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# ALBERTA COLLEGES ECONOMIC RECOVERY TASK FORCE

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## Initial Recommendations



## ABOUT THE ALBERTA COLLEGES ECONOMIC RECOVERY TASK FORCE

The Alberta Colleges Economic Recovery Task Force was launched to assist the work of local, provincial and federal governments, and industry, as they tackle the economic challenges faced as a result of the global COVID-19 pandemic. Work is underway to identify the ways in which Alberta's Colleges are currently supporting local, provincial and national economic recovery and future growth goals. The Task Force continues to examine how to further support and develop this work to assist economic resiliency and recovery to address the immediate and short-term needs as it looks to future opportunities for Alberta's Colleges to support long-term economic growth.

The Task Force focuses on three main themes:

- Economic resiliency to address immediate needs.
- Economic recovery to play a key role in restarting the economy.
- Economic competitiveness to focus on long-term opportunities for Alberta's Colleges to build Canada's economic strength.

### MEMBERS:

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## INTRODUCTION

As the global economy changes, so too must our provincial strategy and approach. The Government of Alberta has released an Economic Recovery Plan to build, diversify and create jobs. The plan identifies Alberta's education system as "essential to building a prosperous Alberta." The Government of Alberta's plan is also complemented by a series of reports and recommendations made by the province's Economic Recovery Council, multiple Chamber of Commerce and economic development roundtables, and reports such as the Business Council of Alberta's "Skilled by Design: A Blueprint for Alberta's Future Workforce."

Alberta's colleges are integral to growing new technology and innovation in key areas of the economy and ensuring Albertans have the skills and training required to meet labour market demands of a changing and increasingly digital economy. The Alberta Colleges Economic Recovery Task Force has developed a series of recommendations based on its initial findings that can be actioned in both the short and medium term to leverage the speed and agility of Alberta's colleges to help operationalize the province's Economic Recovery Plan, and expedite Alberta's path to economic recovery.

### I. WORKFORCE DATA

#### *Identify skills gaps in Alberta's existing and prospective workforce.*

Workforce data exists in many platforms at the federal, provincial and municipal levels, however coordinated analysis is needed when it comes to connecting this information with assessing reskilling/upskilling/skills shifts. We know what sectors are growing in need and we know how many people are unemployed (even underemployed), but there is very incidental data about sectors shrinking and taking their employees with them.

In all of the studies sponsored by Alberta Labour during the past year, there are references to business and sector needs, but there are few references to oversaturated or shrinking sectors.

Additionally, most (if not all) labour studies are conducted on the basis of professions or sectors, as opposed to skills that cross all sectors and professions, to get an aggregate look at whether our overall workforce has an ability to compete in today's economy. Furthermore, NAICS codes (on which Statistics Canada bases its labour analyses) are only reviewed every five years. They were last reviewed and revised in 2017 and will not be reviewed again until in 2022.

#### **Recommendations:**

1. That the Government of Alberta initiate an Alberta Skills Assessment led by a steering committee with representation from Alberta's CCCs, business and industry associations and economic development organizations. The Alberta Skills Assessment should seek to identify necessary skills for a globally competitive workforce as well as skills gaps in Alberta's existing workforce and prospective workforce (students). The results of the Alberta Skills Assessment will form the basis of a provincial re-employment and reskilling strategy.





- *The Steering Committee should include a workforce organization/professional association, faculty, and student representation to ensure that all perspectives are considered, and to ensure the recommendations put forward are meaningful and relevant.*
2. That the Government of Alberta direct Alberta Labour and Economic Development Trade and Tourism to conduct an analysis on existing labour data, including the newly released Conference Board of Canada studies and the steering committee information collected in recommendation 1 above, to synthesize the top sector needs as well as cross-sector skill requirements for all jobs of the future.
    - *The research should also include the identification of opportunities for employment of underrepresented groups that face disadvantages, such as Indigenous people, women, immigrants, persons with disabilities, and youth, as this will help develop targeted interventions.*
    - *Skill sets should also assess lifelong learning, entrepreneurial skills, personal adaptive capacity, problem solving, and resiliency/change management skills that will help people navigate different career paths.*
  3. That the Government of Alberta adapt the province's annual corporate filings system to encourage companies to report on critical labour market information, such as skills gaps and future skills requirements. This would make data timelier and more relevant while also reducing the need for more costly independent surveys.

## II. MICRO-CREDENTIALING

### **Create programming to address existing skills gaps.**

In a 2013 study of Canada's Digital Economy, 51% of firms said they did not adopt technology due to a lack of required skills and competencies among their staff. A later 2019 study echoed the same concerns, noting that businesses lacked capacity in "business process management," to ensure effective application of technology.

In 2017, more than half of all Canadian SMEs surveyed did not have the knowledge or the workforce to make a functional website for selling products or services. A roundtable of Alberta SMEs found similar concerns about knowledge, with most companies reporting a desire to digitize their business (through additional computer usage, including inventory, warehouse, or supply chain) but expressing concern that they "lacked the skills and education" to do so.

The State of Ohio is giving businesses \$1.75 million to reskill former manufacturing workers; it is structured through the state's TechCred program that will reimburse up to \$2,000 per employee, and up to \$30,000 per employer, which can be current or new employees. The funding will be disbursed for any recognized technology-focused credential, including those from Google Cloud, AWS, Oracle, Microsoft Azure and more. Amazon has launched its Upskilling 2025 strategy that will see a \$700 million program to move current Amazon employees into higher-paying roles within Amazon, usually from warehouse/fulfillment centre jobs into software jobs.



## Recommendations:

4. That Alberta's CCCs take the learnings from the Alberta Skills Assessment and work with the Government of Alberta to develop micro-credentialing programming to address Alberta's most immediate skills needs and shortages. The Government of Alberta should directly fund industry to contract with CCCs that have strengths in the subject for the development and implementation of new micro-credentials which are directly linked to in-demand skills. Once developed these courses could then be offered at all the CCCs across Alberta.
  - *The relevance of the micro-credentials programs should be evaluated periodically for updates and adjustments reflective of the constantly changing skills need in the labour market. This evaluation process should be done in collaboration with industry partners.*
5. That the Government of Alberta invest top-up funds to the Canada Alberta Job Grant to offer reskilling and upskilling to existing employees (and owner/operators) at no cost to the business.
6. That the Government of Alberta offer financial support to unemployed Albertans who wish to pursue micro-credentialing or work-integrated learning programs for the purposes of re-employment. Specifically, the Government of Alberta should introduce a program that pairs well with the federal [Canadian Training Benefit](#), thus increasing the tax credits available to learners and providing them the time off work to complete that training.

## III. WORK-INTEGRATED LEARNING

### ***Design work-integrated learning programs focused on supporting in-field employment in areas of need.***

Currently, most work-integrated learning (WIL) programs are designed with the primary goal of attracting students or offering “non-classroom advantages” (as opposed to meeting market or employment needs), resulting in higher in-field employment rates.

Students have identified one of the biggest challenges to WIL as the “WIL Employment Cliff” – students can secure employment for a brief, fixed term under the auspices of training and experience, but struggle to secure ongoing employment on a permanent basis.

One of the biggest challenges to WIL from a college perspective can be having the companies and industry available to hire students in the various fields linked to WIL programming. However, in a post-pandemic world with virtual working arrangements a possibility, this may present an opportunity for colleges and students from all areas of the province to expand WIL opportunities.



## Recommendations:

7. That Alberta's CCCs work with industry and the Government of Alberta to develop work-integrated learning programming focused on upskilling, reskilling and addressing employment gaps.
  - Develop a provincial portal that would centralize WIL resources for students, post-secondary institutions, and industry. This would include:
    - i. A database of available job placements in key sectors to match program participants to WIL opportunities. This would provide a centralized registration platform for employers looking to hire students, and could be used by colleges to target work placements for students.
    - ii. An inventory of available skills development programs in Alberta to improve awareness of tools, grants and other resources available to both jobseekers and employers.
    - iii. As a pilot, issue an innovation challenge to develop an electronic platform to facilitate these connections between Alberta's community colleges and the technology and computer programming sector. SME innovators would compete in a hackathon to develop a database that bridges post-secondary institutions and industry partners in WIL opportunities. This would require strong post-secondary collaboration and willingness to share access to the database. Federal and/or provincial governments could provide incentives to encourage company participation.
    - iv. Future iterations of the portal could build in standardized candidate profiles, assess prior learning, identify skills gaps and suggest upskilling pathways for students.
      - *The provincial portal project should consider utilizing existing online platforms, such as <https://alis.alberta.ca/> which is a comprehensive website with information about education and training, occupational profiles, tools and resources, as well as job postings. A section on WIL can be created on the ALIS website.*
  - Increase resources and emphasis at colleges to work with SMEs to grow local business awareness of benefits and demand for student co-op placements.
    - i. Develop promotional material to help educate employers on the benefits of WIL and incentivize greater private sector participation.
  - Provide multi-year funding to develop and grow college WIL co-op placement programs. To encourage student uptake, reduce any fees required for students to participate in co-op placements.
  - Adopt a provincial goal of universal experiential learning that would require a minimum level of WIL for post-secondary students. Work with post-secondary institutions and industry to gradually implement this goal.





## Sectoral Recommendations – Technology and Computer Programming:

8. Convene stakeholders in the technology sector to determine what occupations, competencies and skill sets are critical to the industry in the short and medium term. Evaluate these needs against existing college programs to determine where additional programming is needed. Establish working groups with representatives from industry and post-secondary to design the needed upskilling programs.
9. Provide incentives for job placements between artificial intelligence (AI)/machine learning organizations/students and Alberta firms with AI needs. Devote greater resources to matchmaking between AI institutions and firms (for example, businesses may know they need an AI solution, but are not certain how to articulate or hire student placements for it).
10. Create a focus group of digital and AI companies to provide input into developing related college-level programming. Seek collaboration between colleges on developing a standardized curriculum for this sector.
  - *A mechanism to periodically evaluate the effectiveness of the curriculum, and update as needed, should be established given that the technology sector is constantly evolving.*

## IV. INNOVATION

Alberta's innovation ecosystem has not yet fully tapped the potential of its colleges and this is largely due to a lack of understanding from both sides. Government, economic development and innovation entities are unclear on the role colleges could and should play in the innovation ecosystem. Colleges, who have not been brought into key conversations, have struggled to articulate their value and contribution to innovation in Alberta. Some of the ways colleges meaningfully contribute to innovation in Alberta include:

### *For Students:*

- Enriching student learning through experiential and applied learning
- Exposing students to real world, hands-on problem solving and expanding their job applicable skills and education

### *For Industry & Entrepreneurs:*

- Developing, validating and demonstrating new technology and practices for a company's commercial success
- Transitioning technology from one industry application to another (often at commercial scale)
- Engaging/leading multiple stakeholders in collaborative applied research initiatives for broader industry impacts





*All:*

- Partnering with businesses to grow employment opportunities for students while strengthening industry relationships and investments in colleges
- Complementing the leading “discovery research” focus of Alberta’s universities
- Generating environments that allow companies and students to explore challenges together through the application of technology and practice

Alberta’s colleges applied research significantly benefits students, contributes to economic productivity, and helps community organizations and business partners achieve their innovation potential and competitive advantage going forward.

***Embed Alberta’s colleges in the fabric and culture of the innovation ecosystem.***

**Recommendations:**

11. Create a provincial online Alberta Colleges Innovation Portal to house information for students, innovators, industry and government. This will include information on how colleges approach IP, partner with industry, support entrepreneurs and offer upskilling in areas of technology and digital tools. This portal will also link to other resources and partners within Alberta’s innovation ecosystem.
12. Establish the Alberta Applied Research and Innovation Network (AARIN): a collaborative and cross-disciplinary organization of Alberta colleges, government, innovation entities and industry groups. The AARIN will be linked with the regional innovation networks across the province and its purpose will be to support member institutions’ applied research and innovation initiatives that contribute to creating exceptional learning experiences for students, workplace skills development, economic growth and healthy communities. The AARIN will serve as a collective voice to raise awareness regionally, provincially and federally of the capacity of vibrant applied research cultures, the capacity within Alberta’s colleges, and to foster best practices in applied research and innovation by facilitating the sharing of resources between members.

***Pivot programming to focus on skills for future jobs.***

High-growth sectors are overwhelmingly technology focused and currently Alberta is not producing enough graduates in high-tech fields. Most of these positions require 4-year degrees (at minimum). However, innovation industries that are not simply “coding” could represent a meaningful opportunity for Alberta’s colleges (i.e. Energy transition/renewable energy; smart construction and green building; Industry 4.0). Programming or micro-credentialing to support participation in emerging and growing sectors (cloud computing, database analytics, SPS, etc.) would assist colleges and their students in meaningfully participating in the innovation economy (and ecosystem) and equip graduates with the skills they need to compete in a rapidly changing labour market.



### **Recommendation:**

13. That Alberta's CCCs work with provincial, federal and regional innovation entities (such as Alberta Innovates, the Alberta Machine Intelligence Institute, ACAMP and NanoCanada) to incorporate advanced technology and digital tools (i.e. artificial intelligence, cloud computing, big data analytics, and machine learning) into existing programming, while emphasizing work-integrated and experiential learning through industry partnership.

### ***Act as an incubator and accelerator for commercialization of made-in-Alberta technology, products and solutions.***

Any idea needs resources to be brought to life and to market. Most innovation resources are concentrated in Alberta's major urban centres, but innovative Albertan entrepreneurs exist across the province in communities large and small. As such, Alberta's colleges could offer an opportunity for commercialization closer to home and linkage to industry. Colleges can also offer innovators and entrepreneurs more intellectual property freedom.

### **Recommendation:**

14. That Alberta's CCCs work with Alberta Innovates and other innovation entities (including universities) to create Commercialization Hubs in Alberta's colleges that will support incubation and acceleration of innovations from ideation to commercialization for Alberta-based start-ups, innovators and entrepreneurs. The Hubs will act as a creative collision space for faculty, innovators and industry, be linked into Alberta's innovation network and programming, and provide innovators royalty-free commercial rights – thereby enabling commercialization of the resultant products, processes and services. The colleges will retain rights for further education and research purposes.

### ***Support technology adoption and innovation within Alberta's SMEs to enhance productivity and global competitiveness.***

In this new age of accelerating automation and digitization, it is particularly important to promote technology adoption and innovation in our small and medium-sized businesses, which are responsible for most of the job growth in Alberta. Most SMEs do not have the resources to undertake such research on their own, which is why partnerships between Alberta's colleges and SMEs are integral to enhancing Alberta's productivity and future global competitiveness.

### **Recommendation:**

15. That the Government of Alberta and Alberta's CCCs work with industry to determine a model for utilizing colleges as innovation labs for undertaking applied research projects that refine and adapt products, services, technologies and processes, and provide partners with the talent and state-of-the-art facilities needed to drive both economic and social gain.

