla-Meléndez, A., Plaza-Angulo, J. J., Del-Aguila-Obra, A. R., & Ciruela-Lorenzo, A. M. (2022). Indigenous entrepreneurship. Current issues and future lines. *Entrepreneurship & Regional Development*, 34(1–2), 6–31.

Entrepreneurship was commonly cited by Indigenous interviewees as a pathway to community autonomy, ownership, and long-term change. For example, one participant argued that “It’s difficult to be an employee, especially when you’re far down on the ladder. And so entrepreneurship is very exciting to those people.” An interviewee who runs a program supporting for Indigenous entrepreneurs emphasized that the ultimate goal of Indigenous entrepreneurship was to foster full autonomy in business ownership and decision-making: “Have their own company, hire their own people who they wanted, make their own rules and run their businesses — that’s really what we started this whole thing to do.”

One participant captured the deeper purpose of Indigenous entrepreneurship as both a personal and collective journey. They explained that the goal is not only to create business opportunities but to build “digital knowledge keepers” who can preserve culture while driving innovation. As they put it, “... we are trying to build the next digital information technologist, digital knowledge keepers so we can do this for the concept of a person’s own personal self, they can actually help their community in regards to saving their culture and their background but they can also be a leader in the community and maybe mentor or train other people to actually do that to start their own companies. Be an entrepreneur, be a bigger picture, go out to the real world and actually be represented.” This perspective underscores how entrepreneurship is viewed not merely as an economic activity but as a pathway to cultural continuity, leadership development, and community success.

Participants also stressed the need to broaden understandings of entrepreneurship beyond high-profile founders. Everyday entrepreneurial practices—such as farming, hunting, or small-scale innovation—were seen as foundational. One participant explained the importance of “surfacing the opportunity to be an entrepreneur... farmers are, a hunter is entrepreneurial... but I don’t think they see it as much of a career path.” Others highlighted that being entrepreneurial does not necessarily

mean becoming a high-profile founder, but can include a range of roles and pathways:

“Showing them that you don’t need to be a Mark Zuckerberg to create something really cool. And you also don’t even have to be a founder... you can be a really good number twos, number threes, number fours... You can be entrepreneurial but not necessarily need to be a founder and be willing to take on that amount of risk.”

Interviewees also highlighted the importance of fostering resilience and learning through failure. Entrepreneurship was described as iterative, requiring multiple attempts and a supportive environment that normalizes setbacks. An interviewee who founded her own business shared that “Our entrepreneurs are probably going to be made rather than found,” and explained the importance within community of exposing youth to entrepreneurship as a viable path, “and really kind of create avenues for people to get their first failure or two or three under their belt... not just orienting towards success, but actually orienting towards supporting failure... getting lots of times at bat.”

Mentorship and culturally grounded skill-building programs were identified as critical enablers of entrepreneurial success. Programs that integrate digital skills with cultural identity and employability were described as essential stepping stones for Indigenous entrepreneurs. An interviewee who is involved with Indigenous tech mentorship shared how their program has found success in “moving away from more westernized approaches in terms of measuring success... where we’re able to work with the mentees and in return provide them that industry-based learning support so they can improve.”

Participants also emphasized both the personal and collective dimensions of entrepreneurship. One Indigenous founder felt strongly that “There is a role for non-Indigenous folks to meaningfully support Indigenous entrepreneurs... not getting too rigid about what help looks like and be willing to enter a more kind of experimental stage of this new building of Canada.” Together, these insights illustrate that entrepreneurship in Indigenous communities is both culturally grounded and future focused. It represents resilience in the face of systemic barriers, opportunities for self-determination, and a pathway to shaping inclusive futures in Canada’s digital economy.

BEST PRACTICES FOR STRENGTHENING INDIGENOUS PARTICIPATION IN TECHNOLOGY AND INNOVATION

International evidence on Indigenous employment shows that structured “good practice” approaches, those that are culturally informed, relationship-based, and evidence-driven, are more effective than generic recruitment and training models in supporting Indigenous hiring, retention, and career progression.¹¹⁵ Building on this evidence, this present research examines insights from organizations across Alberta who are working to strengthen Indigenous participation in the digital economy. While some employers have already adapted aspects of their recruitment, training, or engagement approaches, others offered forward-looking suggestions based on their experiences and observations. Together, their perspectives highlight **a range of 14 targeted best practices that can support** more inclusive pathways into Alberta’s digital economy and progressively improve Indigenous employment outcomes across the province.

1 ADDRESS FOUNDATIONAL NEEDS AND BASIC LITERACY FIRST

The historic and ongoing colonial relationship between Canada and Indigenous Peoples – as well as poverty, inadequate housing, food and water insecurity, and unequal access to healthcare – continue to disproportionately affect Indigenous Peoples today.

In this context, many participants emphasized that meaningful participation in Alberta’s digital economy cannot advance until basic living conditions and foundational educational needs are met. Accordingly, both employers and Indigenous participants argued that meaningfully improving these material conditions must be a stepping stone before expecting participation in advanced tech roles.

Participants further cautioned that policymakers and program designers risk implementing digital strategies that are colonial in approach if

foundational living conditions aren’t acknowledged.

As discussed above, participants highlighted how digital agendas can overlook basic infrastructure needs and interview data underscored that digital transformation efforts must begin with foundational educational supports, arguing that training programs often assume baseline literacy levels that are not guaranteed because of systemic barriers.

When asked what training formats would be most helpful, community survey respondents ranked Indigenous-led programs (66%), employer-offered training/upskilling (59%), in-person workshops/bootcamps (51%), and culturally relevant curricula (46%). In terms of resources they’re already using, many pointed to community-based training (33%), career counselling (28%), networking with Indigenous employers/role models (28%), and on-the-job training (26%). Together, these preferences point to a best practice: co-design training with Indigenous organizations, offer clear and scaffolded pathways into digital roles, and anchor learning in culture, relationships, and practical experience.

¹¹⁵ Barclay, Mary Anne. (2014). “Good Practices in Indigenous Employment, Training & Enterprise Development (IETED).”

Survey respondents overwhelmingly emphasized wrap-around supports that reduce barriers and build belonging. The top needs were career counselling and mentorship (90%), networking with Indigenous employers/role models (90%), transportation assistance (87%), culturally relevant or Indigenous-led employment programs (85%), and funding for training (85%). Additional priorities included childcare support or reduced fees, access to Elders' tribunals for advice, on-reserve tech training delivery, time off for cultural events, and paid internships plus equipment access (e.g., laptops or software). These responses reinforce the case for holistic programming that pairs skills with income supports, mobility, culture, and community.

2 BRIDGING THE RURAL-URBAN DIVIDE BY INVESTING IN DIGITAL INFRASTRUCTURE AND TOOLS

Another key best practice identified by community participants is the need for sustained investment in digital infrastructure and basic technological tools.

Participants noted that divides have direct implications for participation in the digital economy and for digital skills development. As one participant explained, "for many individuals living in Northern or remote communities, online work is still relatively new. And technical access is often limited or it's ongoing... This means that digital literacy or fluency can't really be assumed as a baseline skillset."

Similarly, another participant questioned the feasibility of remote work and participation in the digital economy under current circumstances:

"But is remote work on reserves even possible? Do we have a quiet space? Do we have access to the internet? Phones? If you're going to run a program, you have to have the systems in place to support success." - Interview Participant

Consequently, reliable high-speed internet, up-to-date devices, quiet workspaces, and consistent technical support were described as fundamental prerequisites for full participation in Alberta's digital economy, particularly in rural and northern Indigenous communities where 80% remain without reliable high-speed connections.¹¹⁶

Participants also stressed that the rural-urban divide impacts equitable participation in Alberta's digital economy in many ways beyond the digital divides, despite that many Indigenous youth in remote areas are highly motivated to pursue careers in the digital economy. Participants emphasized that standard, city-based training and employment models are often inaccessible to Indigenous learners in rural and northern communities. They explained that youth in northern and rural communities often have fewer opportunities to access digital programs, post-secondary institutions, instructors, and mentorship, making it harder for interest to translate into real pathways. Other participants shared that from their perspective, Indigenous communities cannot rely solely on urban-based programs or internet-dependent delivery models, noting that awareness-building and program access must be taken directly to rural regions.

Several participants remarked the following:

- › *"Being in the city, you're more exposed to a university that might have that program... that's definitely not happening in the schools up north."*
- Focus Group Participant
- › *"There are a lot of Indigenous youth who are really interested in doing something in the digital economy, but the infrastructure up there isn't great, there's no instructors up there to kind of guide them..."*
- Interview Participant
- › *"Just bringing more knowledge to rural communities where they may not have heard of before... There are so many smart kids in rural communities that just have missed opportunities that they just don't know exist."*
- Interview Participant

Overall, participants were clear that investing in digital infrastructure and tools is a crucial best practice for supporting Indigenous participation in Alberta's digital economy. Without reliable high-speed internet, appropriate devices, and ongoing technical support, even the most well-designed programs cannot be effective or equitable. Additionally, participants stressed that programs need to be delivered in ways that work for rural and northern communities.

¹¹⁶ Government of Alberta, Alberta Broadband Strategy, accessed November 25, 2025, <https://www.alberta.ca/alberta-broadband-strategy>.

3 DEVELOP CULTURALLY RELEVANT TRAINING AND CLEAR EDUCATION AND EMPLOYMENT PATHWAYS

Research participants highlighted that one of the most effective ways to increase Indigenous participation in Alberta's digital economy is to design training programs and skill-building initiatives that are not only technically robust, but culturally grounded, community-led, and provide clear pathways from interest to career opportunities and employment.

In line with a substantial body of research that demonstrates that culturally responsive schooling (CRS) for Indigenous youth is a promising approach for improving the educational and academic achievement of Indigenous people,¹¹⁷ participants in this study similarly emphasized that culturally relevant approaches are essential to preparing Indigenous people for digital careers. A culturally responsive approach to the curriculum and pedagogies “enables students to see their identities, cultures and knowledge reflected in what and how they learn and supports a student’s perception of their potential and supports educational outcomes” and participants in this study emphasized that the same principles must guide digital-skills training by ensuring programs reflect Indigenous values, lived realities, and preferred ways of learning.¹¹⁸

Participants stressed that training should align with Indigenous knowledge systems and be co-designed with communities, including the importance of embedding Indigenous knowledge and culture into training programs:

- › “We need culturally relevant education that develops and delivers training aligned with Indigenous values and experiences. It’s also important to build strong partnerships with tech communities, training institutions, and government agencies so that clear pathways into the digital economy are created.”

- › “Along with investing in digital infrastructure and high-speed internet, we need to place tools directly in Indigenous communities and create cultural programs. Training programs should be developed in ways that incorporate Indigenous knowledge and values.” - Interview Participant

Consistent with existing research, participants highlighted that culturally relevant and responsive training is most effective when co-designed with Indigenous organizations and community members who can identify what is needed and what will resonate with learners. One interview participant explained:

“It would be really important to start fostering relationships with rural communities in Alberta... looking at fostering the relationships in the city like Indigenous organizations that provide education to Indigenous people... respect what the community would like to see.”

In addition to cultural relevance, participants emphasized the need for structured education-to-employment pathways that help learners move from interest to entry-level skills, to advanced training, and ultimately to real jobs. As one participant observed, “We find that there’s quite a strong level of interest. There’s just not a strong level of awareness of the opportunities or how to go after opportunities that exist.” They continued to say: “The real question is how we bring the resources to the community—or bring the youth to the resources—in a way that gives them meaningful experience.”

When training reflects Indigenous identities and lived realities, and when learners can see a clear progression from interest to initial skills, to advanced training, and ultimately to meaningful employment, participation in the digital economy becomes not only possible but sustainable. These insights underscore that culturally relevant education and structured pathways are not optional—they are essential for creating equitable opportunities and fostering long-term success for Indigenous talent in Alberta’s tech sector.

¹¹⁷ Castagno, A. E., & Brayboy, B. M. J. (2008). Culturally responsive schooling for Indigenous youth: A review of the literature. *Review of Educational Research*, 78(4), 941-993.

¹¹⁸ Wollotuka Institute, Office of Indigenous Strategy and Leadership, & Teachers and Teaching Research Centre. (2024, December). Pre-budget submission 2025-26. University of Newcastle.

4 STRENGTHEN EDUCATION, SKILLS PATHWAYS, AND TRAINING OPPORTUNITIES

According to several employers who participated in this research, it should be employers, governments and partners that invest in building accessible, culturally relevant, and flexible education and training pathways to expand Indigenous participation in Alberta digital economy.

Educational and training programs are vital for bridging skill gaps and enhancing the employability of Indigenous candidates. Current funding programs, such as the Ministry of Jobs, Economy & Trade's Integrated Training program and WCB Alberta's Train and Place Program (TaP), provide avenues for skill development.¹¹⁹ Additionally, fostering inclusive education initiatives and encouraging non-Indigenous staff to participate in educational programs about Indigenous history and culture are critical steps toward reconciliation and inclusivity.¹²⁰

For an Alberta example, the University of Calgary offers an Indigenous Relations Training Program (IRTP) through its Writing Symbols Lodge.¹²¹ Since 2009, and offered four times annually, the goal of IRTP has been to provide professional and personal development to non-Indigenous professionals and students in Western Canada on the historical context and contemporary issues affecting Indigenous People in Canada. This is carried out through intensive engagement with Indigenous facilitators and Elders.

Because employers identified limited early exposure to STEM and digital skills as a significant barrier to Indigenous participation in Alberta's digital economy, with several participants noting that current schooling and skill-development pathways do not adequately prepare Indigenous youth for technology-related careers, some employers recommended that digital skill-building begin in K-12 schools, arguing that early experiences can shape readiness and confidence for future educational and career pathways. Employers stressed the need to address the gaps in STEM education, as well as emphasized the importance of early interventions:

"Figuring out at an earlier age, like those earlier interventions. And I think even high school is too late... they need to start happening earlier to build those skills and interests."

Some employers described taking a proactive role in building early digital literacy by delivering hands-on programming directly within Indigenous schools. These initiatives expose younger students to coding, robotics, and entrepreneurial thinking in ways that are accessible and community based. One participant explained how their organization has partnered with local schools to provide these opportunities:

"We've run coding for kids' programs, robotics programs, entrepreneurship programs with the Stony Nakoda school system... grade five to grade ten students."

Relatedly, participants recommended that post-secondary institutions increase the flexibility of course offerings, through hybrid learning, evening or weekend formats, and short-format courses. With the understanding that many Indigenous learners balance work, caregiving, or community responsibilities, and rigid in-person schedules can limit access to programs aligned with digital careers, one participant described how institutions could reduce these barriers:

"If larger institutions offered more online courses, more evening courses, and especially more condensed classes... that would make it more accessible versus having to drive in multiple times a week."

Employers stressed that training alone is often not enough and that learners need support bridging the transition to employment. Recommendations included funding for upskilling, providing real-world experience, and offering wrap-around supports such as transportation, living allowances, and mentorship. The value of employer-supported upskilling was reflected in employer interviews, with one participant calling for increased funding opportunities for labour upskilling and increased company investment in their employees, "whether that's financially or through time, to give real world experiences and stories to help bridge skills and real-life roles."

¹¹⁹ Ballard Group. (2024). Attracting, developing and retaining Alberta's workforce. <https://www.edaalberta.ca/resources/Documents/Ballad%20EDA%20Conference%20Outline.pdf>

¹²⁰ Atlis Technology. (2023, September 29). An employer's guide to promoting Indigenous inclusion in the workplace, September 29, 2023, <https://www.altistechnology.com/learn/how-to-champion-indigenous-inclusion-at-work>

¹²¹ University of Calgary Writing Symbols Lodge. (n.d.). Indigenous relations training program. <https://ucalgary.ca/writing-symbols/community/indigenous-relations>.

Employers stressed that upskilling is most effective when organizations actively invest in it. Beyond formal instruction, participants emphasized the need for financial support and concrete opportunities to gain real workplace experience. As one employer explained, bridging the gap between theory and practice requires intentional commitment from companies.

Consistent with best-practice recommendations shared by community members in this research, employers also emphasized the importance of wrap-around supports. Employers highlighted that strong wrap-around supports can dramatically improve completion and success rates in training programs. One interviewee described the impact of such an approach in their own program:

"We had 12 students who completed 10 weeks of training and all 12 finished... They had living allowance, transportation support, wrap-around services... They felt comfortable and ready to start working immediately."

Community survey respondents were asked what governments, employers, and/or organizations could do to create more opportunities for tech-related work or skills training:

- › *"They can partner with Indigenous communities to co-create programs, offer remote learning options, provide scholarships, and prioritize hiring Indigenous talent. Culturally safe spaces and Indigenous-led mentorship programs would also make a big difference."*
- › *"Offering more flexible options to communities within reserves."*
- › *"Remember that each person is likely facing MULTIPLE barriers to receiving education and employment. Isolating a single factor to address will not be as effective as considering a range of related challenges. Use a neuro-inclusive approach in education and training to remove barriers for both diagnosed and undiagnosed Neurodivergent individuals. Support mentorships, paid internships. Recognize that money for programs is actually an investment, not a cost."*

5 CREATE CULTURALLY SAFE WORKPLACES & INDIGENOUS-SPECIFIC APPROACHES

Reflecting the recommendations shared by community members, expanding Indigenous participation in the labour and digital economy requires workplaces that are culturally safe and supportive.

Workplace preferences also point to concrete inclusion levers. Training or continuous education support was rated "very important" by 89% of community survey respondents, followed by career growth opportunities (86%) and meaningful work (83%). Yet some said they feel uncomfortable asking about pay or benefits early in the process and may hesitate to raise diversity questions if the environment doesn't feel welcoming, signalling the need for transparent compensation practices and visible inclusion commitments.

When asked what supports could help them feel more comfortable in a new workplace, respondents most selected mental health and wellness supports (26%), cultural awareness training for non-Indigenous employees (23%), and access to Elders and cultural advisors in the workplace (23%), all core elements of cultural and psychological safety at work.

Employers also described practical ways they integrate Indigenous cultural practices and learning into workplace programs and leadership development, which from their view helped to create culturally safe workplaces. One employer explained how beginning a program with ceremony helped create a shared sense of connection and ease, sharing that it "really grounded everyone and brought us together in a good way... it mitigates all those nerves of the first day and breaks the ice." Others highlighted the importance of equipping staff with the knowledge needed to respectfully acknowledge and understand the Indigenous lands on which they work:

"We wanted to help people understand how they could respectfully deliver land acknowledgments and also learn about the territories that they were living, working and playing on."

Employers emphasized that meaningful Indigenous inclusion requires ongoing education for staff at all levels. Several organizations have implemented mandatory, structured training programs to ensure employees understand Indigenous histories, contemporary realities, and the responsibilities associated with reconciliation.

Some employers described mandatory organization-wide programs that introduce employees to Indigenous histories and worldviews, as well as address colonization and its ongoing impacts. BMO's Nushatatamawin e-learning program is one such example. One employer described the impact of their organization's mandatory Indigenous cultural awareness program, sharing that "A lot of folks who've never really learned that information will reach out to me and be like, I never even knew half of that stuff."

Participants also highlighted the value of offering both virtual and in-person learning formats, paired with opportunities to visit Indigenous communities:

"We've got two internal training programs... one web-based and one in-person... and then opportunities to travel to community locations directly and being like on the ground, that's huge."

Some organizations have Indigenous Employee Resource Groups (ERG), which are involved with broader organizational learning opportunities such as by integrating teachings from Elders and other experiential learning practices. As one employer explained:

"We bring in an elder... she speaks about her own experiences as a residential school survivor... And then as part of the blanket exercise... we try to get people to understand the connection between showing up, learning more, joining the Indigenous ERG."

Several employers also emphasized that cultural learning should extend to organizational leadership. One participant noted their company's efforts to ensure executives understand Indigenous history, perspectives, and responsibilities:

"We also have done blanket exercises for like the CEO and the executive team. So we're very much in like, how do we educate our leadership so they understand what our goals are from an [Indigenous Relations] perspective."

These insights illustrate that culturally safe workplaces and Indigenous-specific approaches are regarded as essential foundations for increasing Indigenous participation in Alberta's digital and innovation sectors.

6 MENTORSHIP, SPONSORSHIP, AND ROLE MODELS

Consistent with the recommendations shared by community members in this research, employers also identified mentorship, sponsorship, and the presence of Indigenous role models as key strategies for supporting Indigenous inclusion and retention in Alberta's digital economy.

Employers noted that onboarding procedures and processes must ensure Indigenous hires feel supported without being singled out:

"When we hire people from our community partners... we make sure these people feel supported... we also don't want it to be made a big deal... we just want them to know that there are supports available."

Some participants emphasized mentorship as a critical tool for helping employees navigate workplace culture and build confidence, particularly for its ability to help with "fitting in and having an outlet for venting or for recourse and retention."

However, some employers cautioned that Indigenous employees are often "over-mentored and under-sponsored." Sponsorship is defined as "active support by someone appropriately placed in the organization who has significant influence on decision-making processes or structures and who is advocating for, protecting, and fighting for the career advancement of an individual."¹²² Unlike mentorship, which relies on a long-term, personal relationship where a mentor provides ongoing guidance, feedback, and coaching to a mentee, sponsorship involves a protégé being put forward by a sponsor for high-visibility, career-advancing opportunities.¹²³ As one participant noted, "We don't have a formal Indigenous mentorship programme and that's purposeful...we try to focus heavily on sponsorship."

Cohort-based onboarding was also described as an effective approach for fostering peer support and

¹²² Ayyala, M. S., Skarupski, K., Bodurtha, J. N., González-Fernández, M., Ishii, L. E., Fivush, B., & Levine, R. B. (2019). Mentorship is not enough: Exploring sponsorship and its role in career advancement in academic medicine. *Academic Medicine*, 94(1), 94–100.

¹²³ Hilton, C. A. (2021). *Indigenomics: Taking a seat at the economic table*. New Society Publishers. <https://indigenomicsinstitute.com/product/indigenomics/>

smoothing integration into teams. One participant explained that within each cohort, onboarding teams have “direct conversations and informal training with [the cohort].” Employers also spoke to the importance of visible Indigenous role models, both for inspiring future talent and for normalizing Indigenous presence within the digital sector:

“If Indigenous youth had visible role models, it would attract more participation—I think that’s a universal truth.”

Overall, the insights shared by employers reinforce what community members emphasized throughout this research: mentorship, sponsorship, and visible Indigenous role models are essential to strengthening Indigenous inclusion and retention in Alberta’s digital economy.

7 BUILD LONG-TERM RELATIONSHIPS AND PARTNERSHIPS WITH INDIGENOUS LEADERSHIP AND COMMUNITIES

A growing body of international evidence on Indigenous community-managed programs and partnership frameworks shows that successful initiatives are grounded in long-term, trust-based relationships with Indigenous communities rather than short, transactional interactions. Guiding principles from the literature include the building of trust through dialogue and respecting cultural practices, the development of a deep understanding of the cultural beliefs, values, and traditions of Canada’s Indigenous communities, transparency and accountability, equity in the distribution of benefits and shared decision-making as essential for Canada’s Indigenous people to enact self-determination.^{124,125} Additionally, effective collaboration requires a deliberate shift away from programs that engage communities only when needed or only at the outset of a project. Instead, research emphasizes the importance of adopting a relational way of working, defined by

early, ongoing, and meaningful engagement that continues throughout the life of an initiative.¹²⁶

The Northern Policy Institute notes that cooperation between Indigenous communities, local businesses and employers, all levels of government, and training providers can greatly enhance Indigenous skills development program outcomes.¹²⁷ Further best practices for overcoming some common employment barriers include providing wrap-around support for employment and training program participants, creating direct pathways between secondary and higher education for Indigenous students, developing Indigenous entrepreneurs’ “business acumen, management and technical skills,” tuning programs to match contemporary labour demand and supply and recognize systemic and socio-cultural barriers faced by Indigenous workers.¹²⁸

According to the Indigenous community members who participated in this research, the best practices for establishing meaningful collaboration with Indigenous leadership and communities in order to grow Indigenous participation in Alberta’s digital economy are not theoretical, they reflect what is required to facilitate smooth collaboration that also ensures that any work reflects the community’s values and needs.

One interview participant stressed that meaningful partnership requires ongoing consultation rather than top-down program design, noting the importance of “making sure the community is involved... making sure there is a consultation process so they can see what is best for their children, youth, or adults, whatever it might be...”

Participants also connected partnership to Indigenous leadership and economic reconciliation, arguing that systems change is only possible when Indigenous-led decision-making is centred. Overall, community members offered insights that reinforce international evidence showing that effective initiatives must be relational, community-driven, and grounded in Indigenous leadership and long-term trust. Programs must be co-created with Indigenous communities, not imposed on them.

¹²⁴ Hanson, B., R. McCann, D. Smiley, S. Hinck, A. R. Archie, and N. Butler. (2025). “Building relationships for meaningful co-created Indigenous climate education.” *Community Science* 4, no. 1: e2023CSJ000054.

¹²⁵ Australian Public Service Commission. (2025). *First Nations partnership playbook*. Commonwealth of Australia.

¹²⁶ Indigenous Corporate Training Inc. (2025, January 13). 5 things to know when working with Indigenous communities. <https://www.ictinc.ca/blog/5-things-to-know-when-working-with-indigenous-communities>.

¹²⁷ Grewal, D. (2018). Case studies in effective Indigenous skills development. Northern Policy Institute. <https://www.northernpolicy.ca/upload/documents/publications/commentaries-new/commentary-grewal-en-18.10.23.pdf>

¹²⁸ Ibid.

8 PROVIDE WRAP-AROUND FINANCIAL AND SOCIAL SUPPORTS

A growing body of evidence clearly demonstrates that best practices in Indigenous training embed wrap-around supports as a standard feature. Wrap-around supports refer to a coordinated set of personalized services, referrals, and interventions designed to address multiple areas of a person's life, helping them overcome barriers and fully participate in and succeed within programs.¹²⁹ Wrap-around services have been used in many countries to support better workforce participation and can include basic needs such as housing, food, clothing and internet access, social supports such as coaching, mentorship and peer networks, health and wellbeing services including access to healthcare, mental health counselling and addictions supports, childcare, legal and administrative assistance such as help completing forms or obtaining identification, and cultural supports that strengthen community connection.^{130,131}

According to the Social Research and Development Corporation, a wrap-around service approach can support equity-deserving learners by addressing the barriers that limit full participation, increasing the likelihood that learners complete training, and strengthening program outcomes such as skills development, confidence, and readiness for employment.¹³² Wrap-around supports can help counter some of the effects of systemic marginalization by providing practical, holistic assistance tailored to the full range of a person's needs. These benefits include improving accessibility, for example, offering income supports or childcare can make training possible for those balancing multiple jobs or caregiving responsibilities.

Wrap-around services can also enhance engagement and retention by helping participants manage competing life demands such as family responsibilities, health challenges, or housing instability. By providing consistent support, programs can help learners build confidence, life skills, and a stronger sense of career direction.

Wrap-around models further can reduce service gaps by connecting participants to coordinated supports and easing the burden of navigating complex systems. Additionally, the positive effects of wrap-around service models often reach beyond the individual, contributing to improved wellbeing for families and communities.¹³³

Community survey findings strongly reinforce this need. Respondents overwhelmingly emphasized wrap-around supports as critical to success, with 90% identifying career counselling and mentorship programs and 90% citing networking opportunities with Indigenous employers or role models as top priorities. Practical supports were also highlighted: 87% requested transportation assistance, while 85% called for culturally relevant or Indigenous-led employment programs and 85% for funding to cover training costs. Additional supports included childcare or reduced daycare fees, access to Elders for advice, on-reserve delivery of tech training, time off for cultural events, and paid internships with equipment access such as laptops or software.

Participants in interviews echoed these findings, noting that financial support can be the single most important factor in enabling participation:

- › *"We found that probably the biggest barrier we can remove to success at training is to provide or find a way to provide some sort of a living allowance or stipend to the student during the training course... We try to find ways and supports for people to do that during the training program."*
- › *On transportation assistance: "Actually getting students on site... Travel allowance offered, makes a difference (bus pass or gas cards) for getting students to class... Goal is to keep people coming to class and graduate."*
—interview participant or focus group participant

Together, these insights highlight that wrap-around supports are vital. Without financial assistance, transportation, childcare, and culturally grounded guidance, many Indigenous learners cannot access or complete training programs. Embedding these supports into program design is essential for

¹²⁹ Kaufmann, L., Auclair-Ouellet, N., Brooks-Cleator, L., Halpenny, C., Howard, S., & Palameta, B. (2022). Wrap-around supports in employment & skills training: A feminist perspective. Social Research and Demonstration Corporation. https://srdc.org/wp-content/uploads/2022/11/FINAL-Evidence-Brief_Wrap-around-Supports.pdf

¹³⁰ RMIT University. (2023, March). Wrap-around service co-design: Supporting sustainable employment of ethnically & culturally diverse communities. RMIT University.

¹³¹ Kaufmann, L., Auclair-Ouellet, N., Brooks-Cleator, L., Halpenny, C., Howard, S., & Palameta, B. (2022). Wrap-around supports in employment & skills training: A feminist perspective. Social Research and Demonstration Corporation. https://srdc.org/wp-content/uploads/2022/11/FINAL-Evidence-Brief_Wrap-around-Supports.pdf

¹³² Ibid

¹³³ Ibid

reducing barriers, improving retention, and ensuring that Indigenous talent can fully participate in Alberta's digital economy.

9 BUILDING CONFIDENCE THROUGH MENTORSHIP AND INDIGENOUS ROLE MODELS

Lack of confidence is a significant barrier to participation in Alberta's digital economy, with confidence challenges arising long before entering the labour market as internalized assumptions about intelligence and "belonging" in the tech sector can shape the very decision to pursue a digital career. Community members who participated in this research highlighted that mentorship, particularly from Indigenous mentors, can help counter these self-confidence barriers by offering guidance, encouragement, and practical support.

Broadly, mentorship involves the interpersonal relationship between someone less experienced, referred to as a mentee or, more commonly, as a protégée, and someone with more experience.¹³⁴ Subjectively, mentorship is linked to stronger commitment to school or work, higher job and career satisfaction, and greater confidence in one's future opportunities.¹³⁵ Mentorship can also reduce intentions to quit, lessen work-family strain, and decrease feelings of isolation. From a well-being perspective, mentorship has been shown to support better overall mental health, helping reduce stress and prevent burnout.¹³⁶

However, mainstream models of mentorship often fall short in addressing the distinct cultural contexts, norms, and lived experiences that shape Indigenous mentees' learning and career journeys. Accordingly,

Indigenous mentorship is important because mentors who understand these contexts can better recognize the structural barriers Indigenous learners face, provide culturally grounded guidance, counter harmful stereotypes, and create safe, affirming relationships. In professional settings, Indigenous mentors or role models help learners see themselves in future careers, navigate cultural conflicts, overcome isolation, and access networks that might otherwise be unavailable. They can address practical, emotional, and cultural challenges in ways that reflect Indigenous worldviews.¹³⁷

For participants in this research mentorship, particularly from Indigenous mentors, can play an important role in increasing Indigenous participation in Alberta's digital economy. One interview participant summarized this necessity, stating that "We need support networks – establish Indigenous employee resource groups and mentorship programs."

In addition to mentors, role models, particularly Indigenous professionals, were understood by participants in this research as important for helping Indigenous youth and children "see themselves" in digital roles. As one focus group participant put it, "Seeing people of colour or Indigenous people in senior positions... sets an example and shows that a space is safe."

These insights underscore that building confidence is not simply an individual task but a structural one. Exposure to Indigenous role models and culturally grounded mentorship can help overcome internalized barriers and aid in creating a sense of belonging, fostering career progression, and equipping Indigenous talent to envision and pursue meaningful roles within Alberta's digital economy.

¹³⁴ Ramaswami, A., & Dreher, G. F. (2007). The benefits associated with workplace mentoring relationships. In *The Blackwell handbook of mentoring: A multiple perspectives approach* (pp. 211–231).

¹³⁵ Ivey, G. W., & Dupré, K. E. (2022). Workplace mentorship: A critical review. *Journal of Career Development*, 49(3), 714–729.

¹³⁶ Ibid

¹³⁷ Atay, E., & Murry, A. (2023). Not so "mainstream": The need for models of Indigenous mentorship. *Papers on Postsecondary Learning and Teaching*, 6, 1–8.

10 BUILD MORE INCLUSIVE, CULTURALLY SENSITIVE ATTRACTION AND RECRUITMENT POLICIES AND PROCEDURES

The United Way toolkit highlights key barriers employers must address to create more inclusive and culturally sensitive attraction and recruitment policies and procedures.¹³⁸ These include:

- › Marketing to the Indigenous professional and other potential employees;
- › Promoting a culturally safe and diverse workplace;
- › Understanding benefit systems that impact Indigenous people and employment;
- › “Importance of visual representation;”
- › Recognition of cultural responsibilities for Indigenous peoples;
- › Trained recruiters;
- › Style job postings towards Indigenous people;
- › Interview practices (do they reflect/utilize an Indigenous lens; and
- › Onboarding for Indigenous employees.

The toolkit also identifies that establishing appropriate and effective marketing and outreach efforts to reach Indigenous professionals poses significant challenges for employers. Organizations may struggle to promote job opportunities effectively, mainly due to a lack of targeted strategies highlighting the benefits of working with an organization. Marketing strategies must genuinely resonate with the Indigenous community, yet many organizations fail to establish or leverage established relationships with Indigenous organizations.

Another underutilized avenue is an organization’s visibility on social media platforms popular among Indigenous communities, such as Facebook. Additionally, the absence of tailored accessibility statements and visible representation of Indigenous culture within organizations’ online presence can

further impact the successful attraction of potential Indigenous employees.¹³⁹

Bias in job postings and interview processes also impedes hiring Indigenous talent. The United Way toolkit stresses the importance of using inclusive language and intentionally using terms which are widely accepted by Indigenous communities.¹⁴⁰ Job postings should be specific and culturally sensitive, avoiding race-shifting by appropriately verifying Indigenous identity. During interviews, it is essential to include Indigenous representation on hiring committees and to develop questions that reflect an understanding of Indigenous experiences and perspectives.¹⁴¹ Furthering this, the Public Service Commission’s 2023 consultation with community leaders on the best way to recruit Indigenous Peoples found “success attributed to the use of Indigenous mentors who assisted Indigenous applicants navigate the recruitment process.”¹⁴²

The Public Service Commission of Canada also recommends strategies for bettering Indigenous recruitment, such as conducting information sessions for candidates during the application period, conducting oral and interactive evaluations rather than a written evaluation (whenever applicable), spending time welcoming candidates and establishing rapport during an interview, and including prompting questions that bring further clarity around the elements that the selection board will be looking at, such as “What is important to you?” and “Could you tell us some more about...?”¹⁴³ Finally, the Commission found that it is important to ensure that subject matter experts review the questions and content of assessment tools for equity assurance purposes to avoid clichés and stereotypes, contentious or biased themes, etc.¹⁴⁴

Similarly, the United Way advocates for training recruiters in Indigenous cultures and including Indigenous perspectives in the recruitment process.¹⁴⁵ This includes developing interview questions through an Indigenous lens and involving Indigenous representation on hiring committees.

¹³⁸ Perkins, A. (2023). Indigenous attraction, recruitment, & retention strategy tool. United Way. <https://www.unitedwayeo.ca/wp-content/uploads/2023/05/Indigenous-Attraction-Recruitment-Retention-Strategy-Tool.pdf>

¹³⁹ Ibid

¹⁴⁰ Ibid

¹⁴¹ Indigenous Corporate Training Inc. (2015, July 8). First Nation recruitment: 8 tips for interviewing candidates. <https://www.ictinc.ca/blog/first-nation-recruitment-8-tips-for-interviewing-candidates>

¹⁴² Public Service Commission of Canada. (2023). Barriers to Indigenous recruitment. Government of Canada. https://www.canada.ca/en/public-service-commission/services/publications/open-info/barriers-to-indigenous-recruitment.html#_Annex

¹⁴³ Ibid

¹⁴⁴ Ibid

¹⁴⁵ Perkins, A. (2023). Indigenous attraction, recruitment, & retention strategy tool. United Way. <https://www.unitedwayeo.ca/wp-content/uploads/2023/05/Indigenous-Attraction-Recruitment-Retention-Strategy-Tool.pdf>

Moreover, interviewers need to be aware of cultural differences in communication, such as varying eye contact and pacing levels during interviews.¹⁴⁶

In their consultation report, the Public Service Commission of Canada stated that it is important to recognize that it may be contrary to Indigenous Peoples' cultures to highlight their individual contribution to projects.¹⁴⁷ Hiring and selection committee members should consider that individual leadership is not viewed as such by many Indigenous people when it is done to support the community and/or in a spirit of service. In its Indigenous Recruitment Guide, Eco Canada notes that Indigenous candidates may be more likely to experience unfamiliarity with HR recruitment processes, such as submitting résumés and job applications and interviewing.¹⁴⁸ For example, some Indigenous candidates may encounter difficulty communicating their diverse life experiences on their résumé, even when an employer could highly value such life experiences—the limiting factor being the pro forma way résumés are written in Canada. As such, it is recommended that employers tailor the recruitment process for the Indigenous workforce.¹⁴⁹

11 RETAINING INDIGENOUS TALENT

Employer biases significantly hinder the integration of Indigenous peoples into the workforce. Concerns about cultural fit, language barriers, and the ability to integrate into existing workplace cultures can deter employers from hiring Indigenous candidates.¹⁵⁰ Risk aversion, prejudice, and discrimination exacerbate these issues, while perceived high costs of training candidates with skill gaps discourage investment in high-potential Indigenous employees.

Providing equitable professional development and advancement opportunities is vital for retaining Indigenous talent.¹⁵¹ Indigenous employees should be involved in internal and external committees,

mentorship programs, and succession planning efforts. Ensuring access to professional development resources, coaching, and goal-setting initiatives can help Indigenous employees achieve their career aspirations and feel valued within the organization.

In a report on the influence of culture when engaging Indigenous employees, positive relationships with supervisors who embody characteristics similar to community Elders are emphasized as crucial for Indigenous employees. These characteristics include as flexibility, honesty, trust, collaboration, encouragement, empathy, support, and more.¹⁵² Supervisors who engage in servant leadership styles, emphasizing self-direction and collaborative decision-making, can significantly enhance the work experience for First Nations employees.

12 CREATE INCLUSIVE AND CULTURALLY SAFE WORKPLACES

Reducing barriers to hiring and retaining Indigenous employees requires creating culturally safe and supportive workplaces. The TRC's Call to Action 92 calls upon the corporate sector to adopt the United Nations Declaration on the Rights of Indigenous Peoples as a reconciliation framework, whereby organizations must ensure they:¹⁵³

- › Provide equitable access to jobs, training, and education opportunities.
- › Provide skills-based training in intercultural competency, conflict resolution, human rights, and anti-racism.
- › Engage in meaningful consultation, build respectful relationships, and obtain Indigenous people's free, prior, and informed consent before proceeding with economic development projects.

To address historical injustices faced by Indigenous Peoples, employers must actively work to incorporate the principles of Truth and

¹⁴⁶ Indigenous Corporate Training Inc. (2015, July 8). First Nation recruitment: 8 tips for interviewing candidates. <https://www.ictinc.ca/blog/first-nation-recruitment-8-tips-for-interviewing-candidates>

¹⁴⁷ Public Service Commission of Canada. (2023). Barriers to Indigenous recruitment. Government of Canada. https://www.canada.ca/en/public-service-commission/services/publications/open-info/barriers-to-indigenous-recruitment.html#_Annex

¹⁴⁸ Eco Canada. (2020, August). Indigenous recruitment guide. <https://eco.ca/wp-content/uploads/2022/08/Indigenous-Recruitment-Guide-2020.pdf>.

¹⁴⁹ Ibid

¹⁵⁰ Ballard Group. (2024). Attracting, developing and retaining Alberta's workforce. <https://www.edaalberta.ca/resources/Documents/Ballad%20EDA%20Conference%20Outline.pdf>

¹⁵¹ Perkins, A. (2023). Indigenous attraction, recruitment, & retention strategy tool. United Way. <https://www.unitedwayeo.ca/wp-content/uploads/2023/05/Indigenous-Attraction-Recruitment-Retention-Strategy-Tool.pdf>

¹⁵² Thiessen, S. (2023). Engaging First Nations people at work: The influence of culture and context. Administrative Sciences, 13(8). <https://www.mdpi.com/2076-3387/13/8/179>

¹⁵³ Truth and Reconciliation Commission of Canada. (2015). Truth and reconciliation commission of Canada: Calls to action. https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/indigenous-people/aboriginal-peoples-documents/calls_to_action_english2.pdf

Reconciliation into organizational strategies. Key strategies recommended include unconscious bias training, mentorship programs, and recognition of cultural responsibilities,¹⁵⁴ as well as flexible work arrangements and inclusive benefits that support Indigenous employees' unique needs.¹⁵⁵

For example, the United Way discusses the importance of employers understanding Non-Insured Health Benefits (NIHB) and how they impact Indigenous employees' benefits status.¹⁵⁶ Expanding offerings such as paid spiritual days for ceremonies, caregiving and bereavement leave or offering an EAP fund that would allow First Nations, Métis and Inuit staff to connect with an Elder are other strategies for culturally inclusive workspaces.¹⁵⁷ Employers must foster a culture that values and respects Indigenous traditions and practices, allowing Indigenous employees to participate in cultural activities while promoting well-being and shared responsibility for cultural awareness and equity.

A tangible way employers can encourage cultural practices in the workplace is by designating a space for cultural or ceremonial practices in the office (e.g., a smudging room) or expanding professional development budgets to allow Indigenous staff to learn their language or access a cultural practice (e.g., beading, weaving etc.). Indigenous Corporate Training Inc. outlines the following steps employers can take to create an inclusive environment for Indigenous workers:¹⁵⁸

- › Leverage established Indigenous-friendly workplace programs.
- › Learn about the local indigenous community's culture, history, and traditions.
- › Provide cultural education to all employees.
- › Accommodate traditional practices and community obligations.
- › Offer Indigenous awareness training to minimize

cultural misunderstandings.

- › Provide educational opportunities for Indigenous employees to enhance their skills.

Hiring policies and practices that acknowledge and address the impacts of colonization, promote cultural awareness, and foster respectful relationships all contribute to Indigenous employees' well-being and advancement. Creating culturally safe workplaces requires a long-term commitment to continuous improvement. Study participants and thought leaders call for employers to be patient and persistent, recognizing that building trust and genuine relationships with Indigenous communities is a gradual process.¹⁵⁹

Cultural safety, which was previously explored primarily within the healthcare literature, is achieved when Indigenous employees experience their workplace as one that acknowledges the effects of colonization, understands Indigenous histories and worldviews, respects cultural identity, communicates in ways that do not reinforce power imbalances, and actively includes Indigenous knowledge and perspectives.¹⁶⁰

A cultural safe work environment then refers to an environment in which Indigenous candidates feel socially, emotionally, and spiritually safe, where their identities, cultures, and worldviews are affirmed rather than questioned or dismissed. Cultural safety involves shared respect, meaningful engagement, and mutual learning, creating space where Indigenous knowledge, experiences, and ways of being are valued throughout the hiring process.¹⁶¹ For employees, one of the key elements of cultural safety is the ability for individuals to bring their complete selves to the workplace without fear of negative repercussion.¹⁶² Crucially, it is Indigenous people, not employers, who decide whether a workplace is culturally safe.

¹⁵⁴ Perkins, A. (2023). Indigenous attraction, recruitment, & retention strategy tool. United Way. <https://www.unitedwayeo.ca/wp-content/uploads/2023/05/Indigenous-Attraction-Recruitment-Retention-Strategy-Tool.pdf>

¹⁵⁵ Atlis Technology. (2023, June 20). What does it mean to be an Indigenous-friendly employer? <https://www.altistechnology.com/learn/what-does-it-mean-to-be-an-indigenous-friendly-employer>

¹⁵⁶ Perkins, A. (2023). Indigenous attraction, recruitment, & retention strategy tool. United Way. <https://www.unitedwayeo.ca/wp-content/uploads/2023/05/Indigenous-Attraction-Recruitment-Retention-Strategy-Tool.pdf>

¹⁵⁷ Atlis Technology. (2023, June 20). What does it mean to be an Indigenous-friendly employer? <https://www.altistechnology.com/learn/what-does-it-mean-to-be-an-indigenous-friendly-employer>

¹⁵⁸ Indigenous Corporate Training Inc. (2020, June 5). 6 steps to create an inclusive environment for Indigenous workers. <https://www.ictinc.ca/blog/6-steps-to-create-an-inclusive-environment-for-indigenous-workers>

¹⁵⁹ Atlis Technology. (2023, June 20). What does it mean to be an Indigenous-friendly employer? <https://www.altistechnology.com/learn/what-does-it-mean-to-be-an-indigenous-friendly-employer>

¹⁶⁰ Smye, V., Josewski, V., & Kendall, E. (2010). Cultural safety: An overview. First Nations, Inuit and Métis Advisory Committee, 1, 28.

¹⁶¹ People Solutions. (2024). Best practice recruitment and selection of Indigenous job candidates. <https://www.people-solutions.com.au/2024/07>

¹⁶² Curtis, E., Jones, R., Tipene-Leach, D., Walker, C., Loring, B., Paine, S.-J., & Reid, P. (2019). Why cultural safety rather than cultural competency is required to achieve health equity: A literature review and recommended definition. *International Journal for Equity in Health*, 18(1), 174.

According to international findings a lack of cultural safety in the workplace can have significant consequences for Indigenous employees.¹⁶³ When cultural identity is not respected or understood, workers often feel lost, unsupported, and dissatisfied in their roles, which can contribute to higher staff turnover and a reluctance to recommend the workplace to other Indigenous people. These environments can also place a heavy cultural load on Indigenous staff, creating identity strain, mental and emotional stress, and deepening mistrust toward the institution.¹⁶⁴ Collectively, these impacts undermine both employee wellbeing and organizational success.

13 INDIGENOUS INCLUSION AND COLLABORATIVE WORK ENVIRONMENTS

The importance of understanding and integrating Indigenous cultural customs and worldviews into the workplace cannot be overstated. First Nations people, for example, place high value on workplace cultures that recognize and respect their unique context and history, and engaging First Nations employees effectively requires creating a work environment that is supportive, collaborative, and relational.¹⁶⁵

The lack of Indigenous consultation in inclusion strategies creates persisting barriers to culturally safe workplaces. Research by ICTC calls for Indigenous inclusion strategies that are developed separately from more broad organizational DEI strategies.¹⁶⁶ To overcome the barrier that DEI strategies cannot be ‘one size fits all,’ ICTC recommends that when developing an Indigenous inclusion strategy, it is important to begin with an assessment of the organization’s baseline to identify the pain points unique to each organization. First Nations, Inuit, and Métis community members should also have a place at the strategy development table to avoid negative unintended consequences such as persisting prejudice and bias. ICTC’s

report states that an Indigenous inclusion strategy should be Indigenous-led; “you should understand the communities that you’re working with and understand the historical perspective of working with them.”¹⁶⁷

Moreover, fostering a collaborative work environment addresses Indigenous peoples’ right to self-determination and helps mitigate discomfort stemming from historical and intergenerational trauma. Thiessen’s (2023) study implores organizations to create a relational climate and emphasize job resources to serve First Nations employees’ engagement needs better.¹⁶⁸

As stated in ICTC’s 2023 report, A More Equitable Rebound, it is important to remember that Indigenous inclusion is not just a “nice to have” in an organization; there are provincial and federal laws—Declaration on the Rights of Indigenous Peoples Act (DRIPA) and United Nations Declaration Act (UNDA), respectively—that set out commitments for inclusion and reconciliation required by the United Nations Declaration on the Rights of Indigenous Peoples.¹⁶⁹ For First Nations, Inuit, and Métis inclusion, each industry sector has specific Calls to Action under the Truth and Reconciliation Commission.

Participants identified creating inclusive and culturally safe workplaces as a key best practice, emphasizing that these environments are essential for supporting Indigenous workers’ entry into, retention within, and advancement across Alberta’s digital economy.

Many Indigenous workers in Canada cite a lack of cultural understanding from peers and managers as a significant barrier to retaining employment.¹⁷⁰ Accordingly, participants in this study emphasized the need for culturally safe workplaces.

Across interviews, participants highlighted several practices that contribute to culturally safe workplaces, including cultural competency training, supportive policies, and networks that allow

¹⁶³ Reconciliation New South Wales. (2024). Cultural safety in the workplace. <https://reconciliationnsw.org.au/wp-content/uploads/2024/02/Cultural-Safety-in-the-Workplace.pdf>.

¹⁶⁴ Ibid

¹⁶⁵ Thiessen, S. (2023). Engaging First Nations people at work: The influence of culture and context. Administrative Sciences, 13(8), 179. <https://www.mdpi.com/2076-3387/13/8/179>

¹⁶⁶ Information and Communications Technology Council (ICTC). (2023, October). A more equitable rebound: Inclusive career mobility and advancement beyond COVID-19. <https://ictc-ctic.ca/reports/more-equitable-rebound>

¹⁶⁷ Ibid

¹⁶⁸ Thiessen, S. (2023). Engaging First Nations people at work: The influence of culture and context. Administrative Sciences, 13(8), 179. <https://www.mdpi.com/2076-3387/13/8/179>

¹⁶⁹ Information and Communications Technology Council (ICTC). (2023, October). A more equitable rebound: Inclusive career mobility and advancement beyond COVID-19. <https://ictc-ctic.ca/reports/more-equitable-rebound>

¹⁷⁰ Thiessen, S. (2023). Engaging First Nations people at work: The influence of culture and context. Administrative Sciences, 13(8), 179.

Indigenous workers to feel a sense of belonging. One participant recommended that employers “develop more inclusive workplaces, encourage companies to include cultural compensation, training and create support networks for Indigenous employees.” Another interviewee expanded on the importance of these supports, emphasizing that cultural competency and internal support systems are necessary for meaningful inclusion. Employers and Indigenous community members stressed that cultural safety requires intentional design, not assumptions. One employer described efforts to create spaces where Indigenous employees see themselves reflected:

“We’re trying to create a comfortable environment, a psychologically safe environment... we also try to use Indigenous examples so that people can see themselves represented.”

Culturally safe workplaces were described by participants in this research as those that invest in environments that respect Indigenous culture and create space for cultural practices. One interviewee pointed to the Southern Alberta Institute of Technology (SAIT) located in Calgary as a strong example of how institutions can make Indigenous people feel welcome:

“Look at SAIT. They have a smudging lodge right in the school... They built that just for that... that’s investing in a safe and comfortable place for them to go and be with one another and be with their culture... corporations need to do that as well and think of things like that.”

Ultimately, participants emphasized that culturally safe workplaces foster a sense of security, belonging, and possibility, all conditions that can help Indigenous workers to envision a future in Alberta’s digital economy.

14 REMOTE WORK AND FLEXIBLE EMPLOYMENT ARRANGEMENTS

With remote work opportunities able to play an important role in allowing rural residents to connect to jobs that are not locally available several employers who participated in this study emphasized

that expanding remote and flexible work options can be a significant step for supporting Indigenous participation in Alberta’s digital economy.¹⁷¹ As discussed in the preceding section, for Indigenous workers who wish to remain in or close to their home communities, standard urban-centred, nine-to-five models can pose significant barriers to both entry and retention.

One employer described how a key internal priority has been to consistently champion remote and hybrid roles, particularly for candidates living outside major urban centres. Other employers expressed a willingness to challenge long-standing assumptions about where digital roles must be located. Rather than defaulting to major urban centres, they highlighted the importance of reconsidering whether certain positions truly require an on-site presence. One participant explained the “need to train our own organization” to recognize that not everyone lives in a major city and ask whether the role could be based elsewhere.

In this context, employers also highlighted efforts to build Indigenous cohorts within technology and operations teams. One employer mentioned their organization’s initiative of a “virtual Indigenous branch designed to reach rural and northern communities.” Likewise, some participants argued that organizations should invest in developing talent within Indigenous communities rather than expecting candidates to leave their communities. One participant was particularly direct in highlighting this missed opportunity: “Why [aren’t] we working more closely with First Nations people? They don’t want to leave their communities... so develop the talent where they are.”

Together, these perspectives reflect a broader shift toward recognizing that meaningful participation in the digital economy does not require physical proximity to major hubs. With remote work arrangements increasing the “reservation radius” for acceptable jobs,¹⁷² meaning that more people can take jobs that are physically further away, which particularly benefits those in peripheral or rural locations employers can expand access, reduce barriers, and build long-term, community-rooted pathways into the sector.

¹⁷¹ Statistics Canada. (2024, October 17). Opportunities of working remotely in rural labour markets: Small area estimation from the Canadian Survey on Business Conditions, first to third quarter of 2024. The Daily.

¹⁷² Coskun, S., Dauth, W., Gartner, H., Stops, M., & Weber, E. (2024). Working from home increases work-home distances. IZA Institute of Labor Economics.

SUMMARY RECOMMENDATIONS



COMMUNITY RECOMMENDATIONS FOR ORGANIZATIONAL SUPPORT

Efforts to support Indigenous involvement in the digital economy include specialized programs like the IT Apprenticeship Program for Indigenous People, launched by the Treasury Board of Canada Secretariat.¹⁷³ This program aims to address employment gaps in the IT field by offering a combination of on-the-job learning, formal training, mentoring, and guidance. Focusing on potential rather than formal education levels it removes significant barriers to employment in the tech sector.¹⁷⁴

Community suggestions for expanding access are consistent and practical: partner with Indigenous communities to co-create programs, offer remote learning options and scholarships, prioritize Indigenous hiring, and create culturally safe spaces and Indigenous-led mentorship and sponsorship. Respondents also urged flexible delivery on reserves, paid internships, neuro-inclusive approaches in education and training, and a mindset that funding is an investment, not a cost—especially given that most learners face multiple simultaneous barriers. Wrap-around supports—such as childcare, transportation assistance, and culturally safe spaces—were identified as essential for enabling participation and success.



EMPLOYER RECOMMENDATIONS

Employers play a critical role in advancing inclusion. First, organizations should develop Indigenous-specific inclusion strategies rather than folding Indigenous needs into generic diversity, equity, and inclusion (DEI) frameworks. These strategies must be Indigenous-led and aligned with the Truth and Reconciliation Commission's Call to Action 92 and UNDRIP obligations. Recruitment and hiring practices should also be adapted to remove systemic barriers. This includes using culturally sensitive job postings and interview processes, incorporating Indigenous representation on hiring committees, and shifting from rigid credential requirements toward capability-based hiring. Employers should create pathways for candidates with non-traditional backgrounds and invest in training to support career transitions.

Mentorship and sponsorship emerged as key strategies for retention and advancement. Employers should establish Indigenous mentorship programs and ensure sponsorship opportunities that actively promote career progression. Visible Indigenous role models are equally important for inspiring youth and normalizing Indigenous presence in the tech sector. Creating culturally safe workplaces is another priority. This involves implementing cultural competency training, providing spaces for cultural practices such as smudging, and offering flexible benefits like paid spiritual days and access to Elders. These measures foster belonging and psychological safety, which are essential for long-term success.

Remote and flexible work arrangements can significantly expand access to digital careers for Indigenous employees who wish to remain in their communities. Employers should champion remote and hybrid roles and pair these efforts with investments in connectivity and digital tools.

¹⁷³ Government of Canada. (n.d.). IT apprenticeship program for Indigenous peoples. <https://talent.canada.ca/en/indigenous-it-apprentice>.

¹⁷⁴ Birchall, S. (2023, November 8). Canada's director of digital talent on breaking barriers for Indigenous people in tech. Government Transformation Magazine. <https://www.government-transformation.com/transformation/canadas-director-of-digital-talent-on-breaking-barriers-for-indigenous-people-in-tech>



OTHER RECOMMENDATIONS

Reliable broadband and access to up-to-date devices are foundational for participation in Alberta's digital economy, as connectivity underpins education, remote work, and entrepreneurship. Accelerating broadband deployment in rural and remote Indigenous communities is critical to meeting CRTC's basic service objectives.

Of critical importance is supporting Indigenous-led training programs that are culturally relevant and community-driven, and ensuring wrap-around supports such as living allowances, childcare, and transportation. Addressing foundational needs—such as housing, clean water, food security, and basic literacy—must remain a priority before expecting participation in advanced digital careers. Digital transformation cannot succeed without tackling these systemic inequities.

Finally, structured education-to-employment pathways are essential. Educational support should begin with early STEM education for Indigenous youth and extend to flexible post-secondary programs and employer partnerships that bridge training with real-world experience. These initiatives must be developed collaboratively with Indigenous leadership and reflect community priorities, values, and cultural practices. Promoting Indigenous entrepreneurship and innovation is equally important. Supporting Indigenous-owned businesses in tech and innovation sectors through mentorship, access to capital, and partnerships with industry and government can catalyze economic sovereignty and growth. Long-term partnerships between employers, Indigenous communities, and education or training institutions are vital to sustaining progress. These collaborations should be relational, not transactional, and grounded in trust and shared decision-making.

CONCLUSION

Alberta's technology and innovation sector is experiencing rapid growth, positioning the province as a key player in Canada's digital economy. This transformation offers significant opportunities for economic diversification and prosperity. Yet, as this report demonstrates, Indigenous participation in Alberta's digital economy remains disproportionately low, constrained by systemic, organizational, and individual-level barriers. These barriers include anti-Indigenous stereotypes and unconscious bias within the tech industry, a lack of systematic data collection on Indigenous representation, the absence of institutional infrastructure to engage Indigenous communities, and persistent connectivity challenges in rural and remote regions.

The findings of this study underscore that meaningful inclusion cannot be achieved through isolated initiatives or generic diversity frameworks. Instead, it requires intentional, culturally grounded strategies that address both immediate and structural inequities. At the systemic level, foundational needs such as housing, clean water, food security, and basic literacy must be prioritized before expecting participation in advanced digital careers. Without these conditions, digital transformation risks perpetuating colonial approaches rather than advancing reconciliation.

At the organizational level, employers must move beyond performative commitments and embed Indigenous-specific strategies into recruitment, retention, and workplace culture. This includes adapting hiring practices to remove credential barriers, creating culturally safe environments, and investing in mentorship and sponsorship programs that enable Indigenous employees to thrive. Employers should also champion remote and hybrid work arrangements, paired with investments in connectivity and digital tools, to expand access for individuals who wish to remain in their communities.

Community perspectives highlight the importance of culturally relevant training and clear education-to-employment pathways. Indigenous learners need programs that reflect their identities, values, and lived realities, delivered in formats that are

accessible to rural and remote communities. Wrap-around supports—such as transportation assistance, childcare, and living allowances—are essential for reducing barriers and ensuring success. Mentorship and visible Indigenous role models play a critical role in building confidence and inspiring participation, while entrepreneurship offers a powerful avenue for self-determination and economic sovereignty.

Long-term partnerships must be relational, not transactional, grounded in trust and shared decision-making. These collaborations should align with the Truth and Reconciliation Commission's Calls to Action and the United Nations Declaration on the Rights of Indigenous Peoples, ensuring that reconciliation is not conflated with generic DEI efforts but treated as a distinct and necessary commitment.

In closing, this report affirms that increasing Indigenous participation in Alberta's digital economy is both an economic imperative and a moral responsibility. By addressing systemic inequities, investing in infrastructure, and creating culturally safe, inclusive pathways, Alberta can build a digital economy that reflects the principles of reconciliation and shared prosperity. The opportunities are clear, and the path forward requires sustained collaboration, bold action, and a commitment to equity that extends beyond words into measurable change.

APPENDIX A: METHODOLOGY

This research employed a mixed-methods approach to capture both quantitative and qualitative insights into Indigenous participation in Alberta's technology and innovation sectors. The methodology was guided by the First Nations Technology Council's research principles—respect, control, community focus, collaboration, partnership, sharing, and social return—and aligned with the Ownership, Control, Access, and Possession (OCAP®) framework. These protocols were observed through practices such as returning raw data to participants, providing regular updates, and conducting report-back sessions. The First Nations Technology Council, Engage Delaney, and ICTC all participated in the research process in a collaborative manner.

SECONDARY DATA ANALYSIS

ICTC conducted a review of existing labour market data, academic literature, and government and industry reports to establish baseline trends and contextualize findings. A literature review conducted in July 2024 provided a comprehensive overview of available literature (including academic papers, government and industry reports, and grey literature) and secondary data analysis to help shape the study's primary research and provide additional information and context for the final report and toolkit.

PRIMARY DATA COLLECTION AND ANALYSES

Community Survey

The community survey was designed to capture the perspectives of Indigenous job seekers, learners, and community members on barriers to employment and participation in Alberta's digital economy. The survey explored themes such as access to technology and training, confidence and readiness for tech roles, and preferred supports for education and employment. Engage Delaney led the dissemination and collection of survey responses, which was conducted between April – May 2025 and gained a total of 55 qualified responses. Majority of respondents were between the ages of 35–44 (41%), followed by 25–34 (25%), and represented both urban and rural communities, including Calgary, Edmonton, Lethbridge, Siksika, Piikani Nation, Eden Valley First Nation, Samson Cree Nation, and other First Nations and Metis communities not disclosed.

Employer Survey

ICTC conducted a two-phase survey of Alberta-based employers. The first wave of the survey was deployed in December 2024, with the follow-up deployed in October 2025. The intention of two survey periods was to capture any changes in trends, sentiment,

etc., however no significant changes were observed. A total of 500 survey responses were gained (250 per each deployment) across technology and innovation sectors to assess recruitment practices, barriers, and attitudes toward Indigenous hiring.

Key Informant Interviews

- › **Indigenous Community Members:** Engage Delaney and ICTC conducted 21 interviews with Indigenous community members in Alberta. The interviews took place from August 2024 to September 2025. Interviewees represented Indigenous entrepreneurs, First Nations and Metis education, training, and mentorship programs, and Indigenous tech professionals.
- › **Employers and Industry Leaders:** ICTC also conducted 31 key informant interviews with employers, investors, and workforce and business development agencies based in Alberta. The interviews took place from March to September 2025. Interviewees represented executive leadership across Alberta's tech and innovation ecosystem and leaders in Indigenous relations, human resources, and business development.

Focus Groups

Two focus group sessions were held in April 2025: one in Calgary and one in Edmonton. The focus groups were led by Engage Delaney and convened Indigenous students and jobseekers, representing urban and rural, on- and off-reserve community members to explore lived experiences and perspectives on tech careers. A total of 31 participants were engaged across the two sessions, with 19 participants in Calgary and 9 participants in Edmonton.

ADVISORY COMMITTEE

Facilitated by Engage Delaney and convened by ICTC and the First Nations Technology Council, the project was informed by an Advisory Committee of subject matter experts from community-led organizations, DEI consulting, the digital economy, and other related fields. The project Advisory Committee guided study methodology and commented on research in progress while meeting five times between October 2024 and December 2025.

ANALYTICAL APPROACH

Quantitative data from surveys were analyzed by ICTC using descriptive statistics to identify patterns in employer practices and community needs. Qualitative data from interviews and focus groups were coded thematically to surface recurring themes, barriers, and best practices. Triangulation of these data sources ensured validity and provided a holistic understanding of systemic, organizational, and individual-level factors influencing Indigenous participation in Alberta's digital economy.

In addition, the generous participation in this research by approximately 650 research participants made this project possible. This included Indigenous perspectives and employer survey respondents, regional session participants, and interviewees who lent their time and insights.

LIMITATIONS

The study acknowledges limitations related to data availability, particularly concerning Inuit populations in Alberta. While Inuit peoples are present in the province, limited data and perspectives prevented their inclusion in primary research. Findings therefore primarily reflect First Nations and Métis experiences.