Alberta 2030: Building Skills for Jobs

January 2021

About Alberta 2030: Building Skills for Jobs

This report has been developed based on:

- Extensive stakeholder engagement, including:
  - 115+ one-on-one interviews
  - 10 Guiding Coalition meetings
  - 31 roundtables
  - 5,600+ online survey completions
  - 200+ workbook submissions
  - 1,500 participants in 6 telephone townhalls
- Data and analyses from across Alberta's post-secondary system
- Leading practices from other jurisdictions and trends and other insights from global experts
- Perspectives and experience from Alberta's specific context

We acknowledge and sincerely thank all of those who contributed to this report, and whose perspectives are reflected here. All case studies listed within this report are examples only, and do not infer any affiliation with Alberta 2030.

Purpose of this document

What this document is

- Considerations for the vision, goals, objectives, and outcomes for Alberta 2030: Building Skills for Jobs
- A menu of potential initiatives that can be included to support the vision, goals, objectives and outcomes of the Alberta 2030: Building Skills for Jobs
- An outline of design considerations for each initiative that need to be evaluated

What this document is not

- A policy recommendation

Contents

The case for change

Five trends are reshaping post-secondary education globally, amplified by COVID-19

1. The profile of post-secondary learners is changing
2. Digital disruption and COVID-19 have forced higher education to go remote overnight
3. The nature and future of work is being transformed
4. Research funding is being outpaced by GDP growth in many jurisdictions
5. Public funding remains under pressure

Four challenges affecting Alberta's post-secondary system

1. Stagnant overall enrolment despite a changing mix of post-secondary learners
2. Alignment between program completion and market demand in the face of a 7% drop in employment
3. Research translation into real-world tech and products and capital attraction to support innovation
4. Accelerated fiscal challenges for Alberta & post-secondary institutions in Alberta

Six goals for Alberta's post-secondary system

1. Lead Canada in providing world-class, affordable, and innovative post-secondary experiences and credentials
2. Ensure every student has the skills, knowledge, and competencies to enjoy fulfilling lives and careers
3. Unleash Alberta's innovation by supporting post-secondary research that creates new knowledge, capabilities, and companies
4. Become a leading destination for top talent to drive the growth of skills, ideas, and innovations locally and globally
5. Deliver exceptional value for students, faculty, and Albertans by supporting innovative growth, efficiency, and effectiveness across the system
6. Drive system outcomes through enabling and effective governance

Contents

Five trends transforming post-secondary education systems

1. The profile of post-secondary learners is changing

As international enrolment has grown, post-secondary student demographics and funding sources are shifting

Mental health is increasingly an important issue for students

Students (and families) are bearing a greater share of the total cost of education, increasing financial pressures for some

2. Digital disruption and COVID-19 have forced higher education to go remote overnight

Adoption of remote and online learning is growing and creating new pathways for delivery

Investments in EdTech for advanced education is rapidly growing and challenging traditional operating models

3. The nature (and future) of work is being transformed through automation and digitization

Demand for technological, social and emotional, and higher cognitive skills is increasing

Lifelong learning is becoming increasing salient as people reskill and upskill to match the pace of technological change in the workplace

4. Research funding is being outpaced by GDP growth in many jurisdictions

While research spending is increasing, it is not keeping pace with GDP growth

Institutions are reorganizing their research efforts to diversify and grow research funding and partnerships

5. Public funding remains under pressure, intensifying income challenges for institutions

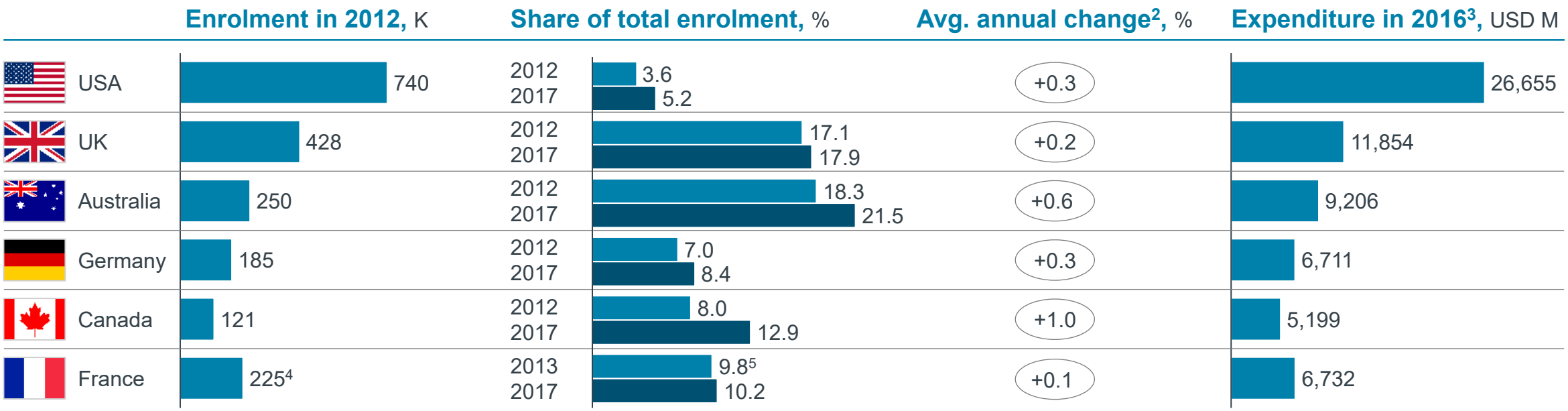
Public expenditure as a share of total expenditure has been steadily declining

Covid-19 and the collapse of the oil market is driving the worst recession in the past century, generating enrolment uncertainty, accelerating financial pressures and shifting demand for skills, delivery models and research models

1. As international enrolment has grown, post-secondary student demographics and funding sources are shifting

In Canada, international enrolment in absolute terms and as share of total enrolment is growing rapidly (1% average annual increase)

International student enrolment and expenditure across six advanced economies[1]



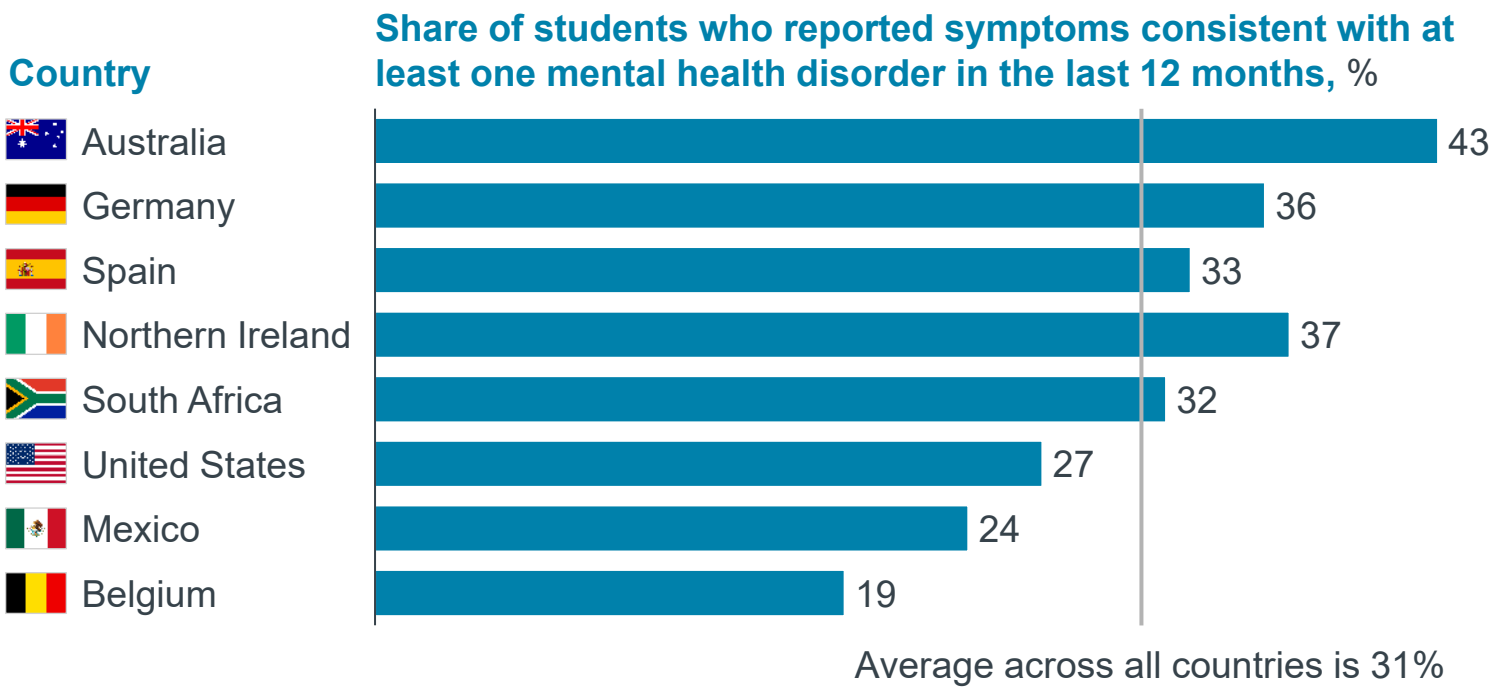
1.This indicator shows the number of international tertiary students enrolled as a proportion of the total tertiary students enrolled in the destination (host) country. International students are those who received their prior education in another country and are not residents of their current country of study; 2. Difference in international student share of total enrolment in years divided by number of years; 3. Estimate of the direct dollar amount spent in a destination country by international students including tuition, fees, and living expenses; 4. Imputed based on total tertiary students and share of international enrolment ;5. 2013 data used in place of 2012 data when 2012 data was not available
Note: Numbers may not sum due to rounding

Source: Education at a Glance: OECD Indicators (2019), Study Portal's The Global Impact of International Students (2019), exp ert interviews

1. Mental health is increasingly an important issue for students

Roughly one in three post secondary students have faced mental health challenges, demonstrating a high level of need for mental health services at advanced education institutions

A global survey across 8 countries and 13.9 K students identified a high level of need for mental health services among students[1]…



… findings that were consistent among Canadian students

A survey in spring 2019 across 58 Canadian post secondary institutions and 55 K students found

51% felt so depressed over the last 12 months that it was difficult to function (up from 38 per cent in 2013)[1]

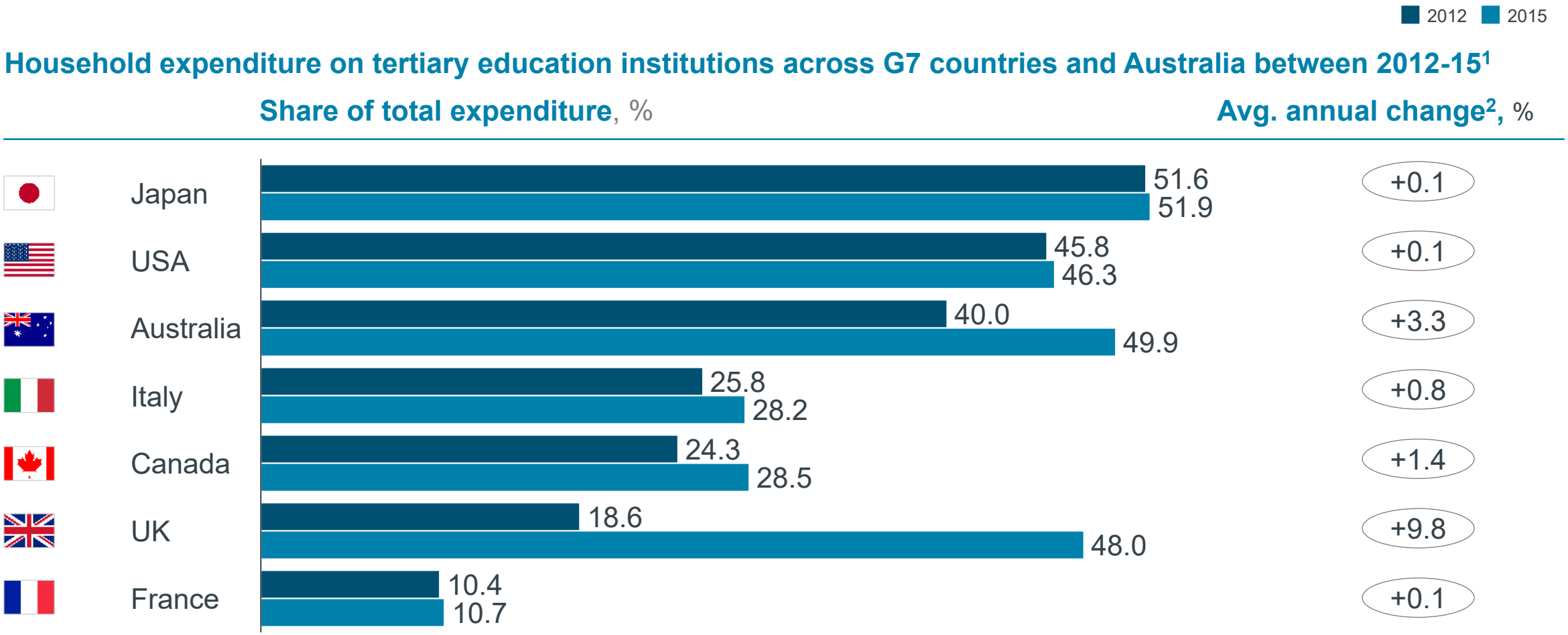
69% experienced overwhelming anxiety (up from 57 per cent in 2013)[1]

1.Students surveyed from Australia, Belgium, Germany, Mexico, Northern Ireland, South Africa, Spain and the United States between 2014-17 for DSM–IV mental disorders; 2. Results from National College Health Assessment may reflect non-response bias; Note: Numbers may not sum due to rounding

Source: WHO World Mental Health Surveys International College Student Project: Prevalence and Distribution of Mental Disorders (2018); National College Health Assessment (2019),

1. Students (and families) are bearing a greater share of the total cost of education, increasing financial pressures for some

Household expenditure on tertiary education institutions across G7 countries and Australia between 2012-15[1]



1. Household expenditure is spending from students and families and excludes public funding and private non household funding such as that from private businesses and non-profit organisations; 2. Difference in international student share of total enrolment in years divided by number of years
Note: German data not available, numbers may not sum due to rounding

Source: Education at a Glance: OECD Indicators (2019), expert interviews

2. COVID-19 has accelerated the adoption of remote and online learning

Prior to COVID-19

nearly 18% **Undergraduate and graduate students in** Canada enrolled in minimum one online course[1]

76% Of Canadian institutions offered **blended learning environments**[2]

8% **Annual growth** of online learning in Western Canada[2]

Since COVID-19

92% **Post secondary students** in Canada had some or all courses moved online[3]

7x **Coursera** added ~10m new users, 7x the pace of sign-ups YTD[4]

37x **Blackboard**, an ed tech delivery platform, saw 37x daily global usage[4]

1. 2016/2017 numbers reported in the 2018 Canadian National Online and Digital Learning Survey; 2. 2017/2018 numbers reported in the 2019 Canadian National Online and Digital Learning Survey; 3. Statcan (COVID-19 Pandemic: Academic impacts on postsecondary students in Canada) ; 4. Press searches

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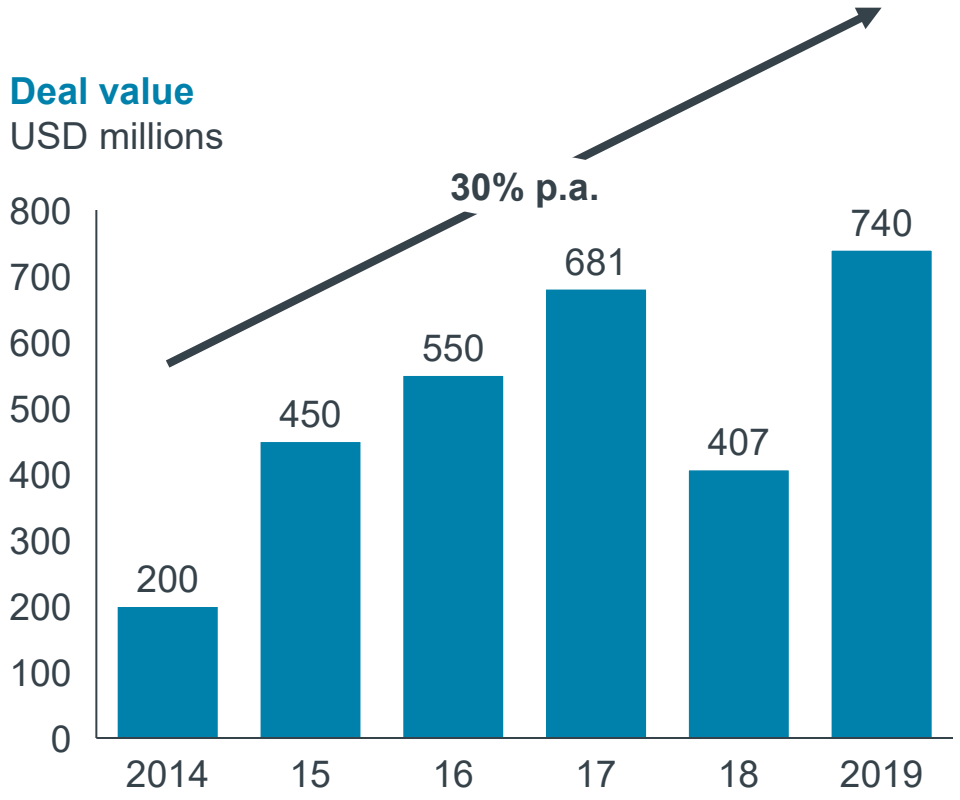
2. Investment in edtech is growing rapidly and disrupting traditional delivery models

Annual Totals for Global Private Investment in Learning Technology Suppliers in Higher Education, 2014-19



Note: Numbers may not sum due to rounding

Source: Metaari's Analysis of the Global Learning Technology Investment Patterns (2019)

Labster

"A million-dollar lab, one click away" gives students access to a realistic virtual science lab experience

Founded in 2012, it has raised $35M after its latest Series B funding round in 2019 and serves 1,000+ universities, 3,000+ high schools, and 3M+ students globally

OPEN UNIVERSITIES AUSTRALIA

Accelerated the development of online courses (e.g., 20+ of 43 accredited universities now offer online classes)

Founded in 1993, Open Universities Australia offers higher education courses and degrees to students globally

CIVITAS LEARNING

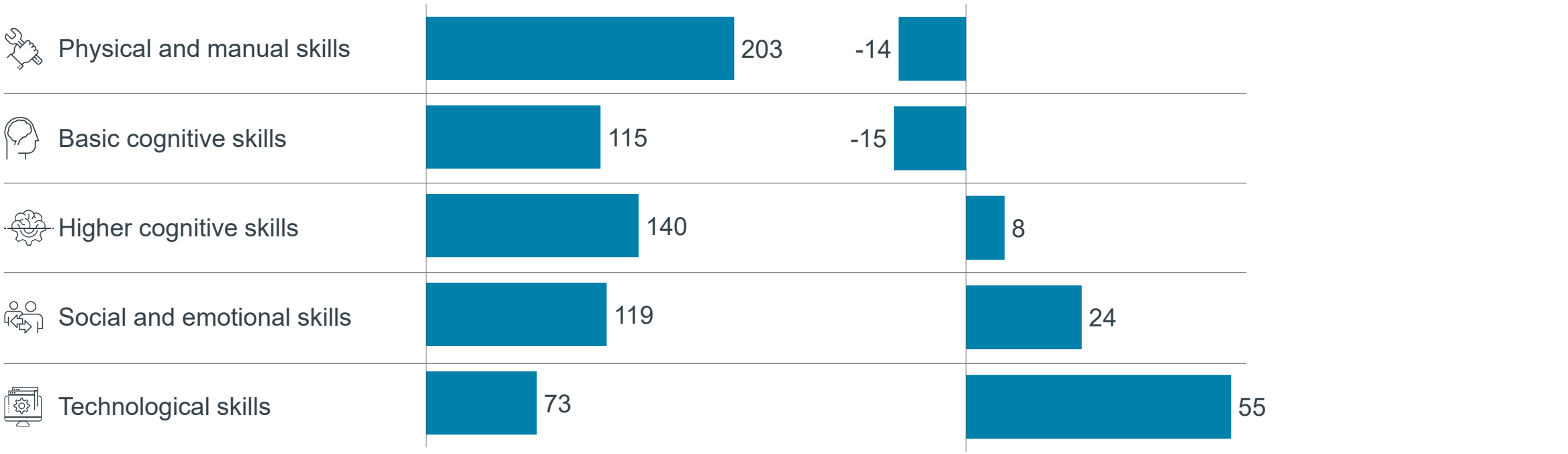
Uses predictive analytics to guide student engagement, advising workflows, course evaluation, and institutional management.

Founded in 2011, has raised $64M over 5 rounds with SFJ and Francisco Partners as most recent investors in 2019.

3. The nature (and future) of work is being transformed through automation and digitization

Demand for technological, social and emotional, and higher cognitive skills is increasing

Impact of automation and artificial intelligence (AI) on demand for different skills in the US and Western Europe[1]



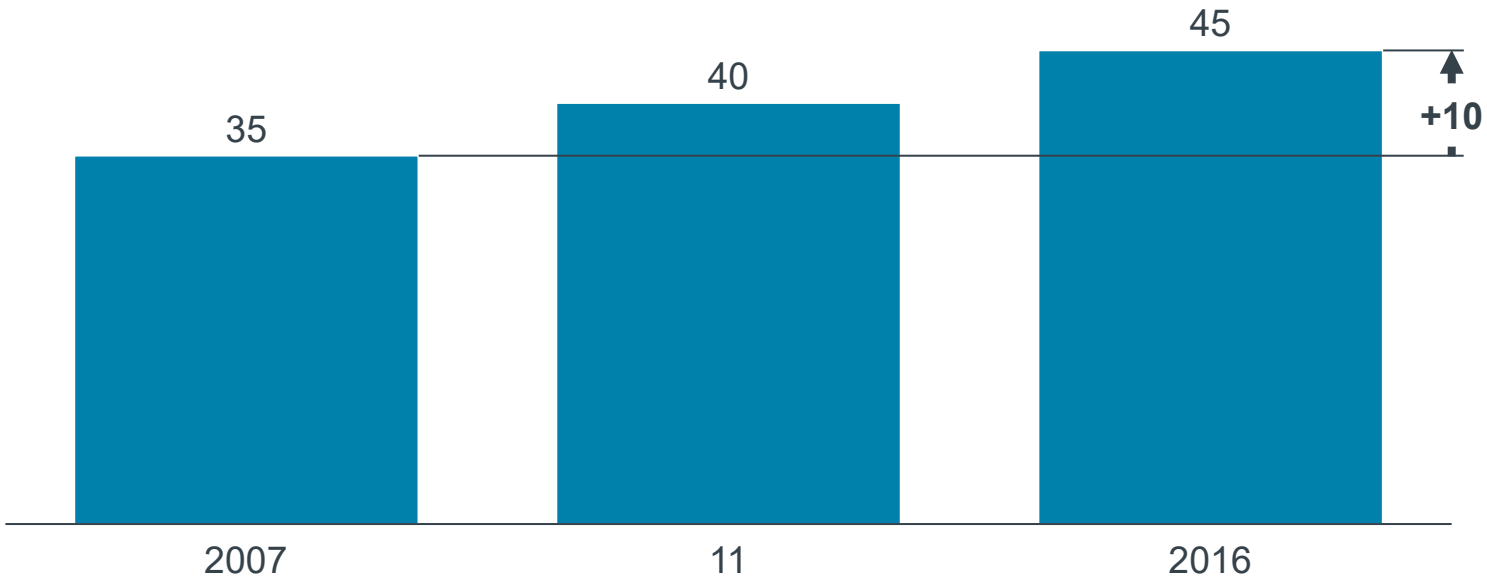
1. Western Europe includes Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Netherlands, Norway, Spain, Sweden, Switzerland, United Kingdom
Note: Numbers may not sum due to rounding

Source: McKinsey Global Institute Skill shift: Automation and the future of the workforce (2018), expert interviews

3. Lifelong learning is becoming increasing salient as people reskill and upskill to match the pace of technological change in the workplace

Participation in lifelong learning has grown 10% over 10 years…

Share of adults aged 25-64 participating in formal and non formal education and training in the past 12 months among EU 27 + UK[1], %



…and is likely to continue growing

375M

workers globally may need to switch occupations to find work between 2016-30 assuming a midpoint automation scenario

1.The EU 27 + UK refers to a weighted average of the 27 member countries and the United Kingdom; Most lifelong learning and growth of such learning is non-formal in nature where ~5% of adults reported participating in formal education in 2007 and 2016
Note: Numbers may not sum due to rounding

Source: Eurostat Adult Education survey, McKinsey Global Institute Jobs lost, jobs gained: Workforce transitions in a time of automation (2017), expert interviews

4. Research funding within higher education as a share of GDP is declining

While gross domestic expenditure on R&D within the higher education sector has increased, the expenditure has not kept pace with GDP growth in six of seven G7 countries

Gross domestic expenditure on R&D within higher education sector[1]

Country	Absolute expenditure, Billions 2015 USD	CAGR, %	Share of GDP, %	Pct. points (%)
Canada	9.7 → 11.1	2.0	0.68 → 0.67	-0.01
France	12.1 → 12.8	0.8	0.47 → 0.46	-0.01
Germany	17.7 → 21.7	2.9	0.50 → 0.53	+0.04
Italy	8.1 → 7.5	-1.2	0.35 → 0.32	-0.03
Japan	19.7 → 20.3	0.4	0.40 → 0.39	-0.02
UK	11.1 → 11.3	0.2	0.45 → 0.39	-0.05
USA	65.8 → 69.2	0.7	0.40 → 0.37	-0.04

1.Based on gross domestic expenditure on R&D performed by higher education sector across total source of funds
Note: Numbers may not sum due to rounding

Source: OECD

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4. Institutions are reorganizing their research efforts to diversify and grow research funding and partnerships

CASE EXAMPLES

New incentives

Changing incentives and resources to promote diverse collaborations

UK Connecting Capability Fund will provide £100M for projects that involve 3+ PSIs collaborating on knowledge transfer and commercialization

Oxford Sciences Innovation Fund is £600M+ university-partnered venture fund that deploys patient capital for low-maturity IP with market potential

Maryland Industrial Partnerships provides matching funds to industry for research translation projects with the University of Maryland System

Supportive practices

Adapting practices to grow research funding, partnerships, and commercialization

UC System has a central knowledge transfer office that provides support to its campus specific tech transfer offices, including IP education

University of Toronto's Innovation, Partnerships & Entrepreneurship Office is an integrated hub for all of U of T's research and innovation activities

University College London has 4 interconnected teams that provide pre-award funding application support to faculty

Collaborative spaces

Building new spaces with an interdisciplinary focus especially around technology capabilities

U-M's Mcity is an advanced mobility and research centre with a 32-acre test site and connected environment for industry, government, and U-M research collaboration

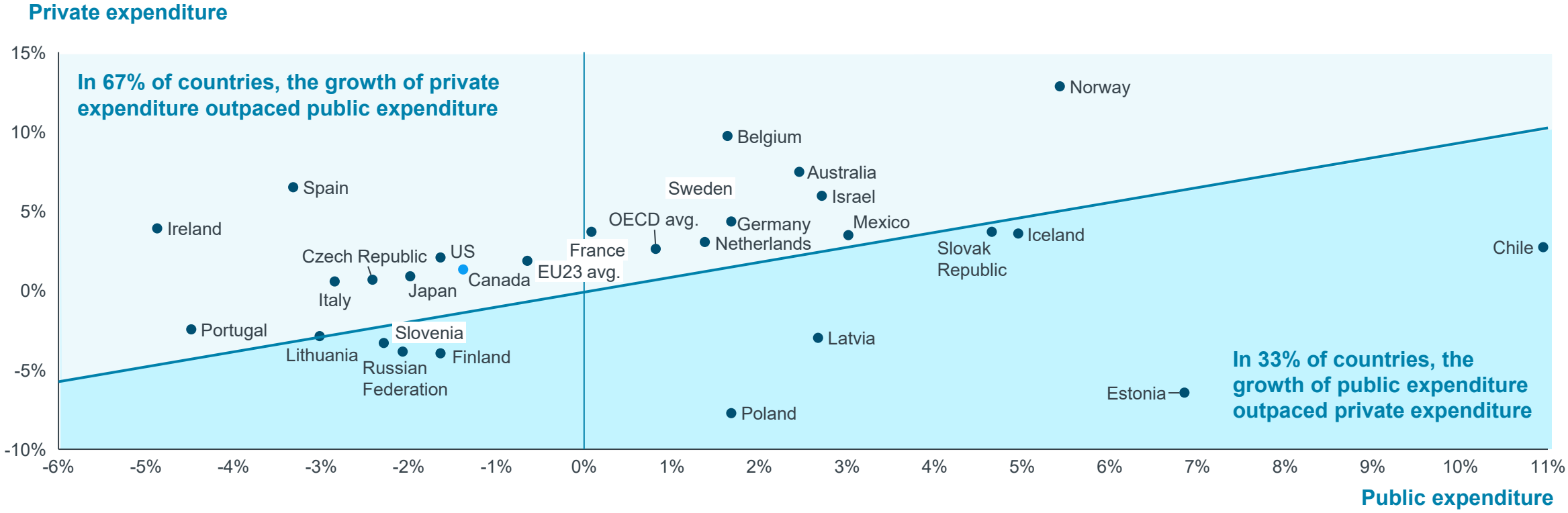
Manchester's Graphene City, funded by the UK government, is a leading innovation cluster for graphene research with 90+ company partners

The **Ontario Advanced Manufacturing Consortium** combines the strength of three institutions across 35+ labs to innovate technologies with industry

5. Public expenditure as a share of total expenditure has been steadily declining

67% of advanced education systems in OECD countries have experienced long term financial pressure due to a decline in public expenditure relative to private expenditure

Growth of public and private expenditure[1] on tertiary education institutions across 25+ countries between 2010-16, CAGR



1. Private expenditure include spend from households (students and their families), private businesses and non-profit organisations. In 2011 and 2016, household share of private expenditure remained stable at ~70%.
Note: Numbers may not sum due to rounding

Source: Education at a Glance: OECD Indicators (2019)

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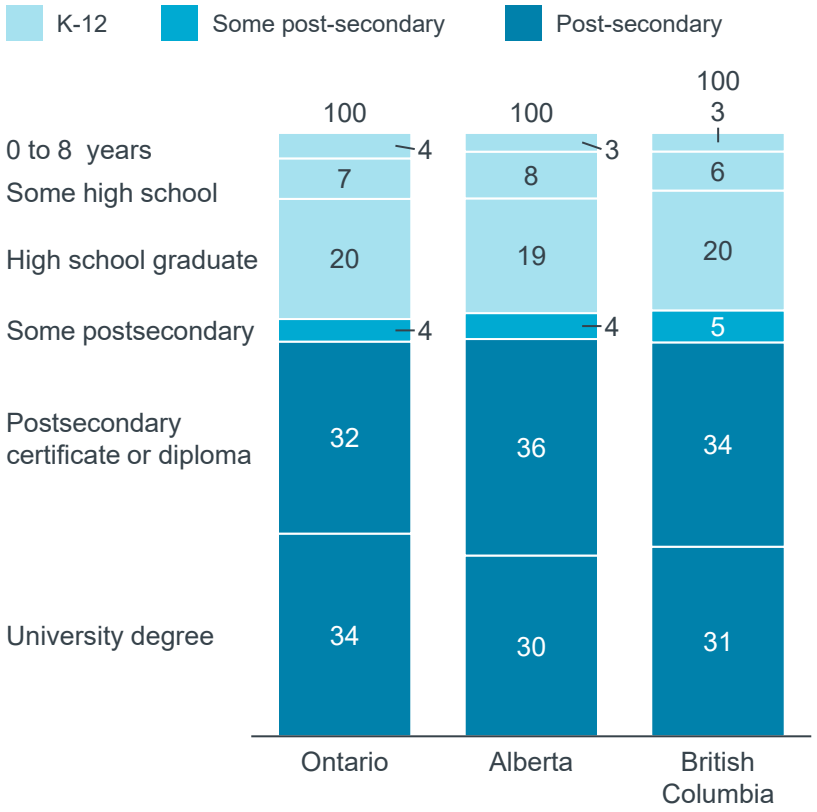
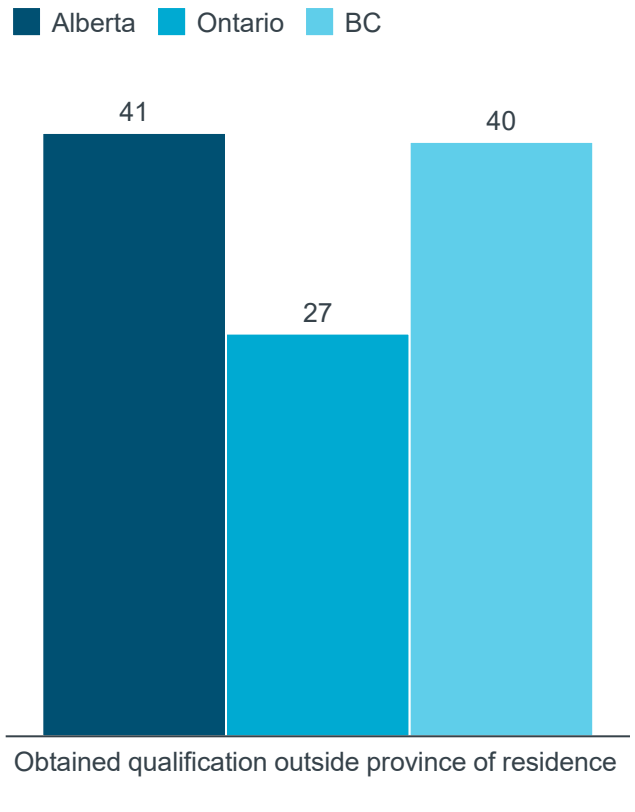
1. Overall post-secondary educational attainment in Alberta is comparable to peer provinces, however 41% of people obtained their qualification outside AB

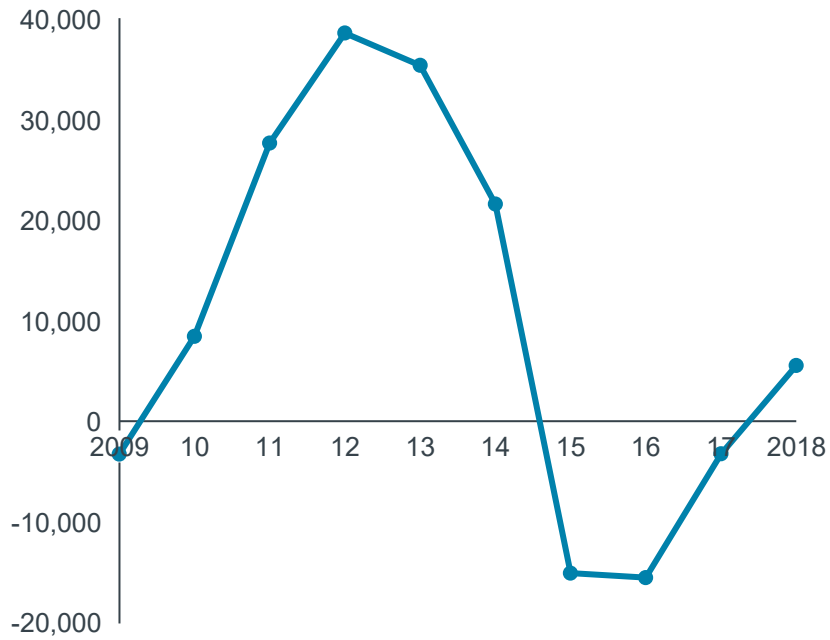
Educational attainment[1], % of population age 25-64, 2019



Education attainment relies on educated people moving into Alberta[2], Where post-secondary education was obtained, 2016



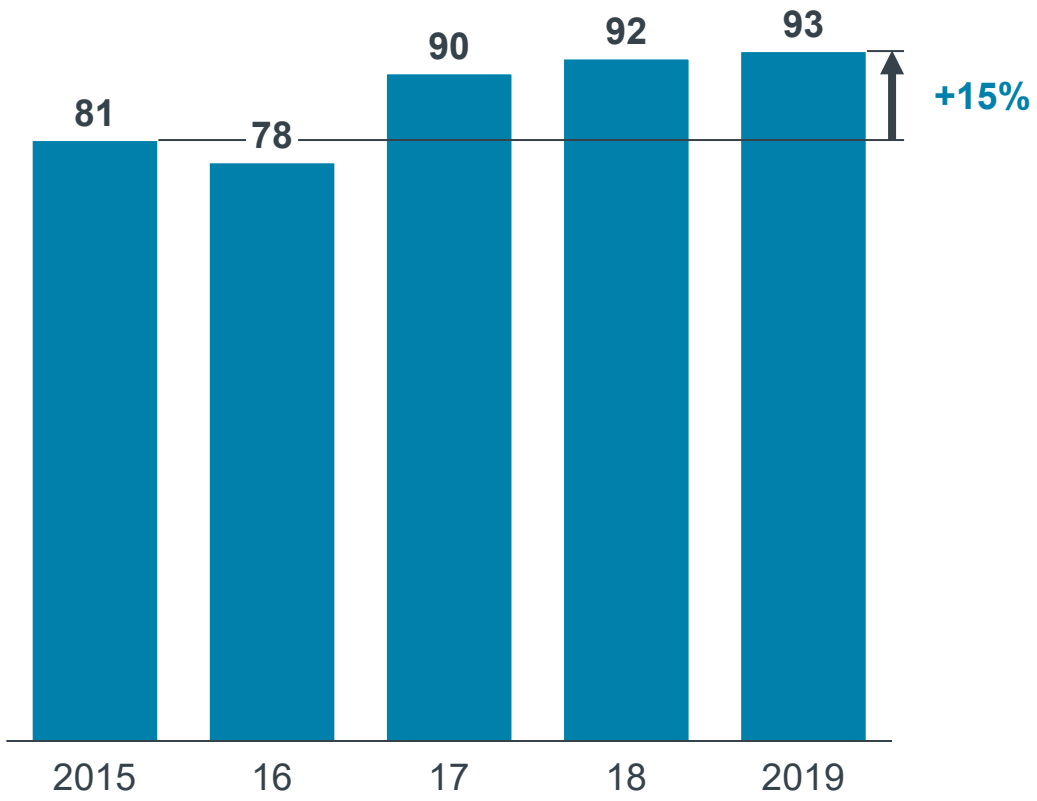
Interprovincial migration has declined from its peak in 2012[3], Interprovincial migration into Alberta from 2009 to 2019



1. Unemployment rate, participation rate and employment rate by educational attainment, annual, 2019
2. Highest level of educational attainment (general) by selected age groups 25 to 64, both sexes, % distribution 2016, Canada, provinces and territories, 2016
3. 2016 Census

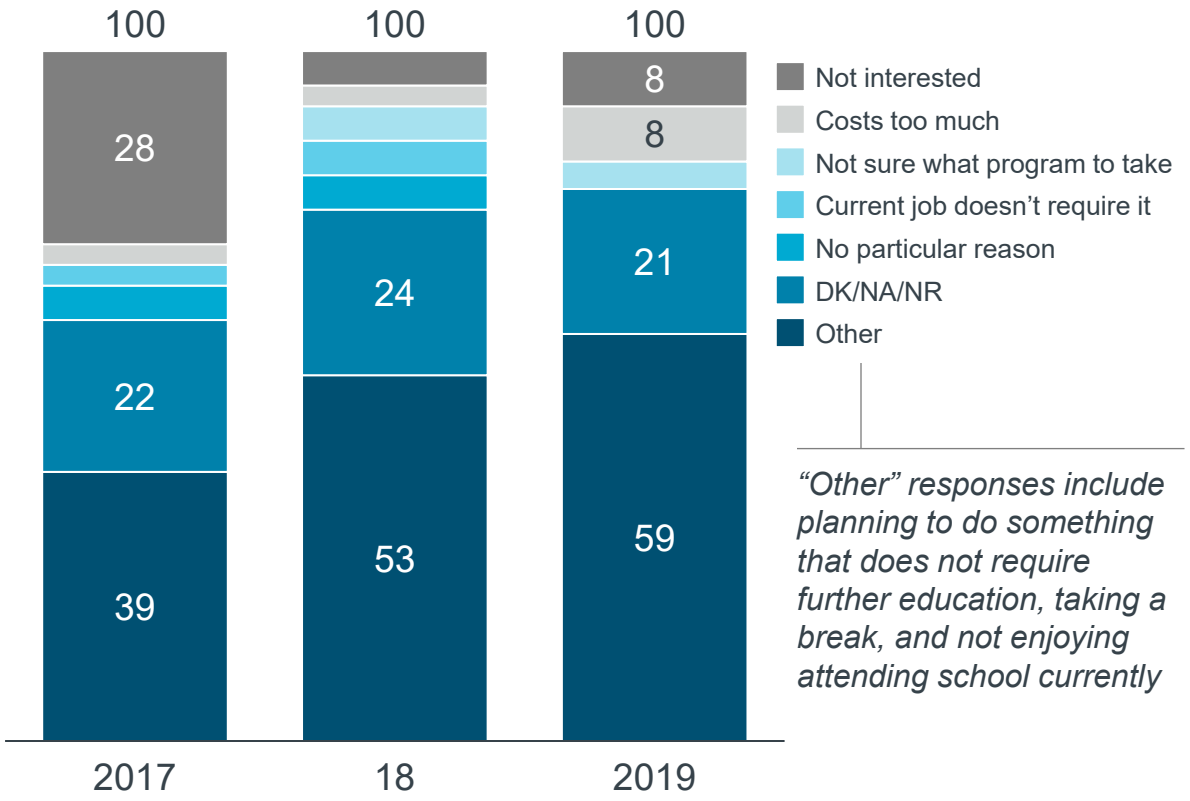
1. Intent-to-enrol in post-secondary for Alberta high school students is increasing

The proportion of students who intend to pursue education or training (including the trades) after high school, % of high school students



Of those who do not plan to pursue post-secondary education, there are varying reasons not to attend

% of high school students



"Other" responses include planning to do something that does not require further education, taking a break, and not enjoying attending school currently

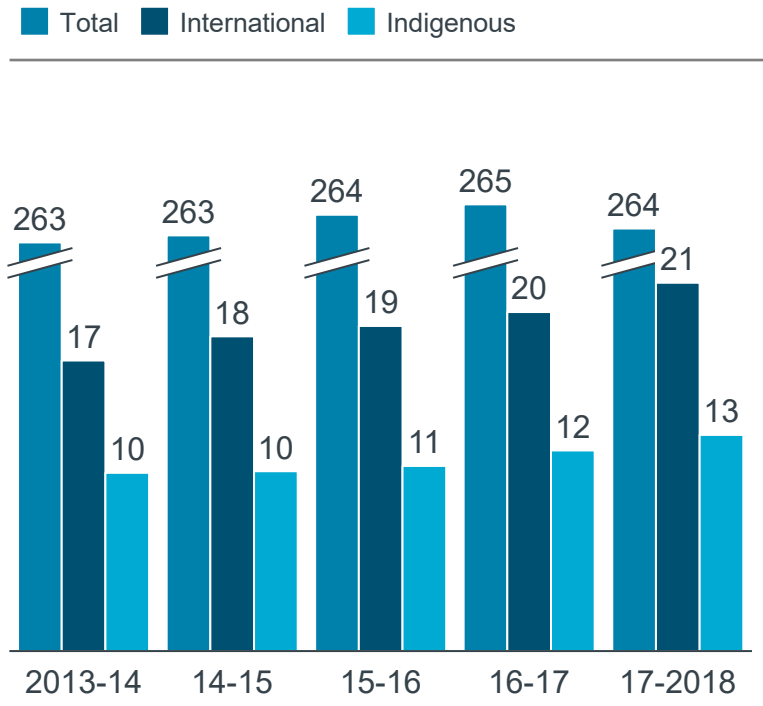
Source: 2018-19 High school student stakeholder satisfaction survey

1. While the increase in intent-to-enrol has not translated into an increase in total enrolment, the mix of post-secondary learners has become more diverse

Degree composition and total enrolment have remained constant, while International and Indigenous enrolment has increased

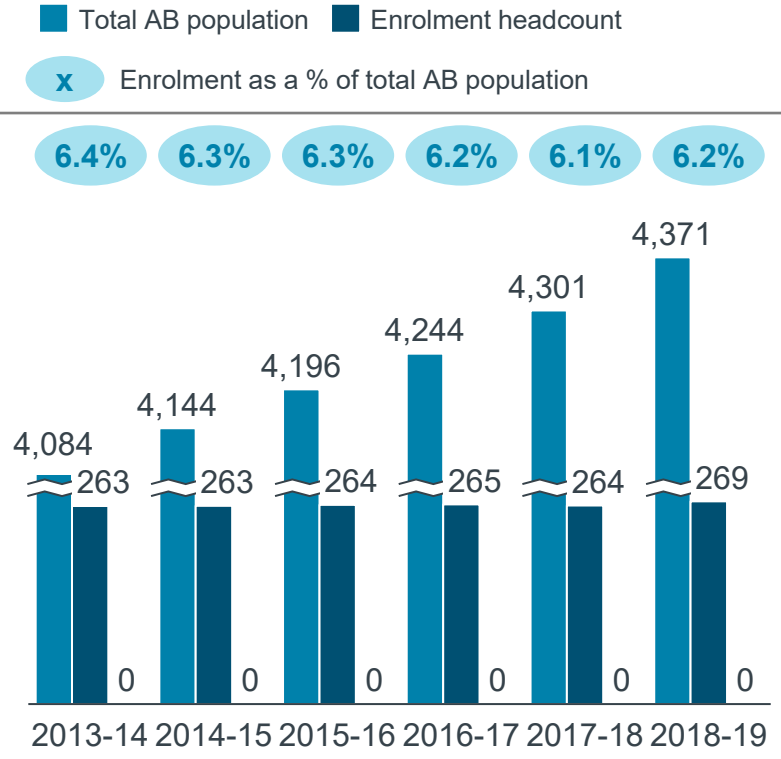
1

Total post-secondary headcount has remained stable while International and Indigenous students headcount have increased, '000 of students



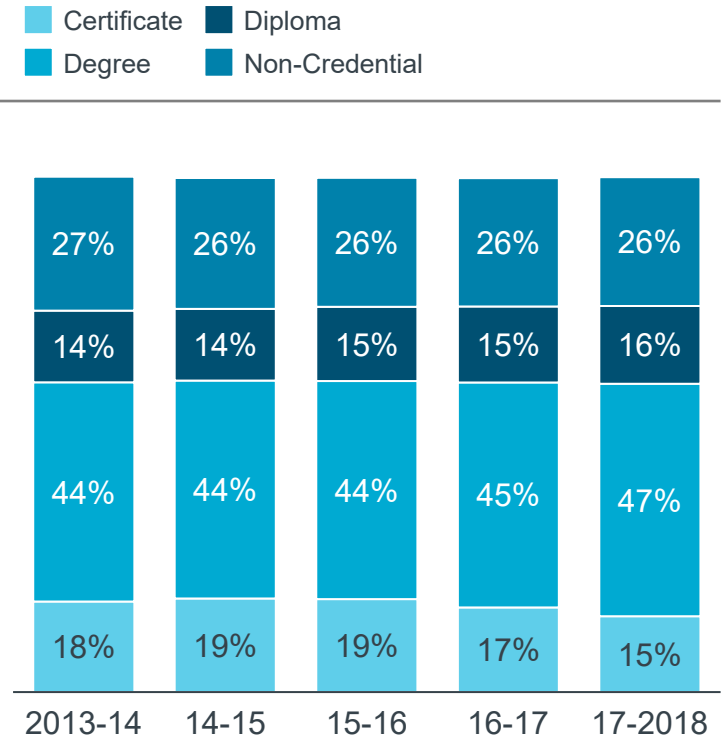
2

Enrolment in post-secondary has remained steady as a percent of total Alberta population[2], '000 of people



3

The composition of degree types has remained relatively constant



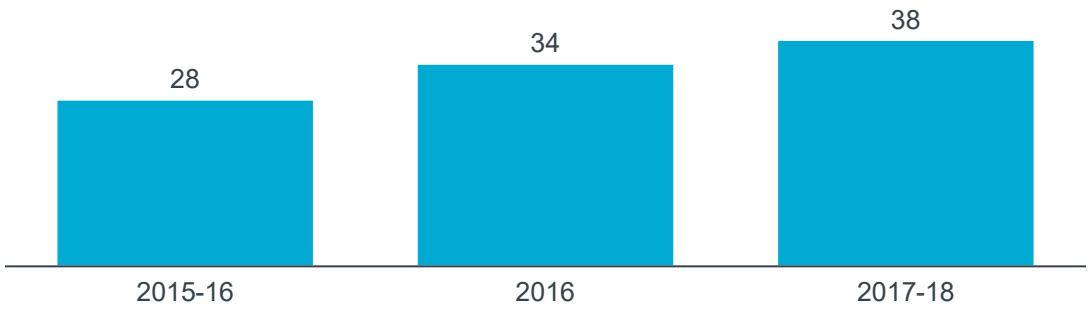
2. Population estimates on July 1st, by age and sex

 Source: LERS

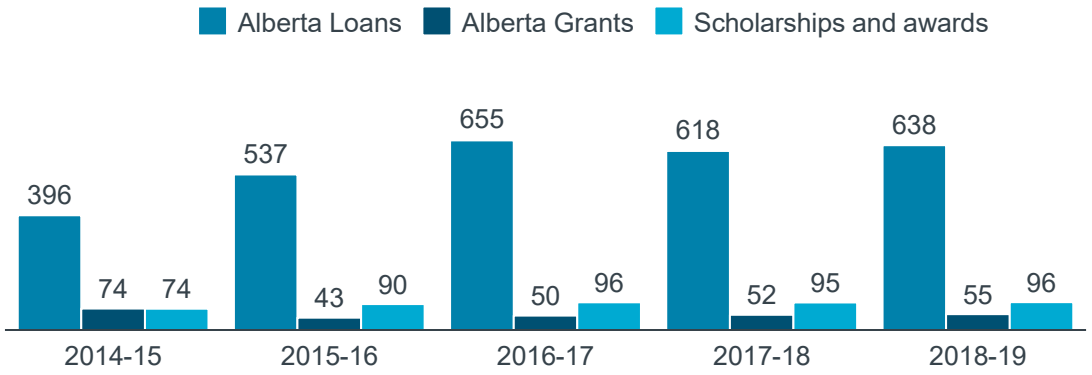
1. Although enrolment has remained stable, the proportion of students accessing financial support for post-secondary is growing

Student aid	Description
Loans	Student loans help students meet basic learning and living costs. Payment begins 6 months post graduation
Grants	Grants help increase affordability for low-income student loan borrowers, and they do not need to be repaid
Scholarships and awards	Scholarships reward students for their academic achievements. Awards acknowledge non-academic achievements. They do not need to be repaid

Proportion of certificate, diploma, applied degree and bachelor degree students who access government financial support[1], % of total enroled population



Amount of financial support provided[1], $M



Since 2012, earnings, savings, family income, RRSPs, and scholarships/awards are no longer used to determine eligibility for student loans which has increased accessibility

The highest subgroup growth in student loan borrowers due to this increased access[2]:

- Married
- Over 31
- Indigenous
- Permanent Disability

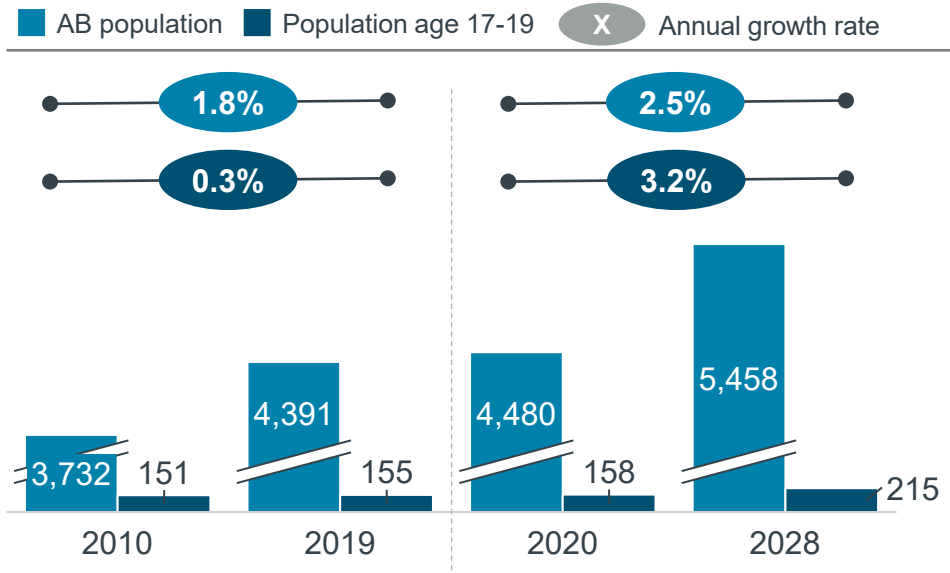
1. Statistical Profiles 2018/19 | Alberta Student Aid, certificate, diploma, applied degrees, and bachelor degrees
2. Learning about our learners, Alberta Advanced Education

1. The number of 17-19 year-olds in Alberta will soon increase, creating an opportunity for FLE growth

1

Annual growth of Alberta's population of youth ages 17-19 could see an increase of~ 3% p.a. in the next decade,

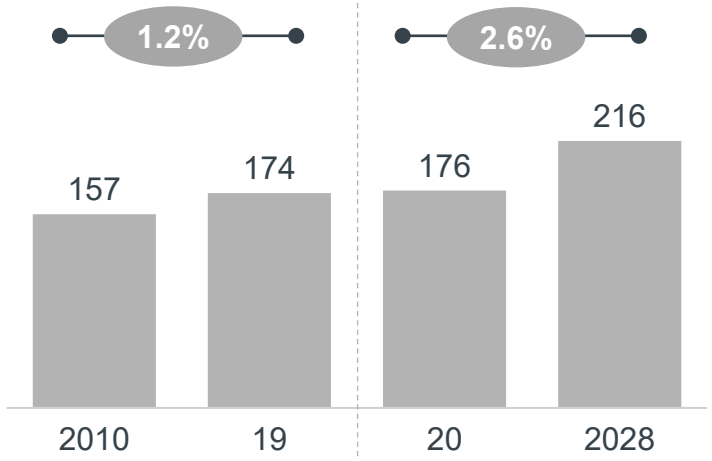
Alberta population projections by age[1], '000 of people



2

Alberta Advanced Education predicts annual growth of FLE enrolment to grow to 2.6% from 1.2% currently,

Alberta FLE enrolment projections, '000 of student



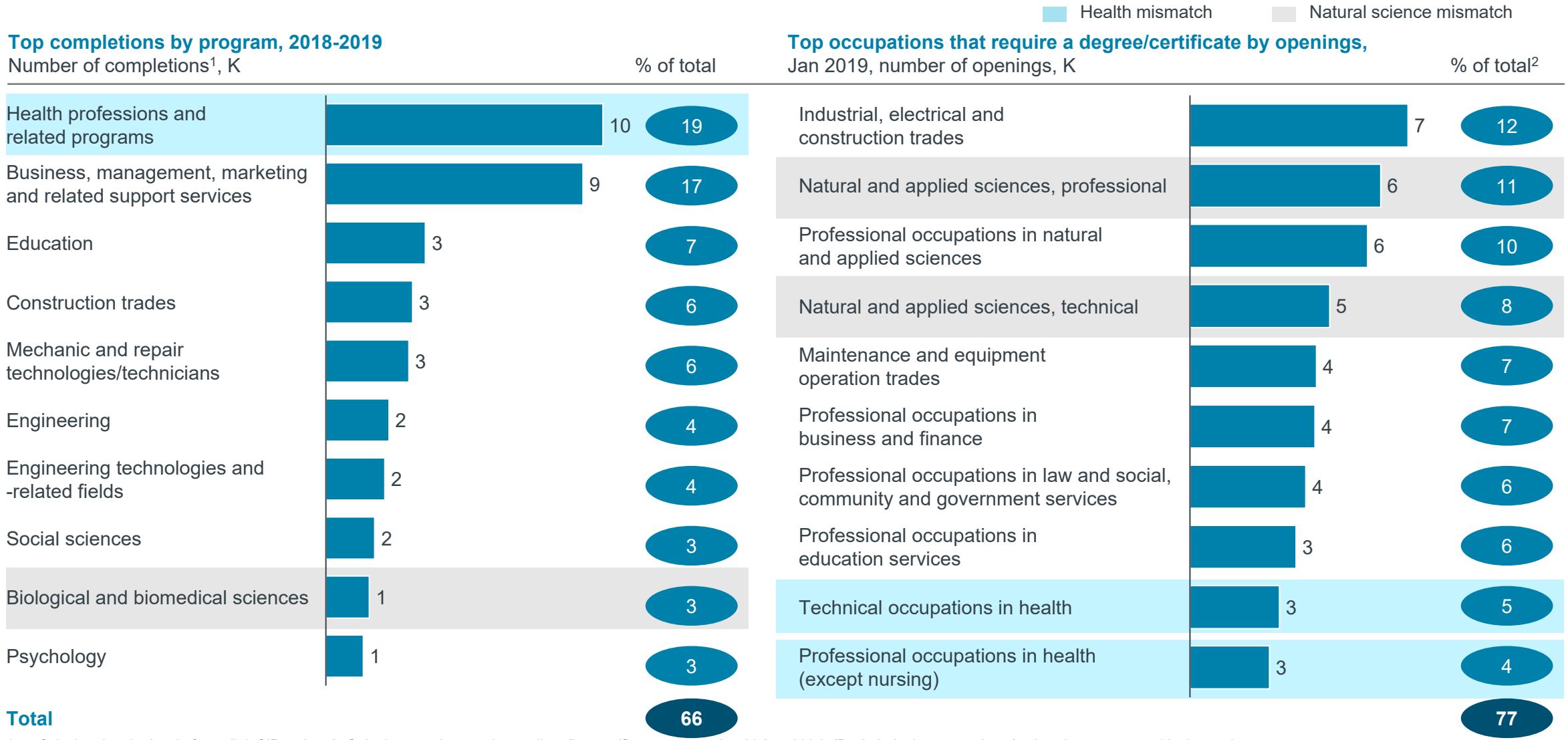
By 2028, there could be an additional ~60k people aged 17-19 in Alberta

This could translate to an additional ~40k students in Alberta PSIs in the next 8 years if:

- Participation rates remain constant or grow
- Transition rates continue to increase (currently ~1% p.a.[3])
- Retention rates remain constant or grow

1. Alberta Population Projections, High, 2019-2046 - Alberta, Census Divisions and Economic Regions - Data Tables
2. Alberta Post-Secondary Enrolment Projections by Geographic Service Region. Projections are based on the numbers of people in the post-secondary age population, as well as their participation and retention rates
3. Alberta Advanced Education analysis

2. Alberta's current mix of post-secondary completions reflects labour market demand except in select sectors such as health and natural sciences



1. Calculated at the level of two digit CIP codes; 2. Only degrees that require medium (i.e. certificates, apprenticeship) and high (Bachelor's degree or above) education are counted in the total

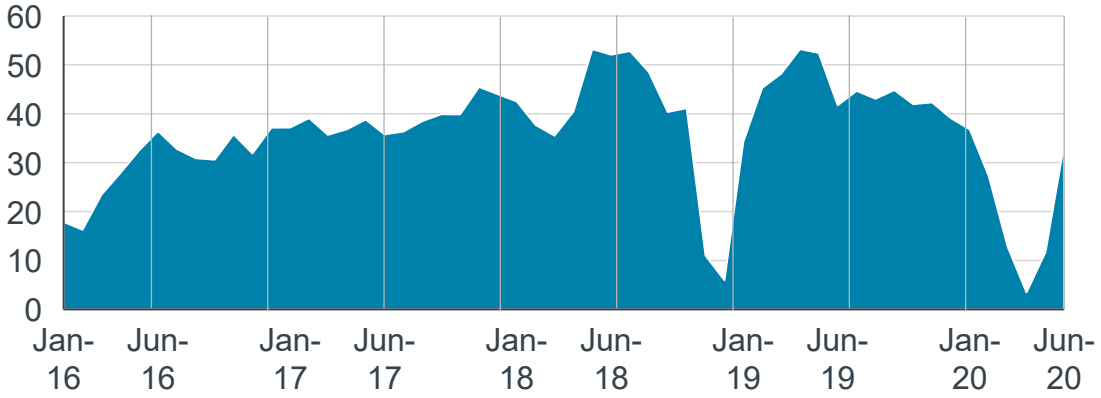
Note: Openings are filled by individuals completing education, in-migration and labour market reentrants; Occupations are filled by a combination of school leavers, in province migrants, and labour market reentrants

Source: Government of Alberta –" Alberta's Occupational Outlook: 2019-2028" , Government of Alberta – "Program Completions within the Alberta Post-Secondary Education System"

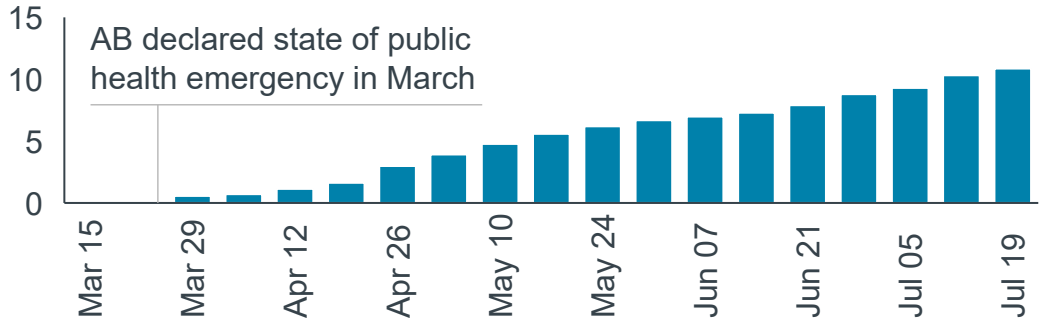
2. Since the oil price drop and Covid-19 in early 2020 , Alberta has lost ~7% of its employment base across both service and goods-producing sectors

Alberta experienced both a deep drop in oil price and state of public health emergency in early 2020….

Western Canadian select crude, $ USD/ barrel[1]

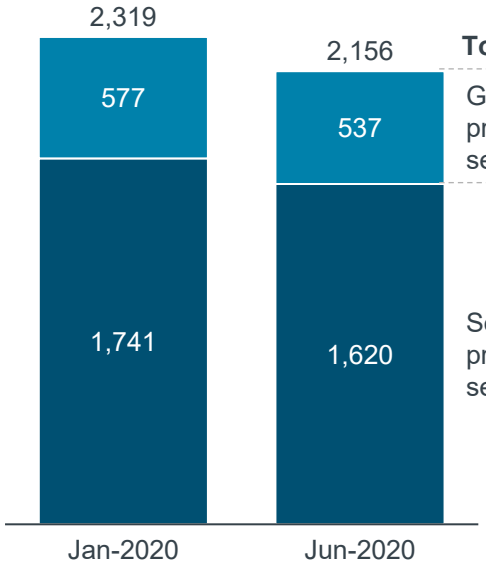


Total covid-19 cases in Alberta as of July 30, 2020, K[2]



…losing jobs in both service and goods-producing sectors

Seasonally adjusted employment by industry, K[3]



Change in seasonally adjusted employment by industry[3]

	Absolute change in K	Percentage of Jan-2020 employment
Total	**-162**	**-7%**
Goods-producing sector	-41	-7%
Services-producing sector	-122	-7%

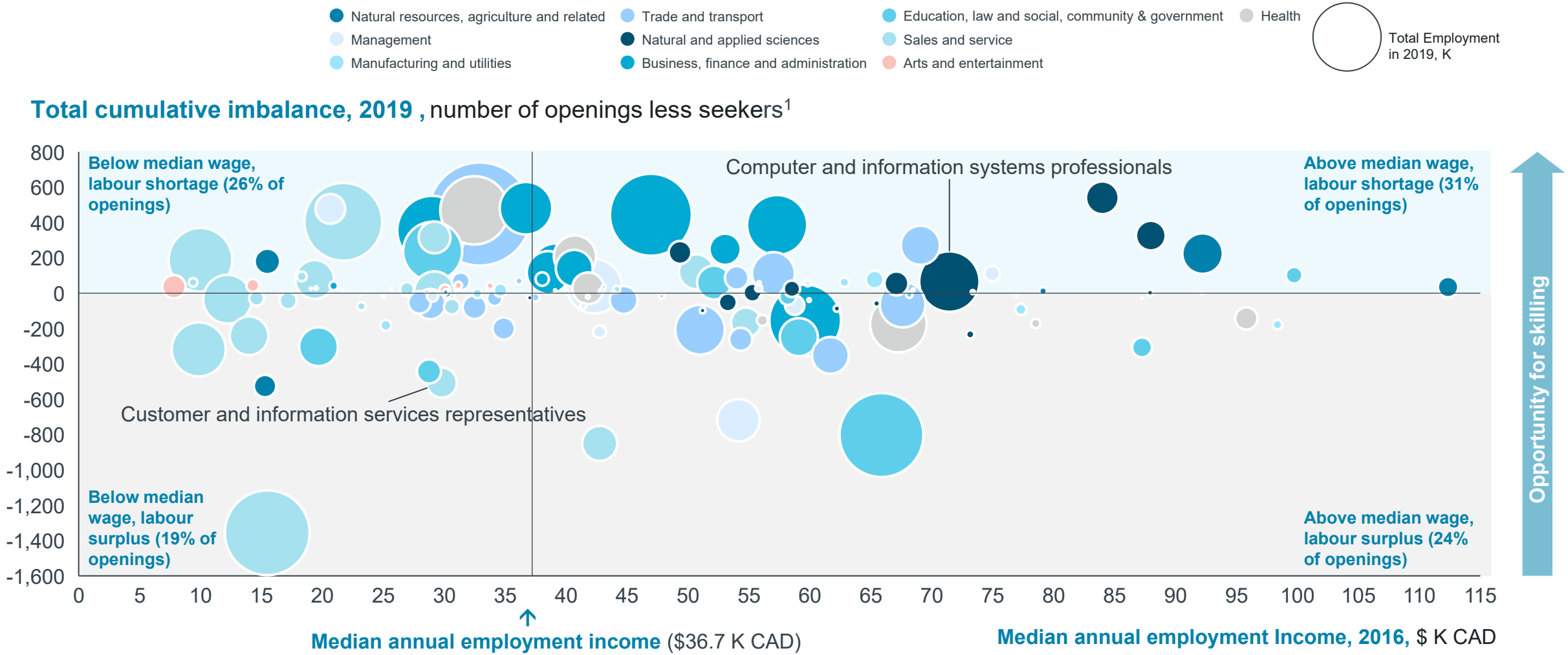
Employment losses reflect in part temporary shock of Covid-19

1. Alberta's Economic Dashboard (July 2020); 2. Alberta government website; 3. Alberta Labour Force Statistics (January and July 2020)

Note: Numbers may not sum due to rounding

2. Reskilling and upskilling is a significant opportunity for Alberta with 31% of job openings in above median wage occupations with labour shortages

Alberta's forecasted occupational shortages and surpluses as of 2019 based on 2018 analysis



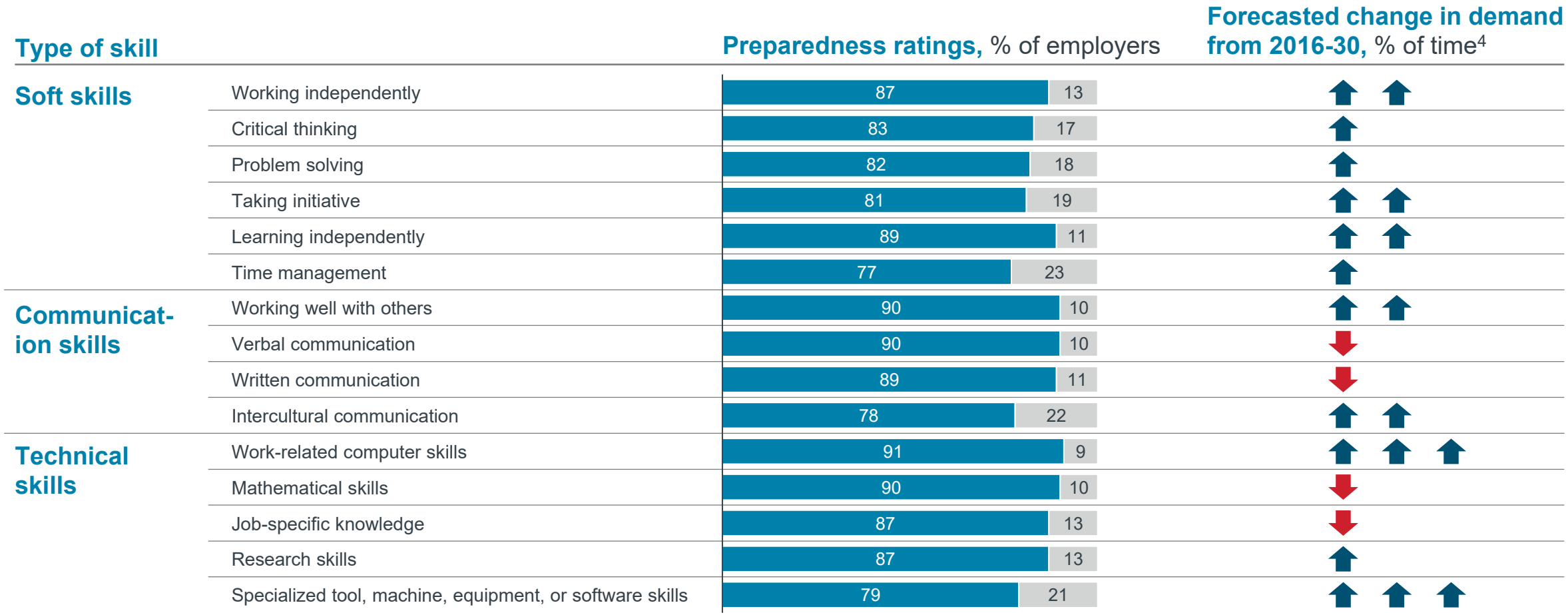
1. Labour surpluses and shortages calculated at the level of three digit national occupations codes;
Note: "Fishing vessel masters and fishermen/women" and "Supervisors, assembly and fabrication" have been excluded due to being extreme outliers

Source: Government of Alberta –" Alberta's Occupational Outlook: 2019-2028" , Statistics Canada

2. Existing skill gaps may become increasingly significant as automation and digitization increases their demand

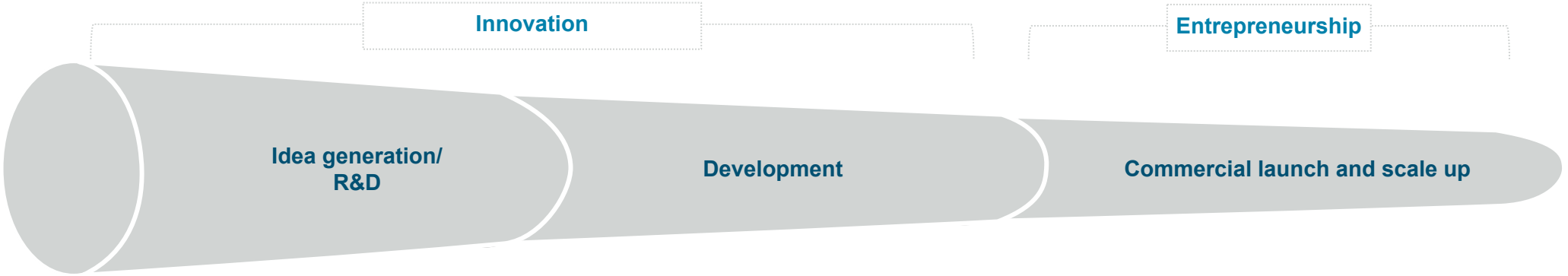
Summary of feedback from the employers of 625 post-secondary graduates who participated in the 2018 Graduate Outcomes Survey[1]

Prepared[2] | Not prepared[3] | <10% increase in share of time | 10-25% increase in share of time | >25% increase in share of time | Decrease in share of time



1. Number of graduates is 365 degree (58%), 161 diploma (26%), and 99 certificate (16%) credentials from 25 post secondary in stitutions (excludes apprenticeship learners and learners from private career colleges); 2. Share of supervisors rated recent graduates as well-prepared, or very well – prepared, for employment; 3. Share of supervisors rated recent graduates as not very prepared, or not at all prepared, for employment; 4. Based on automation and digitization potential of activities
Note: Skill shifts will play out differently across regions, depending on economic structure, sector mix, and level of digitization.
Source: Preparedness ratings from 2018 Employment Success Survey based on 2015-2016 academic year graduates: Change in demand from McKinsey Global Institute Skill Shift: Automation and the Future of the Workforce (2018)

3: Alberta's post-secondary system produces high quality research, but this has not translated into a similar edge in commercialization activity



		AB	BC	ON		AB	BC	ON		AB	BC	ON
Performance	Higher ed publications / full-time teaching staff (2015-2018)	3.5	2.8	4.0	Higher ed patents per full-time teaching staff (2017)	22	31	21	Start-ups formed by higher ed per full-time teaching staff (2017)	2	4	3
	Proportion of publications in top 10% of field as measured by citations (2015-2018)	11	12	10	Higher ed licenses per full-time teaching staff (2017)	8	10	21	Number of VC deals per 1M people (2019)	9	15	14
									Angel investor participation rate, % (2018)	5	7	6
Funding	Gross R&D as % GDP (2017)	0.9	1.6	2.0	Strategic Innovation Fund awards, % GDP (2019)	.06	.12	.07	VC investment, % of GDP (2019)	0.1	0.5	0.3
	Higher ed R&D as % GDP (2017)	0.4	0.7	0.8	NRCAN awards, % GDP (2019)	.013	.004	.009	Angel investment, average amount, $K (2018)	25	29	23
	Business R&D as % of GDP (2017)	0.4	0.9	1.1								

Source: Statistics Canada (GDP, Gross R&D, Higher ed R&D, Business R&D, Full-time teaching staff, Population); CWTS Leiden Rankings (Publications); AUTM Statt Database (Patents, Licenses, Startups); GEM Global Entrepreneurship Monitor (Angel investor participation, Angel investment amount); Strategic Innovation Fund awards database on website; Canadian Venture Capital Association (VC investment, VC deals)

Dynamics in Alberta

4: There are accelerated fiscal challenges for Alberta & post-secondary institutions in Alberta

Institutions' revenue is expected to decrease

- Provincial funding currently contributes ~50% to total system funding and the Government of Alberta has announced incremental reductions over the next five years
- Other revenue sources, including federal funding, student sources and private sources will have to increase to partially offset the reduction in provincial funding
- There is likely additional pressure on most revenue streams due to the ongoing COVID-19 pandemic

While costs have been stable, they are higher compared to other jurisdictions and are expected to increase further due to the COVID-19 pandemic

- Labour cost is the largest cost driver at over 60% of total system cost with a similar cost structure across all PSIs in the system
- Costs associated with mitigating the impact of COVID-19 will also likely increase for post-secondary institutions (e.g., investments in digital infrastructure, cleaning)

The 2020 Alberta context

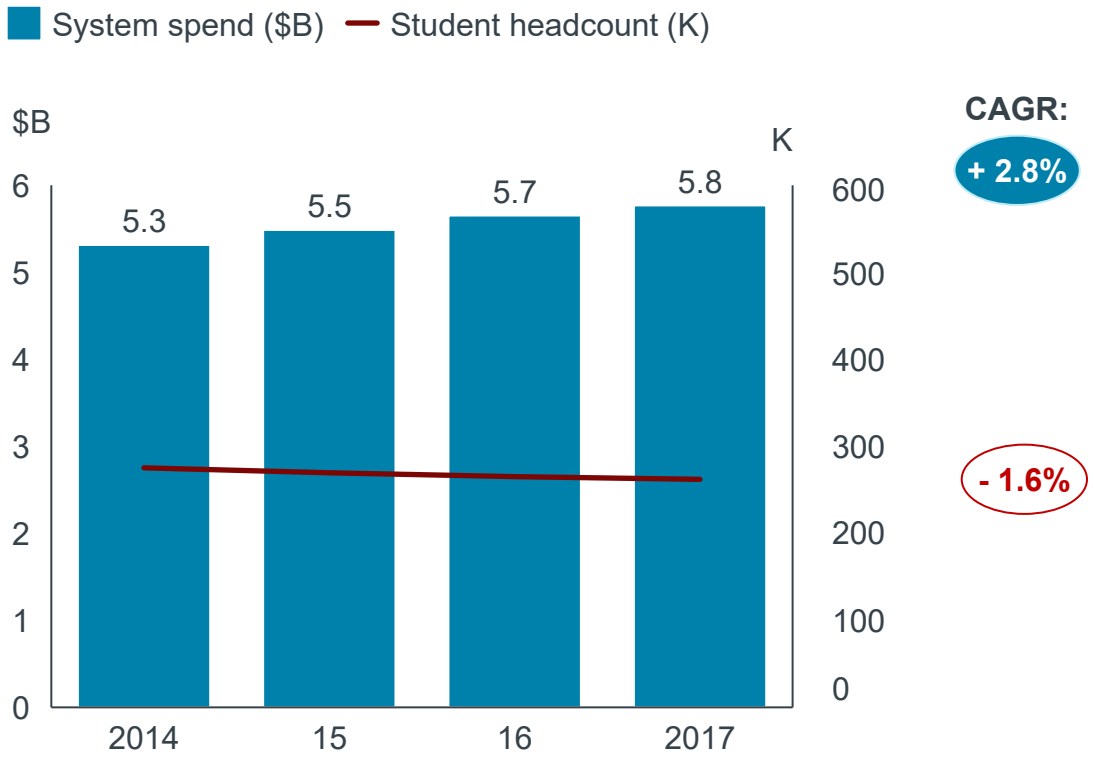
- First-quarter projections show a significant increase to the deficit reaching $24.2 billion – $16.8 billion higher than estimated in Budget 2020
- The province now sits on a debt burden of $99.6 billion
- Total forecasted revenue in 2021 is $38.4 billion, which is down $11.5 billion from budget
- Total forecasted expense in 2021 is $62.6 billion, which is an increase of $5.3 billion from budget

Source: 2018/2019 Financial Information Reporting System (FIRS) – Revenue and expenses by source and type; The Government of Alberta 2020-21 First Quarter Fiscal Update

4: Alberta's system spend has outpaced student enrolment over the past 4 years and spend per student is higher than Ontario and BC

Alberta system spend and student headcount[1]

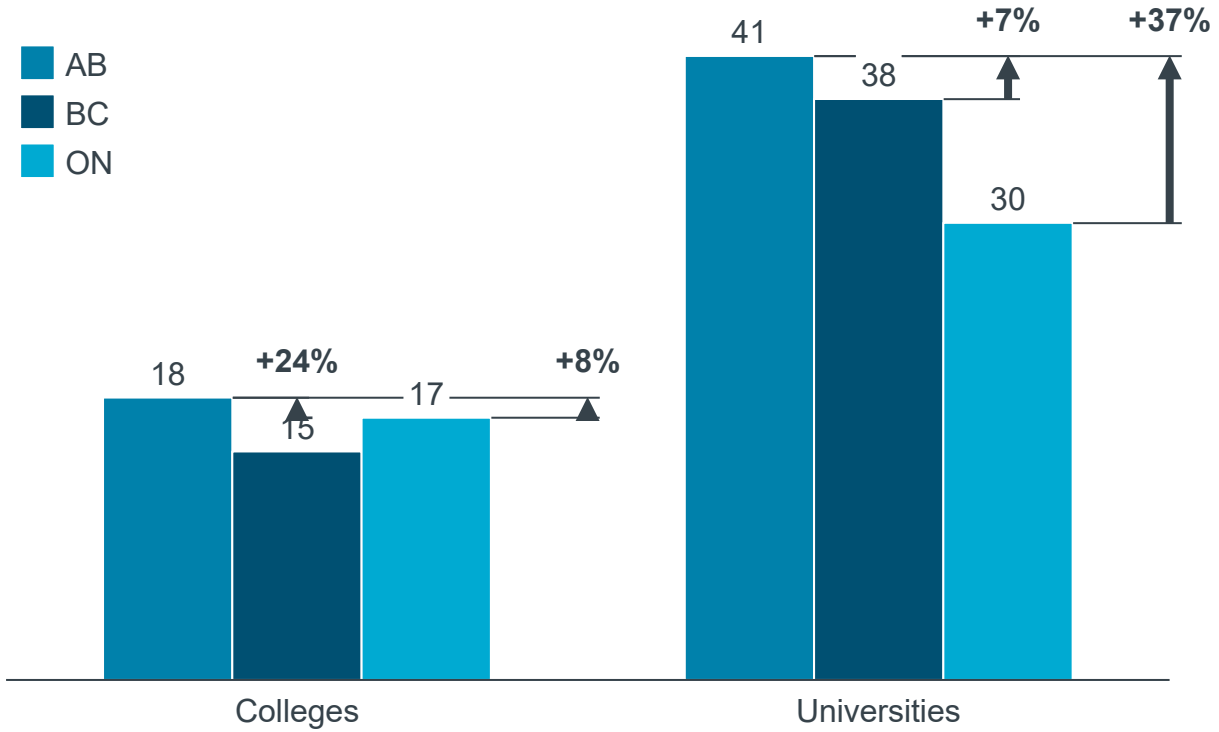
Based on most recent data available for student headcount (Statcan)



Spend per student[2]

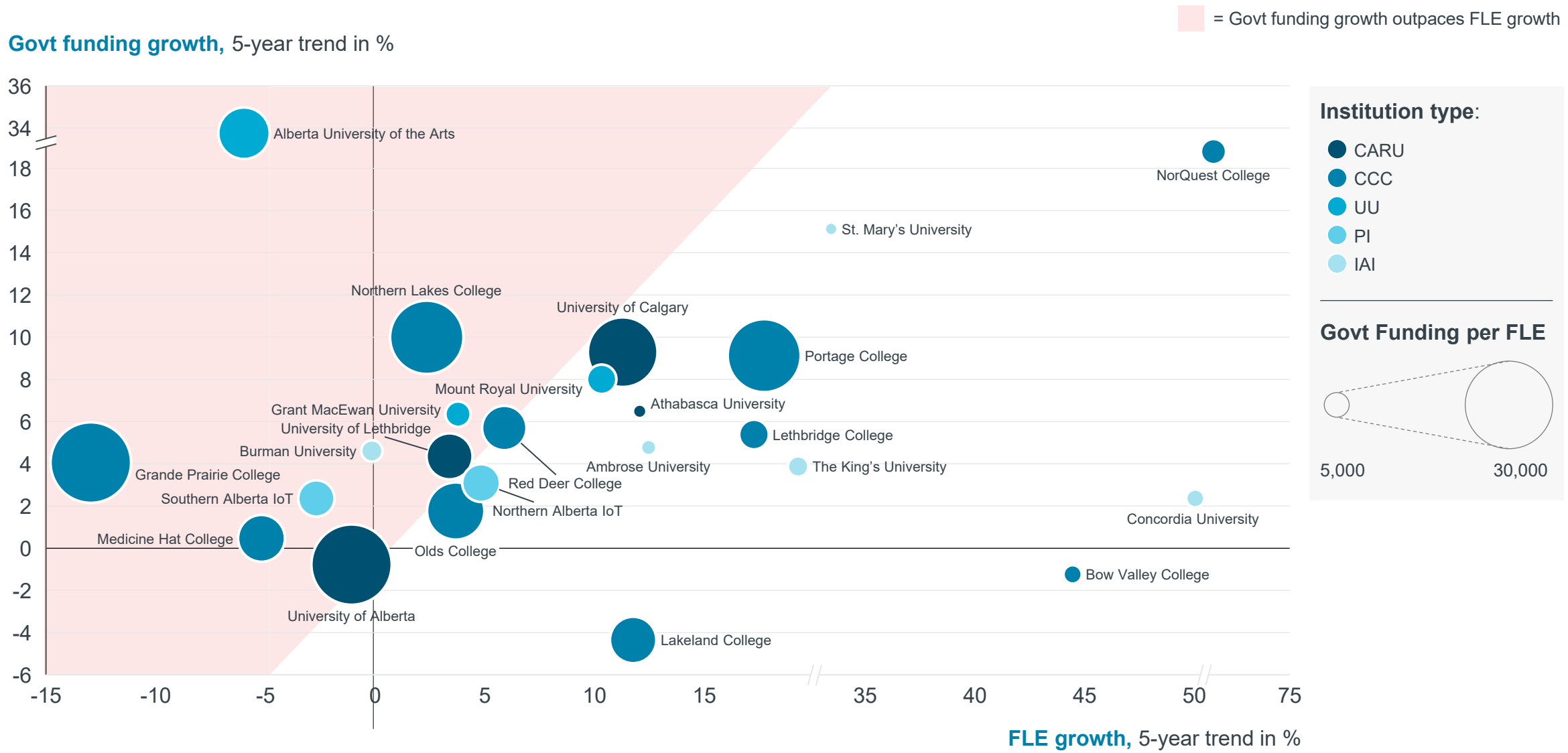
Based on most recent data available (Statcan)

2015/2016, $K / student



1. Financial Information Reporting System (FIRS) for system expenses.Statistics Canada. Table 37-10-0015-01 Postsecondary enrolments, by credential type, age group, registration status, program type and gender. Statistics Canada. Table 37-10-0023-01 Number of apprenticeship program registrations
2. Statcan: Annual expenditure by educational institutions per student, for all services, by educational level, Canadian dollars, Canada, provinces and territories, 2015/2016. Sources for indicator: Financial Information of Universities and Colleges Survey; Postsecondary Student Information System (PSIS). Given differences in provincial accounting and consolidation, Statcan data was used as the most comparable method available to benchmark

4: Govt funding growth[1] vs. FLE growth: Over the past 5 years, 8 out of 24 institutions have seen govt funding increases that outpace FLE growth

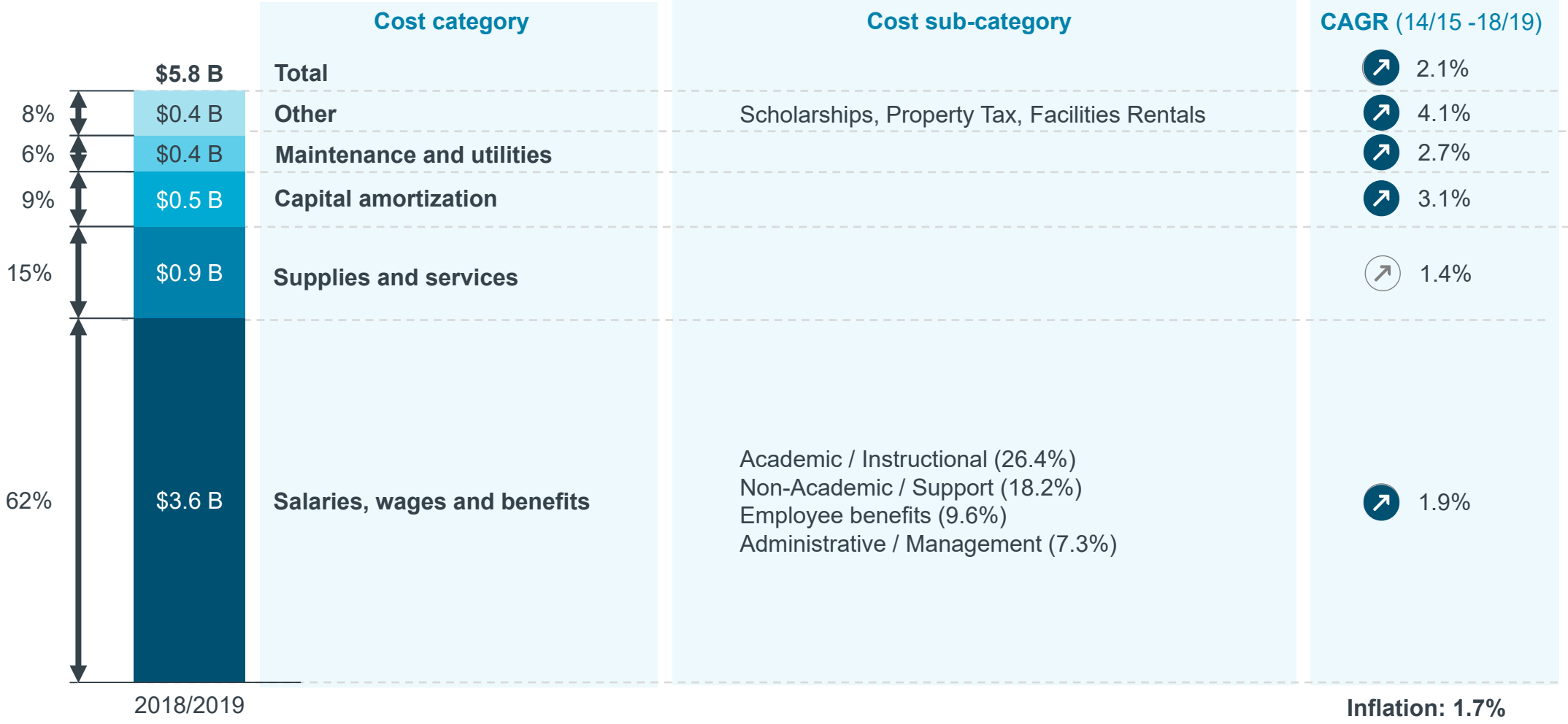


1 Adjusted for inflation; 5-year inflation rate (8.2%) retrieved from the Bank of Canada, 07/2014 – 07/2019

4: Salaries, supplies and services, and capital amortization account for more than 85% of total system costs

System cost breakdown, 2018 - 2019

Growth below inflation Growth outpaces inflation

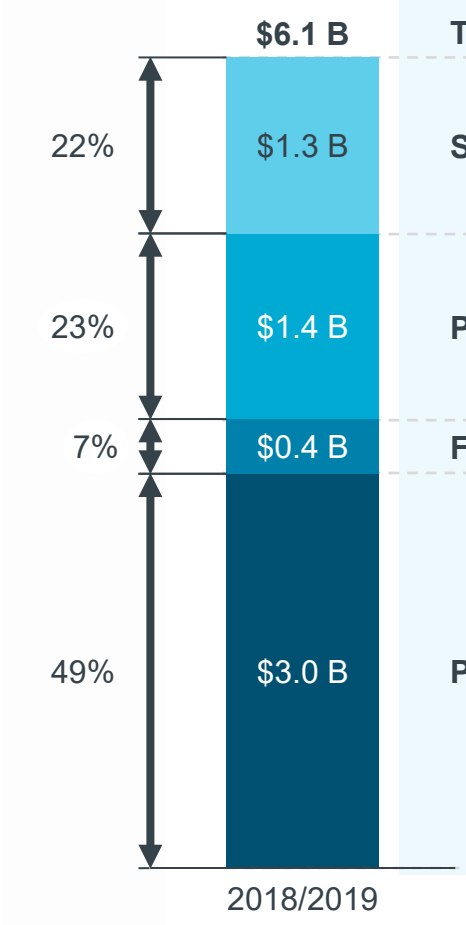


Source: Financial Information Reporting System (FIRS) - Expense by Type 2014-2019
5-year average of inflation (1.7%) retrieved from the Bank of Canada, 07/2014 – 07/2019: https://www.bankofcanada.ca/rates/indicators/key-variables/inflation-control-target/

4: On a system level, provincial and federal sources of funding account for ~56% of total revenues

Growth below inflation Growth outpaces inflation

System revenue[1] breakdown, 2018 - 2019



Revenue source	Sub-categories	5-year CAGR
Total		2.6%
Student sources	Credit Tuition & Universal Feel (15.4%) Other Student Fees (5.3%) Non Credit Programs (2.2%)	3.0%
Private and other public sources	Other Sources (15.6%) Donations & Fundraising (4.7%) Private Sources and Business Enterprise (2.6%)	2.5%
Federal sources		6.1%
Provincial sources	Alberta AET Operations (40.2%) Other Alberta Government funding (5.4%) Alberta AET Capital (2.4%) Alberta AET Research (0.7%)	2.0%

Source: Financial Information Reporting System (FIRS) - Revenue by Source and Type 2014-2019
5-year average of inflation (1.7%) retrieved from the Bank of Canada, 07/2014 – 07/2019: https://www.bankofcanada.ca/rates/indicators/key-variables/inflation-control-target/

Global and Alberta specific trends give rise to six goals for Alberta's post-secondary system

A combination of global trends and Alberta specific dynamics …

Assessment of international trends in advanced education

Performance of Alberta's advanced education system in current state

…Give rise to six goals for Alberta's post-secondary system

1. Lead Canada in providing world-class, affordable, and innovative post-secondary experiences and credentials
2. Ensure every student has the skills, knowledge, and competencies to enjoy fulfilling lives and careers
3. Unleash Alberta's innovation by supporting post-secondary research that creates new knowledge, capabilities, and companies
4. Become a leading destination for top talent to drive the growth of skills, ideas, and innovations locally and globally
5. Deliver exceptional value for students, faculty, and Albertans by supporting innovative growth, efficiency, and effectiveness across the system
6. Drive system outcomes through enabling and effective governance

Contents

Alberta 2030 Vision

Alberta's **world-class** post-secondary system will equip Albertans with the **skills, knowledge and competencies** they need to succeed. The system will be highly responsive to **labour market needs** and through **innovative programming** and **excellence in research**, contribute to the betterment of an **innovative and prosperous Alberta**.

Alberta 2030 Goals

DRAFT

1

Access and Student Experience

Lead Canada in providing world-class, affordable, and innovative post-secondary experiences and credentials

2

Skills for Jobs

Ensure every student has the skills, knowledge, and competencies to enjoy fulfilling lives and careers

3

Innovation and commercialization

Unleash Alberta's innovation by supporting post-secondary research that creates new knowledge, capabilities, and companies

4

Internationalization[1]

Become a leading destination for top talent to drive the growth of skills, ideas, and innovations locally and globally

5

Financial sustainability (enabler)

Deliver exceptional value for students, faculty, and Albertans by supporting innovative growth, efficiency, and effectiveness across the system

6

Governance (driver)

Drive system outcomes through enabling and effective governance

1. Developed as part of Alberta's International Student Strategy (February 2020)

Alberta 2030 Objectives

DRAFT

1 Access and Student Experience

1.1 Empower learners to make informed decisions on post-secondary pathways

1.2 Ensure that post-secondary is inclusive and affordable

1.3 Foster multiple, flexible career and education pathways

1.4 Expand digital and distance education to reach students where they are

2 Skills for Jobs

2.1 Become the first province to offer every student access to work-integrated learning

2.2 Grow apprenticeships in careers and trades of the future

2.3 Foster the strongest employer, industry, and post-secondary partnership environment in Canada

3 Innovation and Commercialization

3.1 Attract and nurture world-class faculty and students

3.2 Drive Alberta's competitiveness in critical areas by aligning resources and incentives

3.3 Set a national standard for policies and practices that foster commercialization

4 Internationalization[1]

4.1 Attract talented international students to Alberta's post-secondary institutions and communities

4.2 Equip learners with international skills and competencies

5 Financial sustainability (enabler)

5.1 Set a global bar for efficiency, transparency, and accountability in the post-secondary system

5.2 Enable institutions to compete for and grow non-provincial sources of funding, while preserving access for all Albertans

6 Governance (driver)

6.1 Establish a world-class governance framework to improve system outcomes

1. Developed as part of Alberta's International Student Strategy (February 2020)

Potential Alberta 2030 Outcomes

Goals	KPIs	Baseline	Y3	Y6	Y10
1: Access and student experience	1. Total learners enrolled in approved programs offered by Alberta's public PSIs (K)	269	281	296	321
	2. Undergraduate completion rates after six years	67%	70%	72%	76%
	3. Diploma completion rates after four years	62%	63%	64%	66%
	4. Total transfer credit awarded towards a credential	New metric, baseline needs to be established to set targets			
	5. Ratio of median income / median student debt load (ASL only, non RAP, non defaulters)	4	4	4	4
2: Skills for Jobs	1. Percentage of students with employment within 6 months	71%	71%	78%	89%
	2. Percentage of employers who rated recent graduates as well-prepared for employment	92%	93%	94%	95%
	3. Percentage of students who participate in WIL (including apprenticeship)	N/A	48%	66%	100%
	4. Percentage of students who indicate their current main job is very related to the program from which they graduated	56%	TBD	TBD	TBD
	5. Enrolment by field of study	Detail follows; targets to be determined by AAE based on priority fields of study			
3. Innovation and commercializati on	1. System higher ed. R&D expenditures (HERD) ($M)	1,638	1,855	2,114	2,539
	2. Patent applications filed	131	141	152	168
	3. Licenses issued	39	48	66	101
	4. Revenue generated (sales) from institution developed and partnered products	New metric, baseline needs to be established to set targets			
	5. Investment attracted for seed, early, and late-stage ventures originated at PSIs	New metric, baseline needs to be established to set targets			
5: Financial Sustainability	1. Non-provincial government revenue / total system revenue (3y rolling average)	50%	55%	59%	65%
	2. Admin expense ratio (3y rolling average)	7.5%	Recommend to re-establish baseline and set targets with new Admin definition in Jan 2022		

1: Access and Student Experience

DRAFT

Flagship initiatives

Objectives	Potential initiatives for consideration
Objective 1.1: Empower learners to make informed decisions on post-secondary pathways	1. **Expand dual credit and RAP opportunities**, in collaboration with AE, PSIs, and FNCs, to support pathway development 2. Empower student decision-making by **streamlining and simplifying the post-secondary application process** 3. Ensure key **AAE websites are available in multiple Indigenous languages**
Objective 1.2: Ensure that post-secondary is inclusive and affordable	1. **Double non-repayable needs-based aid and innovate financial aid offerings** to ensure post-secondary is affordable for students 2. **Provide grants to institutions to expand access to transition programs for every Indigenous student** 3. **Continue to equip institutions with resources to support students' mental well-being** through the Mental Health Grant 4. Modernize the existing provincial framework to **address sexual and gender-based violence** in Alberta's campus communities
Objective 1.3: Foster multiple, flexible career and education pathways	1. **Transform the transfer system** so that no student repeats equivalent coursework due to transferability challenges 2. **Innovate a provincial strategy for prior learning assessment recognition** (PLAR) to recognize prior learning, including micro-credentials, and enable flexible pathways
Objective 1.4: Expand digital and distance education to reach students where they are	1. **Establish a high quality centre of excellence for online teaching and learning** to support faculty and provide students with a world-class online learning experience 2. Establish an option for institutions to **opt-into system-wide online program managers** (OPM) to improve faculty and student experience 3. **Expand access to digital infrastructure for online learning in rural and remote communities** by collaborating with Ministries to pursue federal funding and exploring industry partnerships

2: Skills for Jobs

DRAFT

Flagship initiatives

Objectives	Potential initiatives for consideration
Objective 2.1: Become the first province to offer every student access to work-integrated learning	1. **Become the first province in Canada to offer access to work-integrated learning to 100% of students**
Objective 2.2: Grow apprenticeships in careers and trades of the future	1. **Build, fund, and establish policy for apprenticeships in a wide range of occupations**, including emerging high-tech trades
Objective 2.3: Foster the strongest employer, industry, and post-secondary partnership environment in Canada	1. **Convene industry-led councils to assess workforce needs, advise on qualifications, and design or endorse programs,** including micro-credential programs, across PSIs 2. Promote an **agile program development process** to ensure PSIs can provide nimble, relevant, and effective learning opportunities, including micro-credentials 3. Provide **high-quality predictions of labour market needs** to PSIs and students to inform programs, credentials, and pathways 4. Support institutions to become the **go-to-provider of employer paid upskilling programs**

Alberta

3: Innovation and Commercialization

DRAFT

Flagship initiatives

Objectives	Potential initiatives for consideration
Objective 3.1: Attract and nurture world-class faculty and students	1. **Establish Alberta Innovation Researcher Fellowships** to attract top research talent and support faculty to pursue sabbaticals in innovative companies in priority industries 2. **Support institutions to adapt faculty promotion & tenure policies to incentivize faculty to pursue entrepreneurial activities** 3. **Establish and administer a Premier's Award for Research Innovation and Collaboration** to recognize faculty and students for innovative pursuits and collaborations
Objective 3.2: Drive Alberta's competitiveness in critical areas by aligning resources and incentives	1. **Align provincial contributions for post-secondary research to economic diversification priorities**: Collaborate with Ministries to align provincial research contributions to priority areas for economic diversification and consider separating AAE research contribution from the CAG and establishing performance based research funding 2. **Align, redistribute, and/or grow provincial contributions to incentivize research collaborations and commercialization** (e.g., establish matching grants for industry/institution collaboration, create fund specific for commercialization projects)
Objective 3.3: Set a national standard for policies and practices that foster commercialization	1. **Establish and fund a central entity to build and provide first-rate commercialization and entrepreneurship capabilities system-wide**: Central entity can provide IP and business development education, legal and contracting expertise and servicing for research sponsorships, and vet grant proposals 2. **Support institutions to streamline IP processes** across the system to foster industry/institution collaboration 3. **Convene institutions, industry, and investors together to advance cutting-edge research collaborations** in priority areas (e.g., extension of the Research Working Group, establish bi-annual industry/PSI research demo event) 4. **Showcase Alberta's world-class IP and infrastructure assets through the development of an online, publicly accessible, integrated repository**

Alberta

5: Financial Sustainability

DRAFT

Flagship initiatives

Objectives	Potential initiatives for consideration
Objective 5.1: Set a global bar for efficiency, transparency, and accountability in the post-secondary system	1. **Sponsor a shared service centre for academic** (e.g., enrolment) **and non-academic areas** (e.g., HR, finance) 2. **Support institutions to streamline procurement**: Evaluate opportunity to coordinate sourcing approach to reduce procurement spend (e.g., consolidate volumes, benchmark suppliers) 3. **Implement a clear, transparent funding allocation model** 4. **Implement a performance-based funding model**

Objective 5.2: Enable institutions to compete for and grow non-provincial sources of funding, while preserving access for all Albertans	1. **Deconsolidate institution financials**[1] to provide institutions with greater financial flexibility to grow own-source revenues. *If institutions remain consolidated*,
	  1. **Streamline surplus spending request and approval process** to enable institutions to strategically spend surpluses
	  2. **Streamline review of Commercial Enterprises** (e.g., commercial land development, real-estate deals, overseas campuses) from 12-18 months to 3-6 months
	2. **Increase tuition flexibility and needs-based student aid**[2]: Enable tuition flexibility, within defined guardrails and for select programs, to allow institutions the discretion to set tuition levels and increase need-based financial aid to ensure that tuition increases do not decrease access for Albertans

1. Also included in Goal 6: Governance
2. Needs based aid also included in Goal 1: Improve Access

Alberta

6: Governance

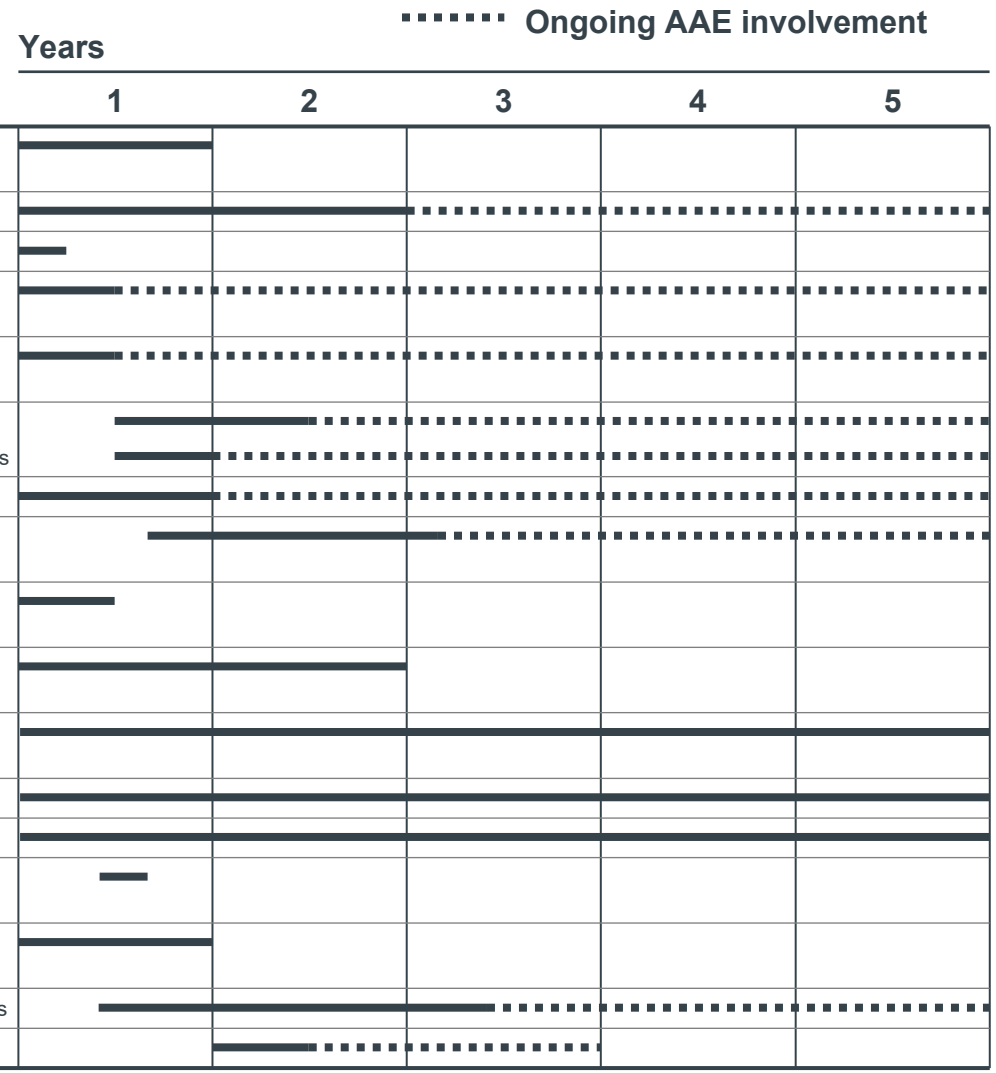
DRAFT

Flagship initiatives

Objectives	Potential initiatives for consideration
Objective 6.1: Establish a world-class governance framework to sustain system outcomes	1. **Deconsolidate institution financials**[1] to provide institutions with greater financial flexibility to grow own-source revenues 2. **Reinforce and strengthen mandates** to provide clear accountabilities for system- and institution-level outcomes in teaching, research, and collaboration 3. **Establish a system-level, independent advisory council to the Ministry** on strategic priorities and the implementation of system-wide initiatives 4. **Revise institutional board appointment and composition** to enable institutions to appoint a majority of the board, use a skillset matrix to inform appointments, and lengthen board tenure to minimize turnover

1. Also included in Goal 5: Financial Sustainability

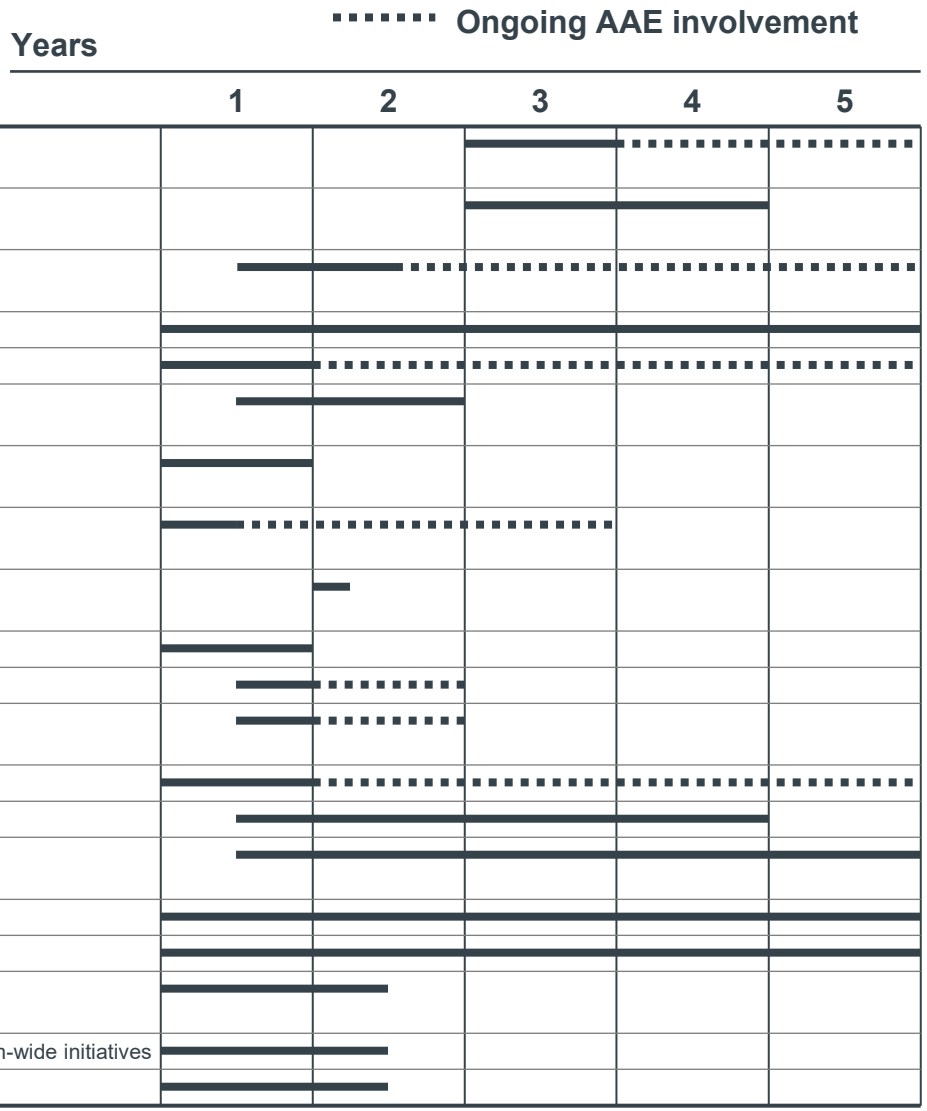
Potential initiative prioritization and roadmap (1/2)



Goal	Initiative
Access and Student Experience	Expand dual credit and RAP opportunities, in collaboration with AE, PSIs, and FNCs, to support pathway development
	Empower student decision by streamlining and simplifying the post-secondary application process
	Ensure key AAE websites are available in multiple Indigenous languages
	Double non-repayable needs-based aid and innovate financial aid offerings to ensure post-secondary is affordable for students
	Continue to equip institutions with resources to support students' mental well-being through the Mental Health Grant
	Provide grants to institutions to expand access to transition programs for every Indigenous student
	Modernize the existing provincial framework to address sexual and gender-based violence in Alberta's campus communities
	Transform the transfer system so that no student repeats equivalent coursework due to transferability challenges
	Innovate a provincial strategy for prior learning assessment recognition (PLAR) to recognize prior learning, including micro-credentials, and enable flexible pathways
	Establish a high quality centre of excellence for online teaching and learning to support faculty and provide students with a world-class online learning experience
	Establish an option for institutions to opt-into system-wide online program managers (OPM) to improve faculty and student experience
	Expand access to digital infrastructure for online learning in rural and remote communities by collaborating with Ministries to pursue federal funding and exploring industry partnerships
Skills for Jobs	Become the first province in Canada to offer access to work-integrated learning to 100% of students by 2028
	Build, fund, and establish policy for apprenticeships in a wide range of occupations, including emerging high-tech trades
	Convene industry-led councils to assess workforce needs, advise on qualifications, and design or endorse programs, including micro-credential programs, across PSIs
	Promote an agile program development process to ensure PSIs can provide nimble, relevant, and effective learning opportunities, including micro-credentials
	Provide high-quality predictions of labour market needs to PSIs and students to inform programs, credentials, and pathways
	Support institutions to become the go-to-provider of employer paid upskilling programs

1. Each initiative has different stakeholders involved at different phases. See Strategy Details for more information

Potential initiative prioritization and roadmap (2/2)



Goal	Initiative
Innovation and commercialization	Establish Alberta Innovation Researcher Fellowships to attract top research talent and support faculty to pursue sabbaticals in innovative companies in priority industries
	Support institutions to adapt faculty promotion & tenure policies to incentivize faculty to pursue entrepreneurial activities
	Establish and administer a Premier's Award for Research Innovation and Collaboration to recognize faculty and students for innovative pursuits and collaborations
	Align provincial contributions for post-secondary research to economic diversification priorities
	Align, redistribute, and/or grow provincial contributions to incentivize research collaborations and commercialization
	Establish and fund a central entity to build and provide first-rate commercialization and entrepreneurship capabilities system-wide
	Support institutions to streamline IP processes across the system to foster industry/institution collaboration
	Convene institutions, industry, and investors together to advance cutting-edge research collaborations in priority areas
	Showcase Alberta's world-class IP and infrastructure assets through the development of an online, publicly accessible, integrated repository
Financial Sustainability	Deconsolidate institution financials to provide institutions with greater financial flexibility to grow own-source revenues
	Streamline surplus spending request and approval process to enable institutions to strategically spend surpluses
	Streamline review of Commercial Enterprises (e.g., commercial land development, real-estate deals, overseas campuses) from 12-18 months to 3-6 months
	Increase tuition flexibility and needs-based student aid: Enable tuition flexibility, within defined guardrails
	Sponsor a shared service centre for academic (e.g., enrolment) and non-academic areas (e.g., HR, finance)
	Support institutions to streamline procurement: Evaluate opportunity to coordinate sourcing approach to reduce procurement spend (e.g., consolidate volumes, benchmark suppliers)
	Implement a clear, transparent funding allocation model
	Implement a performance-based funding model
Governance	Reinforce and strengthen mandates to provide clear accountabilities for system- and institution-level outcomes in teaching, research, and collaboration
	Establish a system-level, independent advisory council to the Ministry on strategic priorities and the implementation of system-wide initiatives
	Revise institutional board appointment and composition

1. Each initiative has different stakeholders involved at different phases. See Strategy Details for more information

Potential 3 year investment for AAE for AB2030; investment ramp is dependent on initiative prioritization and design choices

Goal	Potential initiative	Y1 ($M)	Y2 ($M)	Y3 ($M)	3y total ($M)	Recurring annual investment (10y avg.) $M	Comments
Access and Student Experience	Empower student decision by streamlining and simplifying the post-secondary application process	7	7	7	21	3	One-time investment of $21M over 3 years and recurring $2.6M maintenance annually for the entire Advanced Education Department Digital Plan (per AAE working group). Plan includes the application portal, financial aid applications, labour market predictions, and more.
	Ensure key AAE websites are available in multiple Indigenous languages	TBD	TBD	TBD	TBD	TBD	Investment will reflect one time translation effort
	Double non-repayable needs-based aid and innovate financial aid offerings to ensure post-secondary is affordable for students	5 - 18	13 - 33	17 - 26	35 - 77	20-31	Investment varies based on tuition flexibility provided under current AAE plan or alternative plan. The investment is larger in Y1-3 as institutions can currently raise tuition up to 7% annually. Up to 40%+ of FLEs will be supported. The amount of incremental investment may be $0 if merit-based aid is converted.
	Provide grants to institutions to expand access to transition programs for every Indigenous student	1 - 2	1 - 3	2 - 4	4 - 9	4-8	Investment supports cumulative 3,700 Indigenous learners participate in transition programs at a cost of $1200-$2400 per year to AAE (contribution of 25-50% of the total). Proportion of first year students serves increases from 20% in Y1 to 100% by 2028 (~4,900 served annually)
	Transform the transfer system so that no student repeats equivalent coursework due to transferability challenges	0	1 - 3	2 - 5	3 - 8	2-5	Investment reflects annual grants for transfer projects based on practices at leading jurisdictions (ON & BC): 1) collect data and do research on transfer to understand repeat learning, 2) fund projects that increase transfer pathways 3) develop tools for students to understand pathway opportunities (e.g. Transfer Alberta).
Skills for Jobs	Become the first province in Canada to offer access to work-integrated learning to 100% of students	5 - 15	5 - 15	5 - 16	15 - 46	5-14	Investment reflects funding for employers to develop new WIL opportunities for students (~24K new placements over 3 years, avg. $685/new placement, benchmarked on BHER funding) and stipends to support student wages ($3k for 25-50% of new co-op/internship). Funding is for new placements only, and cost is expected to reduce over time.
	Build, fund, and establish policy for apprenticeships in a wider range of occupations, in particular emerging high-tech trades	0.1 - 0.2	0.1 - 0.2	0.1 - 0.2	0.4 - 0.5	-	Investment reflects one-time cost to develop apprenticeship programs. Estimate for 5 programs at $150k each to develop the course outlines, competencies, examinations and certification standards. Estimate developed with AAE staff. Note this investment may be budgeted under Skills for Jobs
Innovation and commercialization	Establish Alberta Innovation Researcher Fellowships to attract top research talent and support faculty to pursue sabbaticals in innovative companies in priority industries	0.1 - 1	0.1 - 3	0.1 - 4	0.3 - 8	0.1-4	Investment reflects 20-40 annual fellowships at $100-$200k per fellowship (based on peer jurisdictions) with an AAE contribution of 5-50%. Number of fellowships ramps up by linearly over first 3y
	Establish and fund a central entity to build and provide first-rate commercialization and entrepreneurship capabilities system-wide	1 - 3	1 - 3	1 - 3	3 - 8	1-3	Investment reflects cost for 10-30 staff and operation; investment can be lower if institutions re-allocate
Financial Sustainability	Sponsor a shared service centre for academic (e.g., enrolment) and non-academic areas (e.g., HR, finance)	1 - 3	1 - 3	0 - 0	2 - 6	-	$2-6M is an estimated one-time investment that may be covered by institutions. Investment reflect 3-7 program managers to support the transition and one time transition support
Total		**20 - 49**	**28 - 68**	**34 - 65**	**84 - 181**	**35 - 68**	**Financial aid and work-integrated learning are the two initiatives that require the largest investments (60-68%) of the 3y total**

Potential initiatives that are not expected to have an incremental investment for AAE associated with implementation

Goal	Potential initiative	Comments
Access and Student Experience	Expand dual credit and RAP opportunities, in collaboration with AE, PSIs, and FNCs, to support pathway development	Incentivization through IMAs
	Equip institutions with resources to support students' mental well-being through the Mental Health Grant	$8.6M for Mental Health Grant is already budgeted
	Modernize the existing provincial framework to address sexual and gender-based violence in Alberta's campus communities	No incremental investment; intent to align existing resources
	Innovate a provincial strategy for prior learning assessment recognition (PLAR) to recognize prior learning and enable flexible pathways	Re-establishment of working group within AAE to develop PLAR framework
	Establish a high quality centre of excellence for online teaching and learning to support faculty and provide students with a world-class online learning experience	Potential to merge existing institutional CoE suggest funds could be re-allocated
	Establish an option for institutions to opt-into system-wide online program managers (OPM) to improve faculty and student experience	Mechanism to incentivize behavior may be a financial stick which would not require incremental investment; further institutions could reallocate resources from existing OPMs
	Expand access to digital infrastructure for online learning in rural and remote communities by collaborating with Ministries to pursue federal funding and exploring industry partnerships	AAE can work with Services Alberta to pursue federal funding and play a convening role to support partnerships
Skills for Jobs	Convene industry-led councils to assess workforce needs, advise on qualifications, and design or endorse programs, including micro-credential programs	Councils can be voluntary which would not require incremental investment
	Promote an agile program development process to ensure PSIs can provide nimble, relevant, and effective learning opportunities, including micro-credentials	Initiative is an internal process; no incremental investment expected
	Provide high-quality predictions of labour market needs to PSIs and students to inform programs, credentials, and pathways	Investment is reflected in the Advanced Education Department Digital Plan which is referenced in the application portal initiative on the previous page
	Support institutions to become the go to provider of employer paid upskilling programs	AAE can play a convening role; intent is for programs to be employer paid and revenue generating for institutions
Innovation and commercialization	Support institutions to adapt faculty promotion & tenure policies to incentivize faculty to pursue entrepreneurial activities	AAE can support boards to pursue this; no incremental investment
	Establish and administer a Premier's Award for Research Innovation and Collaboration to recognize faculty and students for innovative pursuits and collaborations	Non-monetary prize; intent is for in-kind award (e.g., meet with Premier to discuss research)
	Align ~260M of provincial contributions for post-secondary research to economic diversification priorities	No incremental investment; intent to align existing resources
	Align, redistribute, and/or grow provincial contributions to incentivize research collaborations and commercialization	No incremental investment if alignment or redistribution is pursued
	Support institutions to streamline IP processes across the system to foster industry/institution collaboration (e.g., establish template agreements)	AAE can provide best practices and central entity can support facilitation of these process changes; no incremental investment expected
	Convene institutions, industry, and investors together to advance cutting-edge research collaborations in priority areas (e.g., extension of the Research Working Group, establish bi-annual industry/PSI research demo event)	Initiative is the continuation of existing working group and convention; no incremental investment expected
	Showcase Alberta's world-class IP and infrastructure assets through the development of an online, publicly accessible, integrated repository	Initiative is development of website; budgeted in the central entity initiative on previous page
Financial Sustainability	Deconsolidate institutions to provide institutions with greater financial flexibility to grow own-source revenues	Initiative is an internal process; no incremental investment expected
	Streamline surplus spending request and approval process to enable institutions to strategically spend surpluses	Initiative is an internal process; no incremental investment expected
	Streamline review of Commercial Enterprises (e.g., commercial land development, real-estate deals, overseas campuses)	Initiative is an internal process; no incremental investment expected
	Increase tuition flexibility and needs-based student aid: Enable tuition flexibility, within defined guardrails, to allow institutions the discretion to set tuition levels and increase need-based financial aid to ensure that tuition increases do not decrease access for Albertans	Required financial aid investment is included in the non-repayable needs-based aid initiative on previous page
	Support institutions to streamline procurement	AAE can play a coordinating role to support institutions in pursuing this initiative
	Implement a clear, transparent funding allocation model	Initiative is an internal process; no incremental investment expected
	Implement a performance-based funding model	Initiative is an internal process; no incremental investment expected
Governance	Revise sector mandates to provide clear accountabilities for system- and institution-level outcomes in teaching, research, and collaboration	Initiative is an internal process; no incremental investment expected
	Establish a system-level, independent advisory council to the Ministry on strategic priorities and the implementation of system-wide initiatives	Initiative is an internal process; no incremental investment expected
	Revise institutional board appointment and composition to enable institutions to appoint a majority of the board, use a skillset matrix to inform appointments, and lengthen board tenure to minimize turnover	Initiative is an internal process; no incremental investment expected; assume no board member compensation

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Potential Alberta 2030 Outcomes

Goals	KPIs	Baseline	Y3	Y6	Y10
1: Access and student experience	1. Total learners enrolled in approved programs offered by Alberta's public PSIs (K)	269	281	296	321
	2. Undergraduate completion rates after six years	67%	70%	72%	76%
	3. Diploma completion rates after four years	62%	63%	64%	66%
	4. Total transfer credit awarded towards a credential	New metric, baseline needs to be established to set targets			
	5. Ratio of median income / median student debt load (ASL only, non RAP, non defaulters)	4	4	4	4
2: Skills for Jobs	1. Percentage of students with employment within 6 months	71%	71%	78%	89%
	2. Percentage of employers who rated recent graduates as well-prepared for employment	92%	93%	94%	95%
	3. Percentage of students who participate in WIL (including apprenticeship)	N/A	48%	66%	100%
	4. Percentage of students who indicate their current main job is very related to the program from which they graduated	56%	TBD	TBD	TBD
	5. Enrolment by field of study	Detail follows; targets to be determined by AAE based on priority fields of study			
3. Innovation and commercializati on	1. System higher ed. R&D expenditures (HERD) ($M)	1,638	1,855	2,114	2,539
	2. Patent applications filed	131	141	152	168
	3. Licenses issued	39	48	66	101
	4. Revenue generated (sales) from institution developed and partnered products	New metric, baseline needs to be established to set targets			
	5. Investment attracted for seed, early, and late-stage ventures originated at PSIs	New metric, baseline needs to be established to set targets			
5: Financial Sustainability	1. Non-provincial government revenue / total system revenue (3y rolling average)	50%	55%	59%	65%
	2. Admin expense ratio (3y rolling average)	7.5%	Recommend to re-establish baseline and set targets with new Admin definition in Jan 2022		

1: Access and Student Experience potential outcomes

Data from Alberta dataset
Data from non-Alberta dataset (e.g., Statcan)

KPIs	Baseline	Y3	Y6	Y10	Available benchmarks	Target rationale
1. Total learners enrolled in approved programs offered by Alberta's publicly funded PSIs (K)	269[1]	281	296	321	Headcount CAGR (2014/15-2018/19): ON 2.0%, BC 2.0%, AB 2.2%[2]	FLEs projected by AAE department and adjusted to headcount using historical ratio of 1.6[1]. The calculated growth rate per projections is 1.7% annually
1.1. Alberta learners (K)	197[1]	206	217	236	N/A	Weighted based on the total headcount projections and baseline distribution
1.2. Domestic learners, not including AB (K)	46[1]	49	51	56	N/A	Weighted based on the total headcount projections and baseline distribution
1.3. Self-identified Indigenous learners (K)	13[1]	14	14	15	N/A	Weighted based on the total headcount projections and baseline distribution
1.4. International learners (K)	25[1]	26	28	30	N/A	Weighted based on the total headcount projections and baseline distribution
2. Undergraduate completion rates after six years	67%[3]	70%	72%	76%	ON 76%; BC 68%; SK 50%; QC 85%[3]	AB is competitive with BC but lags ON. Assume linear growth to match Ontario
2.1. Indigenous undergraduate completion rates after six years	TBD	70%	72%	76%	N/A	Same as provincial average. Note AAE calculates metric at a sector level and could adjust for system to determine baseline
3. Diploma completion rates after four years	62%[3]	63%	64%	66%	BC: 34%; SK 62%; QC: 45% NL 66%[3]	AB has some of the highest completion rates. Assume linear growth to match best in Canada (NL)
3.1. Indigenous diploma completion rates after fours year	TBD	63%	64%	66%	N/A	Same as provincial average. Note AAE calculates metric at a sector level and could adjust for system to determine baseline
4. Total transfer credit awarded towards a credential	N/A	TBD	TBD	TBD	N/A	New metric, AAE will need to determine collection and reporting
5. Ratio of median income / median student debt load (ASL only, non RAP, non defaulters)	4[4]	4	4	4	N/A	Target set to account for potential short term unemployment in AB and potential tuition flexibility

1. LERS 2018/19, FLE numbers are AAE projections, adjusted to headcount by historical trends from 2015-2019. Targets assumes ratio of full time, part time, domestic, international and Indigenous students remains constant, Y10 prediction is for 2029-2030 which is the final year with predictions; 2. Benchmarks from statistics Canada Table: 37-10-0011-01 3. Statistics Canada, Persistence and graduation of postsecondary students aged 15 to 19 years in Canada, entry cohort of 2011/12. 4. Student Aid Client Satisfaction Survey, ASL only, non RAP, non defaulters, 2018

1: Access and Student Experience potential evaluation sources

KPIs	Measurement tool	Measurement frequency	Benchmarking sources	Measurement and benchmarking considerations
1. Total learners enrolled in approved programs offered by Alberta's publicly funded PSIs (K)	LERS	Annual	N/A	Total learners are measured in absolute numbers, therefore provincial benchmarks are not appropriate
1.1. Alberta learners (K)	LERS	Annual	N/A	
1.2. Domestic learners, not including AB (K)	LERS	Annual	N/A	
1.3. Self-identified Indigenous learners (K)	LERS	Annual	N/A	
1.4. International learners (K)	LERS	Annual	N/A	
2. Undergraduate completion rates 150% expected time	LERS	Annual	Statcan[1]	It is recommended AAE use LERS data to measure system-wide completion metrics to ensure enrolment and completion rates use the same data
2.1. Indigenous undergraduate completion rates 150% expected time	LERS	Annual	N/A	
3. Diploma completion rates 150% expected time	LERS	Annual	Statcan[1]	It is recommended AAE use LERS data to measure system-wide completion metrics to ensure enrolment and completion rates use the same data
3.1. Indigenous diploma completion rates 150% expected time	LERS	Annual	N/A	
4. Total transfer credit awarded towards a credential	TBD	Annual	N/A	New metric – collection and reporting guidelines need to be established
5. Ratio of median income / median student debt load	Student Aid Client Satisfaction Survey	Annual	N/A	This data should be collected annually to monitor for the impact of potential tuition increases

1. Persistence and graduation of postsecondary students aged 15 to 19 years in Canada: Interactive tool

2: Skills for Jobs potential outcomes

Data from Alberta dataset
Data from non-Alberta dataset (e.g., Statcan)

KPIs	Baseline	Y3	Y6	Y10	Available benchmarks	Target rationale
1. Percentage of students with employment within 6 months	71%[1]	71%	78%	89%	ON 89%[2]	Maintain at 71% for three years to account for potential short term unemployment in AB, then grow linearly to match ON. Key consideration for this metric and target is that it is also dependent on economic circumstances that are out of PSIs' control
2. Percentage of employers who rated recent graduates as well-prepared for employment	92%[3]	93%	94%	95%	N/A	AB has high satisfaction and target is set to account for a small amount of improvement. However, existing survey may not capture nuanced employer feedback. Adjustments can be considered to better assess employer satisfaction
3. Percentage of students who participate in WIL (including apprenticeship)	N/A	48%	66%	100%	N/A	Metric is not tracked at a system-level and reporting guidelines will need to be determined. Per AB2030 stakeholder student survey, ~35% of students are participating in WIL today[4]. Aspiration to ramp up WIL quickly from potentially ~35% today to 100% by 2028
4. Percentage of students who indicate their current main job is very related to the program from which they graduated	56%[1]	TBD	TBD	TBD	N/A	Target to be set based on what is aspirational for AAE
5. Enrolment by field of study	See next page	TBD	TBD	TBD	Data available through Statcan; however targets should reflect provincial labour market needs	See next page for considerations

1. Graduate outcomes survey class of 2015/16;
2. ON number from Ministry of Colleges and Universities, 2018-19
3. Employer satisfaction survey 2018
4. Alberta2030: Building Skills for Jobs student survey

2: Skills for Jobs potential outcomes – Enrolments by field of study

Data from Alberta dataset
Data from non-Alberta dataset (e.g., Statcan)

KPIs: 5. Enrolment by field of study

Field of study	Enrolment 2018-19 (K)	CAGR (2014-19)
Personal improvement and leisure	4,878	1.5%
Education	10,284	5.8%
Visual and performing arts, and communications technologies	5,343	0.0%
Humanities	33,537	0.4%
Social and behavioural sciences and law	23,805	3.4%
Business, management and public administration	33,717	2.7%
Physical and life sciences and technologies	13,833	1.1%
Mathematics, computer and information sciences	7,554	9.1%
Architecture, engineering and related technologies	20,985	0.5%
Agriculture, natural resources and conservation	4,050	2.0%
Health and related fields	30,540	2.3%
Personal, protective and transportation services	3,282	6.5%
Other	8,583	0.0%
Total, field of study	200,391	2.2%

Considerations for use of metric and target setting

- Enrolments by field of study can be used as a leading indicator of number of students in priority fields of study as defined by the government. Note that graduates by field of study are also available through Statcan
- To track and set targets for enrolments as related to labour market alignment, AAE will need to define priority industries and occupations and map fields of study to industries
- However, this is time intensive. If tracking the metric becomes too complex or challenging, there is a risk that it won't be done annually

Source: Postsecondary enrolments, by field of study, registration status, program type, credential type and gender, 2018-2019, Statcan, Table 37-10-0011-01

Note: enrolment numbers on Statcan are calculated separate from the LERS system, which is why enrolment total on this page does not match baseline in targets

2: Skills for Jobs potential evaluation sources

KPIs	Measurement tool	Measurement frequency	Benchmarking sources	Measurement and benchmarking considerations
1. Percentage of students with employment within 6 months	Graduate outcomes survey	Every two years	ON Ministry of Colleges and Universities, 2018-19	Graduate outcomes survey data may lag up to 3 years from graduation year given current measurement frequency, however AAE can choose to conduct the survey annually
2. Percentage of employers who rated recent graduates as well-prepared for employment	Employer satisfaction survey	Every two years	N/A	Propose distinguishing between AB and non-AB grads in employer survey
3. Percentage of students who participate in WIL (including apprenticeship)	TBD	Annual	N/A	Metric is not tracked at a system-level and reporting guidelines will need to be determined. There is potential to track through IMAs or through student surveys
4. Percentage of students who indicate their current main job is very related to the program from which they graduated	Graduate outcomes survey	Every two years	N/A	Graduate outcomes survey data may lag up to 3 years from graduation year given current measurement frequency, however AAE can choose to conduct the survey annually
5. Enrolment by field of study	Statistics Canada Table: 37-10-0011-01	Annual	Statistics Canada Table: 37-10-0011-01	Priority areas and targets will need to be set and updated in collaboration with Labour and JEI to reflect priority sectors

3: Innovation and Commercialization potential outcomes

Data from Alberta dataset
Data from non-Alberta dataset (e.g., Statcan)

KPIs	Baseline	Y3	Y6	Y10	Available Benchmarks						Target rationale
1. System higher ed. R&D expenditures (HERD) ($M)	1,638[1]	1,855	2,114	2,539		**AB**	**BC**	**ON**	**QC**	**SK**	Close gap to BC on a per capita basis. Target estimated based on projected HERD for BC in 2029/30, assuming historical CAGR, and adjusted for AB population size and to assume provincial funding for HERD is flat. To achieve target, AB will grow 4.5% annually (slightly faster than historical at 4.2% annually)
					HERD, $M (2018/19)[1]	1,638	1,782	6,006	3,799	385	
					CAGR (13/14-18/19)[1]	4.2%	4.9%	2.7%	2.9%	4.3%	
					Canada HERD (15,083) and CAGR (3.3%)						
2. Patent applications filed	131[2]	141	152	168		**AB**	**BC**	**ON**	**QC**	**SK**	Alberta's annual patents filed have grown faster than peer provinces with a large jump in patents from 2017 to 2018. Excluding 2018, Alberta's annual growth rate for patents filed was 1%. Assume Alberta's patents grow 1-4% annually through 2030 (targets reflect mid-point)
					Patents (18)[2]	131	169	408	210	14	
					CAGR (13-18)[2]	4%	-3%	1%	-1%	-11%	
					Patents per 1K FT teaching staff (18) [2,3]	26	26	25	20	9	
3. Licenses issued	39[2]	48	66	101		**AB**	**BC**	**ON**	**QC**	**SK**	Alberta lags in total licenses and licenses on a per FT teaching staff basis. However, Alberta has grown from 20 licenses in 2013 to 39 in 2018. Given the variation in license growth, assume Alberta grows at 11% annually (national CAGR)
					Licenses (18)[2]	39	95	378	56	8	
					CAGR (13-18)[2]	14%	18%	13%	-1%	-9%	
					Licenses per 1K FT teaching staff (18) [2,3]	8	15	23	5	5	
4. Revenue generated (sales) from institution developed and partnered products	N/A	TBD	TBD	TBD	N/A for province level; however other jurisdictions have used this metric (e.g., Maryland Industrial Partnerships)						New metric - reporting guidelines need to be established for institutions. Consideration needs to be given to how to ensure PSIs collaborate rather than compete on this metric
5. Investment attracted for seed, early, and late-stage ventures originated at PSIs	N/A	TBD	TBD	TBD	N/A for province level; however other institutions have used this metric (e.g., Waterloo, Cornell Tech)						New metric - reporting guidelines need to be established for institutions. Consideration needs to be given to how to ensure PSIs collaborate rather than compete on this metric

1.Statistics Canada Table: 27-10-0025-01 (2018/2019); updated baseline reflects latest year available
2.AUTM Statistics Access for Technology Transfer Database (STATT) Database (2018)
3.Statistics Canada Number of FT teaching staff at Canadian Universities Table: 37-10-0077-01

3: Innovation and Commercialization potential evaluation sources

KPIs	Measurement tool	Measurement frequency	Benchmarking sources	Measurement and benchmarking considerations
1. System higher ed. R&D expenditures (HERD) ($M)	Statistics Canada Table: 27-10-0025-01	Annual	Statistics Canada Table: 27-10-0025-01	HERD publication typically lags ~2 years; potential alternative to use CAUBO for Sponsored Research Revenue (~1 year lag) for data for benchmarking
2. Patent applications filed	AUTM Statistics Access for Technology Transfer Database (STATT) Database	Annual	AUTM Statistics Access for Technology Transfer Database (STATT) Database	Data for benchmarking from AUTM STATT database typically lags ~2 years, however AAE can request annual reporting from institutions on patents
3. Licenses issued	AUTM Statistics Access for Technology Transfer Database (STATT) Database	Annual	AUTM Statistics Access for Technology Transfer Database (STATT) Database	Data for benchmarking from AUTM STATT database typically lags ~2 years, however AAE can request annual reporting from institutions on licenses
4. Revenue generated (sales) from institution developed and partnered products	Institution reporting	Annual	N/A	New metric - reporting guidelines need to be established; this is likely to lag 2-3 years given innovation pipeline. Consideration needs to be given to how to ensure PSIs collaborate rather than compete on this metric
5. Investment attracted for seed, early, and late-stage ventures originated at PSIs	Institution reporting	Annual	N/A	New metric - reporting guidelines need to be established for institutions; this is likely to lag 2-3 years given innovation pipeline. Consideration needs to be given to how to ensure PSIs collaborate rather than compete on this metric

5: Financial Sustainability potential outcomes

Data from Alberta dataset
Data from non-Alberta dataset (e.g., Statcan)

KPIs	Baseline	Y3	Y6	Y10	Available benchmarks	Target rationale
1. Non-provincial government revenue / total system revenue (3y rolling average)	50%[1]	55%	59%	65%	3y rolling average for universities and degree granting colleges: BC (64%), ON (74%), QC (51%), SK (55%)[2] 3y rolling average community colleges and vocational schools: BC (50%), ON (62%), QC (17%), SK (28%)[3] Calculated overall 3y rolling average: BC (63%), ON (71%), QC (41%), SK (50%)[4]	Set 10 year target to be competitive with BC. Potential for more aggressive targets need to consider short-term economic uncertainty and importance of stability and longevity in funding for post-secondary system
2. Admin expense ratio (3y rolling average)	7.5%[5]	TBD	TBD	TBD	3y rolling average for "Administration and Academic Support" as a % of total expenditures for universities and degree granting colleges: AB (7.0%), BC (7.1%), ON (7.0%), QC (6.0%), SK (7.0%)[6] 3y rolling average for "General Administration" as a % of total expenditures for community colleges and vocational schools: AB (24%), BC (18%), ON (18%), QC (13%), SK (22%)[7]	Recommended to re-establish baseline and set targets using new Administration definition developed through the department's Operational Financial Data Review (OFDR) project. Data will be available in Jan 2022 for FY 2020-21. The current Administration number used for this baseline relies on the Institutional Support category which is broad and does not account for differences in how institutions are structured. Different types of costs have been recorded in this category, so it has not been comparable in the past.

1. FIRS (2016-2019)
2. Statcan Revenues of Universities and Degree Granting Colleges Table: 37-10-0026-01 (2016-2019)
3. Statcan Revenues of community colleges and vocational schools Table: 37-10-0028-01 (2016-2019)
4. Overall benchmark is calculated using revenue numbers from Statcan tables in footnote 2 and 3
5. FIRS (2016-1029); Institutional Support Expense / [Total Institutional Expense - Ancillary Services Expense - Business Enterprise Expense]
6. Statcan Expenditures of Universities and Degree Granting Colleges Table: 37-10-0027-01 (2016-2019)
7. Statcan Expenditures of community colleges and vocational schools Table: 37-10-0029-01 (2016-2019)

Alberta

5: Financial Sustainability potential evaluation sources

KPIs	Measurement tool	Measurement frequency	Benchmarking sources	Measurement and benchmarking considerations
1. Non-provincial government revenue / total system revenue (3y rolling average)	FIRS (Revenue)	Annual	Statcan Revenues of Universities and Degree Granting Colleges Table: 37-10-0026-01; Statcan Revenues of community colleges and vocational schools Table: 37-10-0028-01	Statcan and FIRS data collection methodology and adjustments differ so benchmarks between the two datasets are not perfectly comparable
2. Admin expense ratio (3y rolling average)	FIRS (Expenses)	Annual	Expenditures of universities and degree-granting colleges Table: 37-10-0027-01; Expenditures of community colleges and vocational schools Table: 37-10-0029-01	Recommended to establish baseline and set targets using new Administration definition developed through the department's Operational Financial Data Review (OFDR) project. Data will be available in Jan 2022 for FY 2020-21. The current FIRS Administration number used relies on the Institutional Support category which is quite broad and does not account for differences in how institutions are structured. Therefore, different types of costs have been recorded in this category, so it has not been comparable in the past

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1: Access and Student Experience

DRAFT

Flagship initiatives

Objectives	Potential initiatives for consideration
Objective 1.1: Empower learners to make informed decisions on post-secondary pathways	1. **Expand dual credit and RAP opportunities**, in collaboration with AE, PSIs, and FNCs, to support pathway development 2. Empower student decision-making by **streamlining and simplifying the post-secondary application process** 3. Ensure key **AAE websites are available in multiple Indigenous languages**
Objective 1.2: Ensure that post-secondary is inclusive and affordable	1. **Double non-repayable needs-based aid and innovate financial aid offerings** to ensure post-secondary is affordable for students 2. **Provide grants to institutions to expand access to transition programs for every Indigenous student** 3. **Continue to equip institutions with resources to support students' mental well-being** through the Mental Health Grant 4. Modernize the existing provincial framework to **address sexual and gender-based violence** in Alberta's campus communities
Objective 1.3: Foster multiple, flexible career and education pathways	1. **Transform the transfer system** so that no student repeats equivalent coursework due to transferability challenges 2. **Innovate a provincial strategy for prior learning assessment recognition** (PLAR) to recognize prior learning, including micro-credentials, and enable flexible pathways
Objective 1.4: Expand digital and distance education to reach students where they are	1. **Establish a high quality centre of excellence for online teaching and learning** to support faculty and provide students with a world-class online learning experience 2. Establish an option for institutions to **opt-into system-wide online program managers** (OPM) to improve faculty and student experience 3. **Expand access to digital infrastructure for online learning in rural and remote communities** by collaborating with Ministries to pursue federal funding and exploring industry partnerships

Alberta

1.1.1: Expand dual credit and RAP opportunities, in collaboration with AE, PSIs, and FNCs, to support pathway development

Initiative overview:

Post-secondary pathways are supported through accessible dual credit and RAP programs. AAE can incent institutions to offer programs through IMAs while funding for dual credit remains with Alberta Education. AAE can also determine whether to provide funding to FNCs to support dual credit. AAE and AE will increase data sharing to monitor participation and success of dual credit and RAP and expand access

Case for change:

Dual credit and RAP opportunities increase awareness of post-secondary pathways that can lead to increased participation. 104K students grade 10-12 participate in dual credit opportunities[1]. In a survey of participants, a majority reported that dual credit gave them a preview of post-secondary (79%), helped them develop skills needed in post-secondary (74%), increased their confidence that they could succeed in postsecondary (71%), and helped them decide about transitioning to post-secondary (66%)[2]. 800+ students participate in RAP and 72% transitioned into an apprenticeship after graduation[3]

Design considerations

- Data sharing between Alberta Education and Alberta Advanced Education (e.g. participation and course data)
- Incentives for PSI and employers to expand dual credit and RAP opportunities (e.g. non-funding metric in IMA)
- Portion of funding to FNCs to support dual credit and RAP offerings

Risks and mitigation strategies

- PSI focus on FLE count at the expense of supporting dual credit // Establish meaningful metric in IMA to support dual credit
- Unable to secure data transfer from Alberta Education // AE and AAE can align on common goals and benefits of data transfer

Interdependencies

- AAE and AE data sharing collaboration
- Existing organizations offering opportunities (e.g. CAREERS: The Next Generation)
- Labour and Immigration, Alberta Health, Agriculture and Forestry, and other relevant ministries that are directly involved in or support dual credit-related opportunities

Potential steps to implementation

Potential Activities	*Stakeholders**
Identify opportunities to improve data collection and sharing on dual credit and RAP	AAE Department and AE (R, A), Institutions (C,I), Employers (C,I)
Review and establish performance metric to incentivize dual credit and RAP	AAE Department (R, A), Institutions (C), Employers (I)

1. AAE analysis; 2. Provincial dual credit strategy implementation evaluation final report, June 2017; 3. AAE internal analysis

*(R) Responsible - Stakeholders who do the work to complete the action or make the decision
(A) Accountable - Stakeholder who owns the work and signs off when the action is complete
(C) Consulted - Stakeholders who must provide input before the action is complete
(I) Informed - Stakeholders who must be kept up to date, but do not need to formally provide input

1.1.1: Sustainability of RAP and CTS credentialed pathways is at risk

Two dual credit pathways are experiencing a significant decline in participation[1]

Pathway	2019-20 Participation	Change over last 3 years	Impact on post-secondary
RAP	865 students	Participation has decreased by 31%	72% of RAP apprentices transition into an apprenticeship after graduation
CTS credentialed pathways	103.4k students (34% of students in grade 10-12)	Completion of pathways has decreased by 11%	Data is not available from Alberta Education to determine to what extent dual credit courses in high school transition into post-secondary

1. AAE analysis 2. Based on $250 per course and 103.4k students. Schools can still choose to fund dual credit programming, but there is no longer a dedicated funding avenue. This is a broad estimation/inference for this calculation and not necessarily how these numbers were intended to be used/their original purpose.

Three factors contribute to further dual credit programming risk in Alberta

1. Removal of tiered funding at AE in 2020 budget means **there is no longer ~$25-30M dedicated funding to dual credit programming**[2]; this is resulting in a reduction of valuable experiential and off-campus programing with equipment, instructor and tuition requirements

2. Without an AE priority for dual credit in the adult learning system and financially incentivizing/supporting the importance of dual credit programming, **we expect institutions to shift resources and attention to participation of FLEs which puts dual credit programs at risk**

3. **Economic downturn contributes to declines in RAP participation** because it is driven by employment opportunities and willingness to hire inexperienced youth

1.1.1: Roadmap

Expand dual credit and RAP opportunities, in collaboration with AE, PSIs, and FNCs, to support pathway development

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24
Identify opportunities to improve data collection and sharing on dual credit and RAP	Identify and assign AAE department team to work with AE to better understand dual credit and RAP data	—			
	Collaborate with AE to identify existing data and map gaps in data	—	—		
	To resolve gaps in data, identify options to improve data collection and data sharing infrastructure between institutions and ministries (e.g. dual credit courses awarded credit at admission)	—	—		
	Implement changes to data infrastructure to improve sharing		—		
Review and establish performance metric to incentivize dual credit and RAP	Review existing metrics in IMAs to understand potential to incorporate metric on dual credit and RAP	—			
	Develop and test options for dual credit and RAP metric with institutions		—		
	Incorporate metric		—		

1.1.2: Empower student decision-making by streamlining and simplifying the post-secondary application process

Initiative overview: A single coordinated learner application portal empowers informed decision making for education and career pathways through 1) single application for all PSIs, 2) personalized recommendations, 3) centralized financial aid information and application, and 4) career pathway options. Student data will be collected through the portal to understand program demand and matriculation trends

Case for change: Learners have to navigate multiple websites and tools to apply to post-secondary. 77% of Alberta based applicants offered admission to the programs they apply to, and 60% apply to only one program[1]. Further, 50% of surveyed students did not consider job prospects as a top three reason for selecting a program and 42% are unsure where to find labour market outcomes for their program of choice[2]

Design considerations

- Portal functionality (e.g., features, data collection, and sharing)
- Portal ownership, maintenance, and membership (e.g., would Alberta Post-secondary Application Society dissolve to enable AAE to host the tool, participation of IAI and FNC, will institutions have the opportunity to opt-into the tool)
- Funding mechanism

Risks and mitigation strategies

- Functionality of the tool is limited by legacy IT and privacy concerns // Initiative should be part of a broader digital transformation
- Lack of institutional buy-in and competing institution priorities // Develop collaboratively with PSI and offer as opt-in
- Functionality of the tool will be limited by ability of AAE to obtain additional data from PSIs // PSIs will be engaged early for data requirement articulation

Interdependencies

- Advanced Education Department Digital Plan led by Service Alberta[3]
- Alberta Post-secondary Application Society ownership of ApplyAlberta
- Alberta Learning Information System and existing IT systems at institutions
- Existing admission, application, and financial aid processes across institutions

Potential steps to implementation

Potential Activities	*Stakeholders**
Refine final design for the application process and stand up delivery team with Service Alberta	APAS (R,A), AAE Department (C,I), PSI (C), AE (C)
Design a series of pilots to test new tool functionality	AAE Department (R), SA (A), External vendor (A), PSI (C,I)
Expand and maintain tool	AAE Department (R), SA (A) PSI (C,I)

Financial implications

- Development: $21M provincial funding over three years (Entire AAE Digital Strategy)
- Maintenance: Up to $2.6M annual

1. System wide ASI fact sheet, Alberta Applicants only, Fall 2019. Some applications are not processed once a program has reached capacity; 2. AB2030: Student survey; 3. This is a data and functionality plan AAE is developing in collaboration with Service Alberta

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1.1.2: A streamlined portal has many benefits, including encouraging students to apply for more than one program

Context

Only **17% of applicants are qualified** for one of the programs they applied for, and **77% are qualified and offered admission**[1]

~$3M[2] is generated from the applications of students who are **not qualified for the program they apply to, or their application is not processed**[2]

60% of Alberta applicants **only apply to one program**[1]

Solution

Application platform will **nudge single-application students and/or students who are not on track to be admitted into a program to apply for similar programs**[3]

Example prompt from portal:

"You have applied to the Licensed Practice Nurse program at the Lethbridge College. Y% of applicants with your academic profile typically apply to nursing programs at NorQuest College and Red Deer College. Click here to apply.

Implications

This solution can **increase admission and participation and inform students about potential pathways**

There is also an opportunity to generate revenue through incremental applications that can cover the incremental maintenance costs

1.System Wide ASI Fact Sheet December 05, 2019: 296,850 application, 182,273 unique applicants, Includes AB applicants, Some applications are not processed once a program has reached capacity
2.Assuming application fee is $100 on average
3.Final grades are not always available at time of application, but the system could prompt students with a warning "you are not currently meeting the requirements for this program"

1.1.2: Roadmap

Empower student decision-making by streamlining and simplifying the post-secondary application process

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24	Month 24-30	Month 30-42
Refine final design for the application process and stand up delivery team with Service Alberta	Consult with APAS to determine future design of PSI application process	———					
	Consult with Labour, Education, CSS, APAS, PSIs and Students on their needs/requirements to inform application design	———					
	Understand and develop necessary data sharing agreements and existing supports to adapt the application (e.g., ALIS)	———	———				
Design a series of pilots to test new tool functionality	Set up an internal delivery team with Service Alberta to implement	———	———				
	Identify specific functionality of the tool and which services to pilot		———				
	Develop and launch pilot and monitor results to inform expansion of tool		———	———	———		
Expand and maintain tool	Conduct a continuous improvement process while rolling-out additional functionality					·····	·····

Alberta

1.1.3: Ensure key AAE websites are available in multiple Indigenous languages

Initiative overview:

AAE will provide translations of key websites for prospective and current Indigenous learners in multiple Indigenous languages. Translation languages will be determined through consultation with Indigenous communities. AAE can hire translators from the community to support translation.

Case for change:

Publishing AAE websites in Indigenous languages will recognize Indigenous learners and increase awareness of pathways in post-secondary more broadly in Indigenous communities. Indigenous students can share information about post-secondary with family and relatives in their native tongue. There are nearly 13,000 Indigenous learners in the post-secondary system today and enrollees are growing at 2.9%[1] annually.

Design considerations

- Choice of web pages and languages (e.g., determine through consultation)
- Channels to create awareness of new resources

Risks and mitigation strategies

- Translated pages are not maintained // Create continuity plan and schedule, make sure pages are included with regular 'maintenance' and update plan of other AAE resources
- Lack of awareness in Indigenous communities // Once translation is complete, publish and broadcast new resources to Indigenous leaders and communities
- Concern if not all languages are translated // Work closely with Indigenous communities to determine languages to translate

Interdependencies

- Hiring translators
- Current staff capacity and capability to update pages
- Resources hosted on translated pages – ideally translated versions are available as well

Potential steps to implementation

Potential activities	*Stakeholders**
Consult with Indigenous communities to understand which webpages could benefit from translation	AAE Department (R, A), Indigenous community leaders (C)
Consult with Indigenous communities on languages needed for translation	AAE Department (R, A), Indigenous community leaders (C)
Hire Indigenous language translators to translate webpages	AAE Department (R, A)
Establish review process to maintain up-to-date translations as webpages are changed or created	AAE Department (R, A)

1. Alberta Government, Headcount Enrolment within the Alberta Post-Secondary Education System 2018/2019

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Alberta

1.2.1: Double non-repayable needs-based aid and innovate financial aid offerings to ensure post-secondary is affordable for students

Initiative overview:

AAE will double non-repayable needs-based aid from ~$55M to ~$95-105M annually and will earmark a portion of non-repayable needs-based aid to support learners in re-skilling programs (e.g. micro-credential bootcamps) that are currently not eligible for aid. AAE can grow funding by converting a portion of merit-based aid.

Case for change:

Financial stress is the #1 concern for students today[1] -- 36% of students access financial aid and 80%+ of student loan borrowers would not have been able to attend or continue post-secondary without government student loans[2]. Given AAE's current tuition guidance, tuition fees may rise up to 7% annually over the next three years. Student participation may be adversely affected without financial aid – many studies indicate that 1ppt increase in tuition is associated with less than 1ppt decrease in enrolment[3]. If aid is to be reconfigured, ~70%[1] of students and general public believe that needs-based aid should receive the greatest focus

Design considerations

- Mechanism to grow non-repayable aid (e.g., convert merit awards)
- Earmarking of certain portions for specific purposes (e.g., reskilling, upskilling)

Risks and mitigation strategies

- Learners who are most in need do not receive sufficient financial aid // Review financial aid eligibility and need threshold to ensure students most in need receive aid
- Lack of stakeholder buy-in to convert merit based aid // Phase in conversion over time and enable institutions to offer merit based aid if they desire

Interdependencies

- Stakeholder support to convert merit- to needs-based aid
- Existing financial aid distribution processes
- Committed merit-based aid and overlap with students that would receive both merit and needs-based aid

Potential steps for implementation

Owner: AAE Strategy Implementation Group (SIG)

1. Appoint AAE Department team to refine design for aid package
2. Refine design for financial aid package and confirm investment
   a. Confirm amount of non-repayable aid and allocations for specific needs not currently covered (e.g., micro-credentials)
   b. Expand definitions for what learning opportunities qualify for financial aid or create new funding envelopes (as required)
   c. Determine net new investment required and/or amount that can be converted from merit-based aid to fund growth in aid
   d. Establish metrics to track financial aid distribution
3. Administer incremental financial aid
   a. Confirm that administration team has capacity to administer through existing distribution
   b. Communicate availability of incremental aid and process for application to potential student applicants
4. Track financial aid distribution results and solicit feedback

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1. Alberta2030: Building Skills for Jobs student and general public survey, Nov. 2020
2. Alberta Student Aid statistical profiles 2018/2019
3. Literature review of 12 studies examining tuition elasticity in Canada and the USA over the past 20 years

1.2.1: Business Case: Double non-repayable needs-based aid and innovate financial aid offerings to ensure post-secondary is affordable for students

Scenario: Current AAE plan for tuition: 7% maximum average annual tuition increase for 3 years (starting in 2020/21); then annual tuition increases tied to CPI

- Students who may no longer participate due to tuition increases receive needs-based aid to cover the incremental cost in tuition relative to the previous year
- Students who continue to participate but access financial aid received incremental needs-based aid to maintain existing levels of student loan debt

Incremental financial aid investment: Total average annual investment from over ten years is **~$20M-31M**; the average annual investment in 2030 is estimated at **~$40M-50M**

Assumptions

- Effective overall tuition increases 3.5-7% annually from 2020/21-2023/24 followed by tuition linked to CPI
- Student FLEs grow 1.9% annually (per historical CAGR), adjusted by a -0.25% to -0.55[1] reduction in participation for every 1 percentage point increase in tuition
- Needs-based aid is used to cover 100% of the incremental cost in tuition for students who may no longer participate due to tuition increases
- For every 1 percentage point increase in tuition, average loan student debt grows by 0.23%[2]; average student loan debt grows at inflation (1.7%[3]) annually
- The percentage of FLEs that access financial aid is 36%[4]
- An average student completes his/her post-secondary studies over 3.3[5] years and accrues the same amount of debt in each year
- Financial aid is used to maintain the inflation adjusted level of median student loan debt upon graduation ($22,000)[6]

	2020	2022	2024	2026	2028	2030
FLEs (K)	178	172-182	170-187	173-193	177-199	181-205
% increase in tuition	3.5-7.0%	3.5-7.0%	1.7%	1.7%	1.7%	1.7%
FLEs who may no longer participate	1,600- 6,900	1,600-6,600	800-1,600	800-1,600	800-1,700	900-1,700
Financial aid to cover tuition differential	**$1.3M-12.1M**	**$1.5M-13.3M**	**$0.4M-0.8M**	**$0.4M-0.9M**	**$0.4M-0.9M**	**$0.5M-1.0M**
% of tuition increase passed to debt	0.8-1.6%	0.8-1.6%	0.4%	0.4%	0.4%	0.4%
Expected student loan debt / FLE ($K)	$23.0-23.1	$24.2-24.7	$25.2-25.7	$26.2-26.7	$27.3-27.9	$28.5-29.1
Student loan debt / FLE target ($K)	$22.8	$23.6	$24.4	$25.2	$26.0	$26.8
% of FLEs in need	37%	37%	37%	37%	37%	37%
Adjustment for years to complete	3.3	3.3	3.3	3.3	3.3	3.3
Financial aid to maintain debt load	**$4M-6M**	**$12M-20M**	**$17M-25M**	**$22M-29M**	**$29M-38M**	**$39M-46M**
Total financial aid needed ($M)	**$5M-18M**	**$13M-33M**	**$17M-26M**	**$22M-30M**	**$29M-39M**	**$40M-47.0M**

Average annual investment: ~$20-31M

Note, actual average tuition % increases during 2020-2023 need to be tracked to inform financial aid

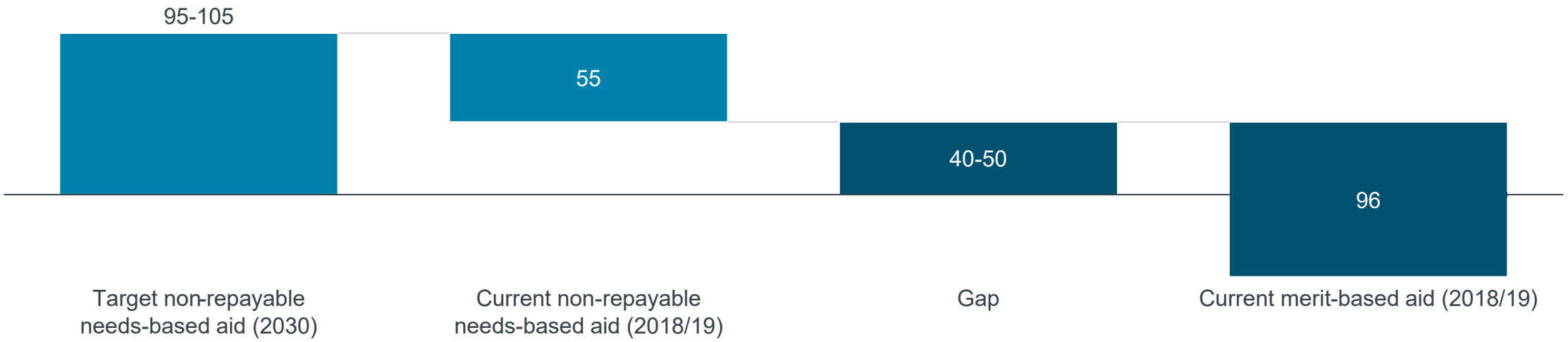
1. Bayan Yousef Farhan, “Tuition elasticity of demand as a tool to manage higher ed institutions” Al Ain University of Science and Technology, 2014,
Fortin, Nicole, “Explaining Canada-U.S. Differences in University Enrollment Rates.” Higher Education in Canada, 2005
2. Monk, James, "The Role of Institutional and State Aid Policies in Average Student Debt" Published in the Annals of the American Academy of Political and Social Science, 2014
3. 5-year average of inflation (1.7%) retrieved from the Bank of Canada, 07/2014 – 07/2019
4. Alberta Student Aid Statistical Profiles (2018/19)
5. Calculated weighted expected time to completion for diploma and degree programs
6. Alberta Student Aid Statistical Profiles (2018/19), proxied by Eligible Full-Time Public Post-Secondary Enrolments Funded: Loans and Grants by Academic Year

1.2.1: Potential to grow non-repayable needs based aid through converting merit aid and/or net new investment

To **grow non-repayable needs-based financial aid by 40-50M by 2030, AAE can consider a combination of net new investment and converting merit aid**

Converting merit-based aid can fill the gap to achieve the target, non-repayable needs-based aid, but a key consideration is the **potential overlap between students who would receive both needs-based aid and merit-based aid** to make sure they are not adversely affected

Supporting Analysis:



Source: Statistical Profiles 2018/19 | Alberta Student Aid Report, certificate, diploma, applied degrees, and bachelor degree s

1.2.1: Roadmap

Initiative: Double non-repayable needs-based aid and innovate financial aid offerings to ensure post-secondary is affordable for students

Activity	Action	Month 0-6	6-12	12-18	18-24	24-30	RACI*
Appoint AAE team to design aid plan	Identify department members with financial aid expertise and provide team with mandate to develop plan to double non-repayable needs-based aid						AAE SIG (R, A)
Refine design for financial aid package and confirm investment	Confirm amount of non-repayable aid and allocations for specific needs not currently covered (e.g., micro-credentials)						AAE SIG (R, A), Institutions (C), Students (C)
	Expand definitions for what learning opportunities qualify for financial aid or create new funding envelopes (as required)						
	Determine net new investment required and/or amount that can be converted from merit-based aid to fund growth in aid • Work through AAE to obtain approvals to convert portion of merit based aid, if required • Work with Treasury to confirm incremental allocation						
	Establish metrics to track financial aid distribution						
Administer incremental financial aid	Confirm that administration team has capacity to administer through existing distribution						AAE SIG (R, A)
	Communicate availability of incremental aid and process for application to potential student applicants						
Track financial aid distribution results and solicit feedback	Track results and solicit feedback from financial aid applicants, recipients, and administrators		→	→	→	→	AAE SIG (R, A)
	Re-assess need annually		→	→	→	→	

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Alberta

1.2.2: Provide grants to institutions to expand access to transition programs for every Indigenous student

Initiative overview:

AAE will provide funding to institutions to expand transition programs to support Indigenous students. Transition programs can include: academic support/tutoring, community support, and mentorship. Community delivery and outreach will be a priority[1]

Case for change:

There are nearly 13K Indigenous students studying at public PSIs in Alberta. The transition to post-secondary can be challenging, both academically and personally[2] for Indigenous learners. The PSI teaching style is often different (e.g., quantitative assessments vs. holistic learning), and transition programs like the UAlberta TYP have been shown to ease the transition and improve student success[3].

Design considerations

- Funding allocation mechanism (e.g., special grants) and model (e.g., per student)
- Stipulations of funding and which specific elements of a program will be funded
- Potential for financial aid (scholarships) alongside program funding

Interdependencies

- Existing programs and their level of success (how to expand/support)
- Availability of staff/faculty to manage and lead transition programs
- Infrastructure available at each PSI to support additional programming

Risks and mitigation strategies

- Transition programs are under or over utilized // Evaluate expected enrolment and fund on a per FLE basis
- Programs do not fulfill student needs // Support institutions to engage early and frequently with Indigenous communities so that programs are developed to fulfil student needs

Potential steps to implementation

Potential activities	*Stakeholders**
Determine scope of transition programs eligible for funding	AAE Department (R, A), Institutions (C)
Determine funding mechanism and confirm funding for the transition program initiative	AAE Department (R, A)
Administer funding and track transition program effectiveness	AAE Department (R, A), Institutions (C)

1. Council of Ministers of Education Canada, Report on Best Practices for Aboriginal Education, 2019
2. Indspire Reports 2020, roundtable discussions, stakeholder feedback, OECD Promising Practices in Supporting Success for Indigenous Students, 2017
3. Stakeholder feedback, University of Alberta reports 2019

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Alberta

1.2.2: Business case

Initiative: Provide grants to institutions to expand access to transition programs for every Indigenous student

Assumptions

Indigenous student headcount in Alberta[1]
12,900 (2018/19), growing at ~2.9% annually

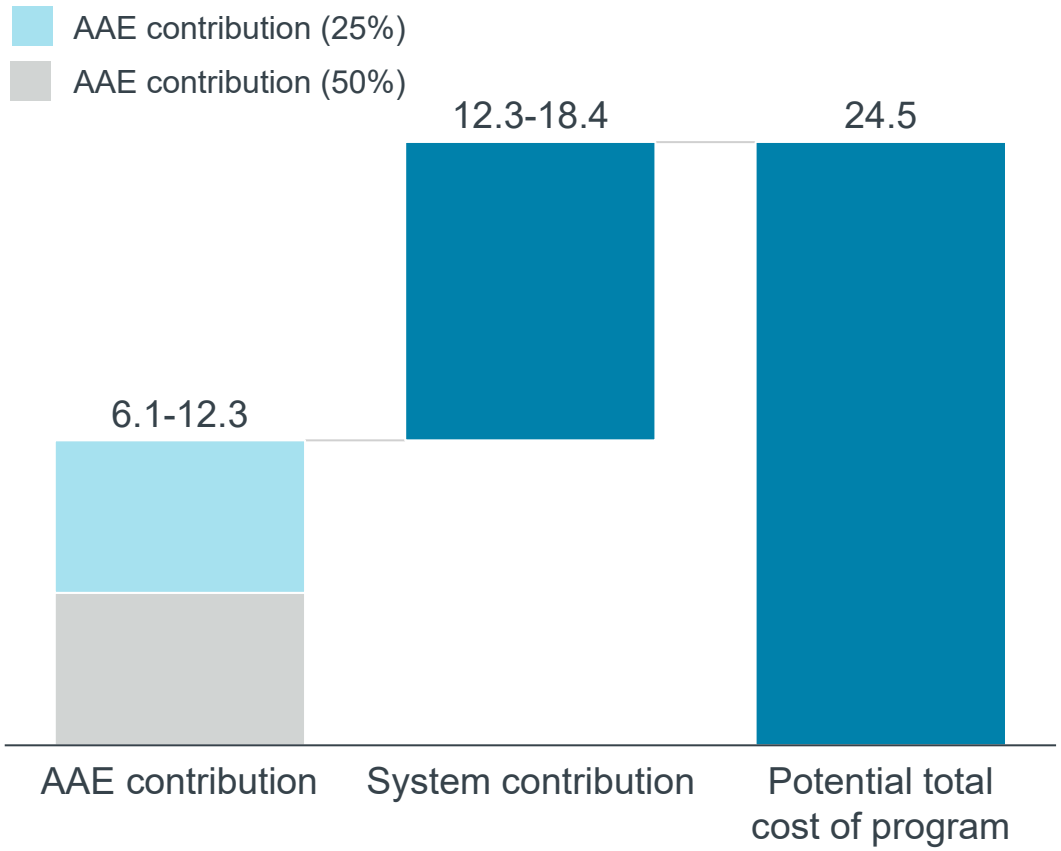
By 2030, 100% Indigenous learners participating during the first year of post-secondary; average student completes his/her post-secondary over 3.3 years[2]

4 dedicated staff : 100 enrollees (staff for academic advising, mentorship, instruction, mental health); **~110K / instructor / year[3]**

1 program coordinator per 20 public PSIs (1 shared resource)**; ~80K / coordinator / year[3]**

25-50% government contribution (design choice to be determined by AAE)

Potential annual incremental investment in 2030, $M



1. Alberta Government, Headcount Enrolment within the Alberta Post-Secondary Education System 2018/2019
2. Calculated weighted expected time to completion for diploma and degree programs
3. Estimate representative of salaries & fringe rate

1.2.2: Roadmap

Initiative: Provide grants to institutions to expand access to transition programs for every Indigenous student

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24
Determine scope of transition programs eligible for funding	Identify department team members with expertise on supporting Indigenous learners to develop plan to expand access to transition programs		■		
	Research and evaluate current transition program models in Alberta and across Canada		■		
	Seek input from institutions and Indigenous communities on transition program models		■	■	
	Document program requirements for funding eligibility			■	
Determine funding mechanism and confirm funding for the transition program initiative	Determine estimate of funding needed to incentivize institutions to establish and expand transition programs		■	■	■
	Generate a list of potential funding mechanisms and sources			■	■
Administer funding and track transition program effectiveness	Evaluate and confirm funding based on mechanism that provides long-term stability/predictability			■	■
	Disburse funding and ensure programs are established			■	■
	Regularly track program effectiveness				■ →

1.2.3: Continue to equip institutions with resources to support students' mental well-being through the Mental Health Grant

Initiative overview:

AAE will continue to provide annual funding (~$8.6M total is budgeted annually) to PSIs and FNCs to support on-campus mental health resources. AAE will support institutions to have community-based plans to ensure students have access to clinical resources through AHS. The Healthy Campus Alberta Community of Practice maintains consistent mental health support, and students have access to on-demand, virtual 24-hour care

Case for change:

Mental health is a growing challenge. According to a 2019 study, 50%+ of PSI students felt so depressed it was difficulty to function, 69% felt overwhelming anxiety, and 25% had been diagnosed or treated by a professional for anxiety and 20% for depression[1]. In 2017, AAE established an updated mental health grant to provide funding to PSIs and FNCs. This grant has not yet been renewed for 2021

Design considerations

- Continue funding model in place since 2017

Risks and mitigation strategies

- Insufficient support provided // Continue funding model in place since 2017 and assess potential to increase funding to meet student need

Interdependencies

- Coordination with AHS and primary care
- Community-based plan to address access to clinical services

Potential steps to implementation

Potential Activities	*Stakeholders**
Administer planned funding allocation of the Mental Health Grant	AAE Department (R, A), Institutions (I), Students (I)

1. American College Health Association, National College Health Assessment, Alberta, Spring 2019 Improving Post-Secondary Mental Health, alberta.ca, June 2017

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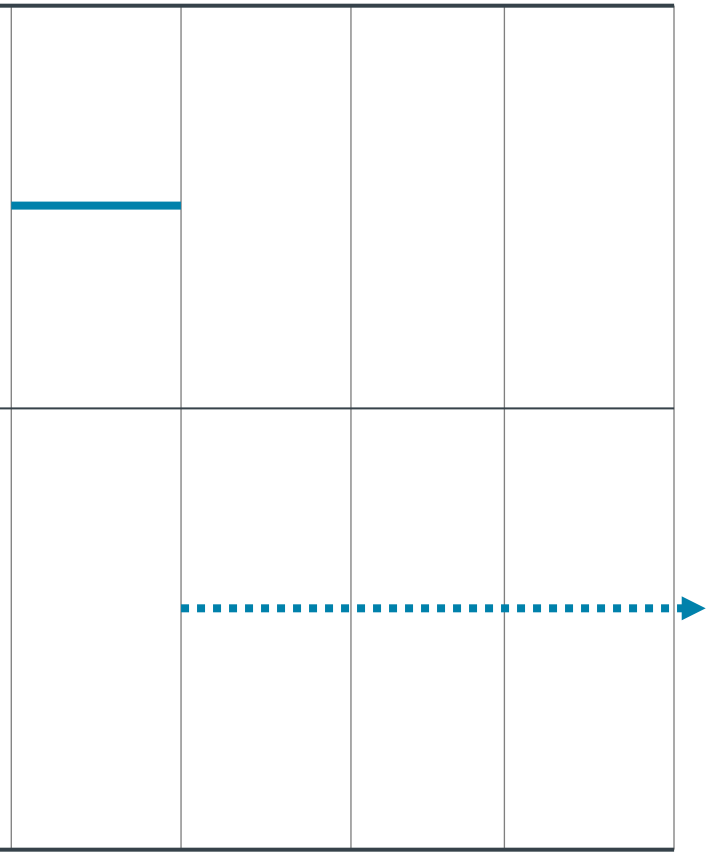
1.2.3: Roadmap

Initiative: Continue to equip institutions with resources to support students' mental well-being through the Mental Health Grant

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24
Administer planned funding allocation of the Mental Health Grant	Administer planned funding allocation of the Mental Health Grant				
	Update funding allocation and requirements of the Mental Health Grant as needed to reflect student needs				



1.2.4: Modernize the existing provincial framework to address sexual and gender-based violence in Alberta's campus communities

Initiative overview: AAE will work with institutions and other stakeholders to continue planned efforts to modernize the existing provincial framework to address sexual and gender-based violence in campus communities. Informed by survivors, student leaders, policy experts, and frontline workers, the framework will provide concepts and practices to support collective action towards ending campus sexual violence and harassment

To support this outcome, AAE will establish a sexual violence prevention committee (SVPC) with government and institutional representatives, first responders, students, and community organizations to review best and promising practices and produce a new framework or other strategic guidance mechanism

Case for change: There is an unprecedented conversation and push for transformative change occurring in North America regarding campus sexual and gender-based violence and harassment. In a recent Statistics Canada survey, 71% (1.35 million) of Canadian post-secondary students witnessed or experienced unwanted sexual behavior in 2019[1]. In that same year, 11% of female students and 4% of male students reported being sexually assaulted[1]

A framework was developed in 2016 for Alberta's 26 PSIs; however it is missing a collective mandate and system-wide practices to support review and modernization of CSV policies and procedures.

Design considerations

- Implementation mechanism (e.g. agreement from all 26 PSIs to participate in the SVPC and implementation strategy)
- Development of Terms of Reference to support SVPC (e.g., mandate, term, role)
- Mechanism for regular review of the framework and evaluation of performance/progress towards recommended outcomes

Risks and mitigation strategies

- PSIs may not have capacity to participate in the process and / or implementation // Generate enthusiasm (e.g. through relationship with COPPOA) and ensure representation and commitment to the process is reflected in SVPC membership and Terms of Reference
- Framework recommendations are not implemented systematically across campus communities // Department leadership and institution Presidents have accountability mechanisms in place (e.g. through COPPOA)

Interdependencies

National research and tools already created or being developed in parallel through other initiatives (e.g., Courage to Act, Our Turn)

Potential steps to implementation

Potential activities	*Stakeholders**
Establish a sexual violence prevention committee (SVPC) to modernize the provincial framework	AAE Strategy Implementation Group (R, A), PSI (C, I), students (C,I), experts (C,I)
Launch broad consultation to understand needs, best practices, and develop provincial framework	SVPC (R), AAE (A), PSI (C, I), students (C,I), experts (C,I)
Implement framework recommendations	PSI (R), SVPC (R), AAE (A), students (C,I), experts (C,I)

1. Students' experience of unwanted sexualised behaviour and sexual assault at postsecondary schools in the Canadian provinces, 2019 Statistics Canada

*(R) Responsible - Stakeholders who do the work to complete the action or make the decision (C) Consulted - Stakeholders who must provide input before the action is complete (A) Accountable - Stakeholder who owns the work and signs off when the action is complete (I) Informed - Stakeholders who must be kept up to date, but do not need to formally provide input

Alberta

1.2.4: Roadmap

Modernize the existing Provincial Framework to address sexual and gender-based violence in Alberta's campus communities

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24
Establish a sexual violence prevention committee to modernize the provincial framework	Establish a sexual violence prevention committee (SVPC) with government and institutional representatives, first responders, students, and community organizations to review best and promising practices and produce a new framework or other strategic guidance mechanism	———	———		
Launch broad consultation to understand needs, best practices, and develop provincial framework	Engage in broad consultation with stakeholders and community experts to understand the current need of students and best practices to address sexual and gender-based violence	———	———		
	Based on consultation, modernize existing framework that meets student and institution needs	———	———	———	
Implement framework recommendations	Engage institutions to implement framework and recommendations			·····→	·····→
	Develop internal mechanism at AAE to review and continually improve framework				·····→
	Develop mechanism with institutions to track effectiveness and publicly report progress				·····→

1.3.1: Transform the transfer system so that no student repeats equivalent coursework due to transferability challenges

Initiative overview: Equivalent course or program credits transfer easily and consistently between institutions, including credits that count toward micro-credentials. There are also multiple pathway options to ladder credentials, no students are repeating course work due to inability to transfer credits. AAE will support implementation by establishing transfer goals, providing system-wide support for transfer projects, and ensuring adequate data is collected to understand Alberta specific transfer challenges

Case for change: Approximately 6% (~15k) of total students in publicly funded PSIs move between institutions and sectors[1]. Only 43% of students who have prior post-secondary receive transfer credits[2]; those who do not may be repeating courses. Up to 1/3 of first year students who transferred between PSIs were dissatisfied with the transfer credit process[3]. AAE lacks the data needed to quantify the degree and financial impact of students required to repeat learning and lacks the dedicated funding to support pathway projects and research to better understand and resolve these challenges. A streamlined transfer process improves student experience and contributes to completion

Design considerations

- Role of AAE and mechanism to incentivize institutions to improve transferability (e.g., establish directives, provide incentives, re-establish transfer governing body, lead transfer data collection)
- Mechanism to support course transfer agreements between FNC and PSI
- Formal transfer credit arrangements between apprenticeship and/or micro-credentials into other types of programming

Risks and mitigation strategies

- Lack of role clarity and effectiveness for AAE role // Establish clear roles, responsibilities, and accountability for stakeholders and operational government support
- Time and resource intensive for faculty, registrars and administration // Implement gradually in distinct phases. As transferability improves, resource and time commitment will be reduced
- Institutional autonomy and academic freedom // Provide clear direction on end-state targets and let institutions determine how to best achieve them

Interdependencies

- Coordination with institutions, faculty, student advisors, and registrars

Potential steps to implementation

Potential Activities	*Stakeholders**
Convene Transfer Network to improve transferability	AAE Strategy Implementation Group (SIG) (R, A)
Improve transfer data collection and sharing to inform transfer interventions	Transfer Network (R), Institutions (R), AAE SIG (A)
Set targets for transfers and create new system incentives for articulation	Transfer Network (R), AAE SIG (A), Institutions (C)
Expand articulation committees	AAE SIG (R, A), Institutions (R, A)

Additional actions and stakeholders to be determined as they vary depending on the design choices made

Financial implications: Ongoing incremental investment (grants ranging from $2M-5M) to support transfer projects, research, and tools, based on practices in BC and ON

1. ACAT Student Mobility Reports – System Level Summary (6% of total students are mobile/transferred between publicly funded PSIs (LERS 2004-2016)); 2. As reported on the 2015/2016 graduate outcomes survey, exact numbers are not available due to a data gap; 3. 2019 CUSC Survey of First-Year Undergraduate Students

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1.3.1: Jurisdictions with strong transfer programs provide dedicated funding, research, and tools

AAE can choose the structure to support transferability

Potential fit for Alberta

Best practices to support transferability[1]

1. **Funding:** Provide dedicated funding to support transferability projects
2. **Research:** Conduct research and collect data to provide advice related to student transfer, mobility, and success
3. **Tools:** Build or provide access to tools to support transfer (e.g. transferalberta.alberta.ca)
4. **Collaboration**: Support institutions to participate in data sharing, articulation, and recognizing coursework from other institutions

Options to structure support for transfer

	Transfer network or formal council	Dedicated public service employees to support transfer activities	Guidance only
Pros	Ability to implement a coordinated approach to increasing learner pathways through support tools, data mechanisms and incentives Provide broad expertise and advice, given diverse membership (e.g., multiple sectors, institutional roles, students) Network would not require establishment of a formal entity	Ability to implement a coordinated approach to increasing learner pathways through support tools, data mechanisms and incentives	Those with authority to make transfer decisions can manage the entire transfer process (e.g. institutions)
Cons	Potential for roles and responsibilities to be unclear Typically decision making authority for transfers, although this could be modified	No decision making authority for transfers Could require employees to balance multiple commitments	Transfer process is decentralized and there is insufficient system-wide collaborating

With any option, AAE can set targets (e.g. % of transfer students who are repeating learning) and provide institutions with the autonomy on how to manage the transfer process to achieve it

1. Expert interviews, and scan of BC, ON, and CA systems

1.3.1: Case example: Jurisdictions with strong transfer programs rely on councils to facilitate collaboration, conduct research and provide advice

CASE EXAMPLES

British Columbia

- BC established BC Council on Admissions & Transfer (BCCAT)
- BCCAT **advises articulation committees** on transfer and supports **projects to improve transfer**
- BCCAT **funds research** on improving student and credit mobility
- PSIs are mandated to submit transfer data to BCCAT, which is collected as part of **larger central data warehouse**
- **$2M estimated annual funding** for BCCAT with additional funds for course articulation and research projects[1]

Ontario

- Ontario established **Ontario Council on Articulation and Transfer (ONCAT)** to support transfers
- **ONCAT funds research** to monitor the current state of transfers and pathways
- **PSIs report transfer data** through funding agreements
- Ontario uses a **centralized application tool** is building an updated **database for all transfer data**
- **$15M estimated annual funding** for ONCAT which includes grants for course articulation and research projects[1]

California

- CA announced a **Governor's Council for Post-Secondary Education** to support transferability across sectors[2]
- The Council was established in response to sectors operating in silos
- The Council works across institutions to develop best practices for transfers

1.Comparison of Approaches to Transferability, Mobility and Transitions in AB, BC, ON and QC (internal AAE document);
2. Governor Gavin Newsom Announces Council for Post-Secondary Education, Higher Education Appointments, Aug 2019

Alberta

1.3.1: Case example: BCCAT supported transfers by prioritizing two approaches to facilitate block transfers in BC

Block transfer is one of multiple methods to improve transferability

Model in BC, details to follow

1 System-wide transfer

All university-level courses at Transfer System member institutions would be transferable to all other member institutions

2 Standardized pre-major curriculum:

The common first-year curriculum and a set of courses within a discipline would be transferable to designated degree programs

3 Descriptive pathways:

A transfer grid would be established, identifying courses within a discipline recommended or accepted for transfer at all participating institutions.
The grid would illustrate to students or advisors how to plan programs so as to transfer full blocks of credit, or how to maximize the student's amount of transferable credits

4 Learning outcomes:

Objectives or competencies that students should acquire at particular points in a program would be established. A collaboratively agreed-upon amount of block credit would be granted to students demonstrating achievement of those objectives or competencies

5 General education core curriculum/first year transfer program:

All Transfer System member institutions would offer a common first-year curriculum, based on the general education requirements included in most degree programs. The completed first year would transfer as a block to any one of a set of designated degree programs

6 Flexible pre-major program:

An agreed-upon set of first- and second-year courses within a discipline would be accepted by the Transfer System member institutions as fulfilling the subject-specific requirements of the first two years of a designated degree program.

Source: Definitions from "Block Transfer in the BC Transfer System The Current State and Possible Future Directions", A BCCAT special report, 2014 https://www.bccat.ca/pubs/Reports/BlockTransfer2014.pdf

1.3.1: Case example: Block transfer improved transferability in BC, but a BCCAT report explains there is room to improve

CASE EXAMPLE

Context for block transfer in BC

Block transfer began in 1996 to "allow transfer of credits between institutions, and eliminate the time-consuming process of course-by-course institutional credit assessment"

Block transfer principles:

- The arrangements should optimize credit transfer opportunities for students;
- Acceptance of the arrangements should be **voluntary by both sending and receiving institutions;**
- Block credit should **supplement, but not replace, course-by-course transfer;**
- Block transfer **should provide greater flexibility** to sending institutions in developing innovative curriculum;
- Block transfer agreements should **encompass as many institutions as possible in multi-lateral or system-wide agreements**; and,

The program was successful: **From 1996 to 2013, 948 block transfer agreements were developed in BC**

Challenges with block transfer

The **distinction between "sending" and "receiving"** institutions has blurred

Many **colleges now grant degrees of their own**, which reduces incentive to match programming to universities

Range of programming has expanded and with increased variability of programming, "pure" block transfer with guaranteed credit and no conditions attached is more difficult

There are also challenges with **pre- and co- requisites** if students are not receiving course by course transfer

Significant **ongoing maintenance** and administration

Lessons learned

Alberta already has ~2000 pathway opportunities, more accurate data on block transfer in Alberta is needed to understand if block transfer needs to be expanded in Alberta

Source: Definitions from "Block Transfer in the BC Transfer System The Current State and Possible Future Directions", A BCCAT special report, 2014 https://www.bccat.ca/pubs/Reports/BlockTransfer2014.pdf

1.3.1: Roadmap

Transform the transfer system so that no student repeats equivalent coursework due to transferability challenges

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24
Convene Transfer Network to improve transferability	Convene a Transfer Network with representatives from institutions, faculty, students, and experts to evaluate implementation of outlined pathways to improve transferability				
Improve transfer data collection and sharing to inform transfer interventions	Evaluate current state of transfer data and identify opportunities to improve data infrastructure and sharing				
	Engage relevant stakeholders to gain approvals and commitment to change data infrastructure and sharing				
	Conduct research and collect data to provide advice related to student transfer, mobility, and success				
Set targets for transfers and create new system incentives for articulation	Refine and test transferability metrics with institutions; consider existing student pathways and future student pathways				
	Set transferability targets (potentially as part of the IMAs) and use improved transfer data infrastructure to track progress				
	Ideate and set financial incentives to support institutions to improve transfers (e.g. funding for articulation and relevant research projects)				
Expand articulation committees	Identify roles and responsibilities for each articulation committee (e.g. potentially introduce new committees)				
	If expanding block transfer, ensure existing arrangements work well and engage with all stakeholders to articulate and implement the framework				

1.3.2: Innovate a provincial strategy for prior learning assessment recognition (PLAR) to recognize prior learning, including micro-credentials, and enable flexible pathways

Initiative overview:

AAE has a provincial framework for prior learning assessment that recognizes a person's knowledge and skills acquired through formal and informal learning, including micro-credentials. Institutions will follow the provincial framework such that PLAR credit is transferable and PLAR credits will be counted toward FLE counts. PLAR supports Albertans to receive credit for previous learning and speed up reskilling

Case for change:

PSIs need to be flexible to encourage participation of individuals with prior learning or credentials (e.g., private bootcamps, foreign credentials, military service). There are few opportunities to receive credit from Alberta PSIs for prior learning which can create participation barriers and result in repeated learning. Current assessments are inconsistent across PSIs[1] and time and resource intensive. Alberta lacks data for PLAR credit awarded due to data unreliability. The benefits of prior learning recognition are massive – in Canada, individuals who have prior learning recognized are more likely to have better employment opportunities (estimated to be worth $13.4 to $17B)[2]

Design considerations

- Assessment framework (e.g. type of assessment, process of assessment)
- Funding for assessments (e.g. students fee for assessment, CAG allocation)
- PLAR committee composition (e.g. institution representatives, AAE support)
- PLAR data collection and reporting

Risks and mitigation strategies

- Assessment is inaccurate or time intensive to implement // Develop a thorough framework with significant stakeholder engagement, training and quality assurance
- PLAR credits are not portable // PLAR credits are not differentiated on a transcript

Interdependencies

- Institutions and faculty will need to support the framework
- Approval from regulatory and accreditation bodies
- Approval from international education and International Qualifications Assessment Service bodies

Potential steps to implementation

Potential Activities	*Stakeholders**
Refresh and renew the PLAR articulation committee to innovate a PLAR framework	AAE SIG (R, A), Institutions (C,I), External organizations (C,I)
Pilot new PLAR framework for select credits	AAE SIG (R, A), Institutions (C,I), External organizations (C,I)
Expand implementation of PLAR across institutions and credits	AAE SIG (R, A), Institutions (C,I), External organizations (C,I)

Note: PLAR stands for Prior Learning Assessment and Recognition

1. Advancing PLAR in Alberta— an Action Plan Report on Institution Visits October 2009; 2. Brain Gain 2015: The State of Canada's Learning Recognition System

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Alberta

1.3.2: Roadmap

Innovate a provincial strategy for prior learning assessment recognition (PLAR) to recognize prior learning, including micro-credentials, and enable flexible pathways

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24	Month 24-30	Month 30-36
Refresh and renew the PLAR articulation committee to innovate a PLAR framework	Refresh PLAR articulation committee and its mandate		—	—			
	Conduct a call for interest and nominate the committee		—	—			
	Draft framework including PLAR timelines, procedures, forms of acceptable evidence, presentation of evidence, assessment, appeal procedures			—	—		
	Determine FLE implications for institutions conducting PLAR			—	—		
Pilot new PLAR framework for select credits	Identify a subset of institutions to pilot new PLAR framework for select credits			—	—		
	Seek approval from appropriate bodies			—	—		
	Set up data collection mechanism to track PLAR implementation			—	—		
	Begin implementing PLAR framework in pilots				—	—	
Expand implementation of PLAR	Support institutions to adopt PLAR through mandate and incentives					·····	·····
	Update PLAR framework to account for trends in learning					·····	·····

1.4.1: Establish a high quality centre of excellence for online teaching and learning to support faculty and provide students with a world-class online learning experience

Initiative overview:

The PSI system has a centre of digital excellence to support instructional design, media support, faculty professional development, and quality assurance of online learning. Digital support is tailored to the needs of institutions. The CoE is a core component of a broader digital strategy

Case for change:

Globally, online learning is growing and provides a flexible platform to expand access and completion. Pre-COVID, 18% of Alberta PSI students were enrolled in 1+ online course[1] and across Western Canada online registrations were growing 8% annually[2]. During COVID, ~92% of students were learning online[3] however, faculty/instructors time commitment and inadequate training[2], are common challenges. While the majority of PSIs offer faculty professional development, there is an opportunity to centralize these services to increase quality, reduce duplication, and reduce costs (~3-50 percent savings per average credit hour[4])

Design considerations

- Support services (e.g. instructional design, media support, and quality assurance)
- Funding mechanism (e.g. re-allocation from existing sources)
- Program integration (e.g. how best to complement existing curriculum and tracks)
- Level of integration with OPM

Risks and mitigation strategies

- Conflict with existing centres for teaching and learning which leads to low adoption // Stakeholder engagement to understand needs and maintain clear roles and responsibilities
- Insufficient service levels or funding for CoE // Prioritize use cases, allocate sufficient funding, and build self-funded operating model for centre of excellence

Interdependencies

- Alberta Advanced Education Digital Strategy[5]
- Digital strategies at each institution
- Existing centres of teaching and learning that provide digital support

Potential steps to implementation

Owner: AAE Strategy Implementation Group (SIG)

1. Solicit proposals from institutions to serve as the system CoE for online teaching and learning

2. Conduct an assessment of submitted CoE for online teaching and learning

3. Designate CoE for online teaching and learning for the system (e.g., mandate, opt-out, resource re-allocation)

4. Advocate for use of CoE and develop supporting guidelines and training on how the system CoE can support faculty

1. 2016/2017 numbers reported in the 2018 Canadian National Online and Digital Learning Survey; 2. 2017/2018 numbers reported in the 2019 Canadian National Online and Digital Learning Survey ; 3. Statcan (COVID-19 Pandemic: Academic impacts on postsecondary students in Canada) ; 4. Making digital learning work, Arizona State University, March 2018; 5. This is a data and functionality plan AAE is developing in collaboration with Service Alberta

1.4.1: The CoE is one of four foundational elements of a comprehensive digital education strategy

Centre of online excellence

Digital education domains	Relevant initiative in AB2030
A **Content:** 21st century content and curriculum for learners, educators and public media audience	Establish a centre of excellence for online teaching and learning to build capacity to provide students a world-class online learning experience
B **Platforms:** Digital learning and sharing platform for learners and educators	Consolidate to a single online program management platform for the entire system thus optimizing online course delivery and quality
C **Data management:** Data collection and data-driven performance management	Across many initiatives there is an effort to increase data collection and sharing, including student applications, increased data on transfer, and providing quality data predictions of labour market needs to students and institutions to inform pathway opportunities and program development Provide high-quality predictions of labour market needs to PSIs and students to inform programs and pathways
D **Infrastructure:** Secure connectivity and infrastructure	Empower student decision by streamlining and simplifying the post-secondary application process Expand access to digital infrastructure for online learning in rural and remote communities by collaborating with Ministries to pursue federal funding and exploring industry partnerships Improved application portal with smart features

Alberta

1.4.1: Roadmap

Establish a high quality centre of excellence (CoE) for online teaching and learning to support faculty and provide students with a world-class online learning experience

Activity	Action	Month 0-6	6-12	12-18	RACI*
Solicit proposals from institutions to serve as the system CoE for online teaching and learning	Dedicate AAE team to establish a CoE for online teaching and learning across the system	—			AAE Strategy Implementation Group (SIG) (R, A)
	Bring in expertise as needed to define best in class CoE for online teaching and learning				
	Develop and submit request for proposals from institutions to serve as the system CoE for online teaching and learning	—			
Conduct an assessment of submitted CoE for online teaching and learning	Evaluate CoEs scope of support services, program integration, and level of integration with OPM	—			AAE SIG (R, A), Institutions (C), Faculty (C)
	Benchmark CoEs against best practice to determine strengths and opportunities	—			
	Identify the best performing CoE for online teaching and learning and determine capacity for CoE to serve broader system	—			
Designate CoE for online teaching and learning for the system	Determine mechanism to designate CoE for online teaching and learning for the system (e.g., mandate, opt-out, resource re-allocation)	—			AAE SIG (R, A)
	Select institution to host CoE	—	—		
Advocate for system CoE	Advocate for use of CoE and develop supporting guidelines and training on how the system CoE can support faculty		····	···· ▶	AAE SIG (R, A)

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1.4.2: Establish an option for institutions to opt-into system-wide online program managers (OPM) to improve faculty and student experience

Initiative overview: Alberta PSIs have the opportunity to host their online offerings through 1-3 providers at a reduced cost. Institutions retain their own branding and programs but share the back-end infrastructure cost. AAE can run an RFP to identify OPMs that meet student and faculty needs and are efficient. AAE will incentivize institutions to move to the system OPMs

Case for change: The future of learning includes digital and distance learning. Pre-COVID, 18% of students were enrolled in 1+ online course[1] and online registrations were growing 8% annually[2] across Western Canada. During COVID, ~92% of students were learning online[3]. Online learning improves access, learning and completion for students and provides flexibility to support lifelong learning. Leaders in online learning are investing in cloud-based OPM infrastructure to facilitate delivery of online learning, improve faculty and student experience, and achieve 15-20% average cost savings in OPM delivery[3]

Design considerations

- Outcomes (e.g., % of courses offered online, % of total credits offered online, user and faculty experience)
- Incentives for adoption (e.g., AAE subsidizes transition cost for institutions, due to volume, institutions can pay in at a lower cost than if procured independently)
- OPM service-level (e.g., instructional design, registration and enrolment, marketing)
- Technical requirements (e.g., to make data align)

Risks and mitigation strategies

- Some institutions may already be in long-term contracts // Transition gradually to platforms over 3-5 years, and leverage existing relationship when appropriate
- Overreliance on a single OPM // Limiting to a couple OPMs has procurement benefits and creates resiliency in the system in the event of over-reliance on a single OPM across the system

Interdependencies

- AAE digital strategy
- Existing systems and processes at different institutions

Potential steps to implementation

Potential Activities	*Stakeholders**
Understand current state of system digital infrastructure and set outcomes	AAE SIG (R, A), Institutions (C)
Develop and submit a RFP for system OPM(s)	AAE SIG (R, A), Institutions (C)
Pilot OPM transition	AAE SIG (A), Institutions (R)

Financial implications

Up to ~$2.5M support team for entire PSI system[4]

1. 2016/2017 numbers reported in the 2018 Canadian National Online and Digital Learning Survey; 2. 2017/2018 numbers reported in the 2019 Canadian National Online and Digital Learning Survey ; 3.Statcan (COVID-19 Pandemic: Academic impacts on postsecondary students in Canada) and expert interviews 4. Estimate based on stakeholder engagement; investment may not be incremental due to reallocation of existing institutional budgets on OPMs

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1.4.2: There are financial and experiential benefits to reducing the number of OPM providers in the province

AAE should make a strategic decision on OPM provider and services and then incent institutions to collaborate

What is an OPM?

When institutions choose to upload course material online, they can do the technical work in-house, or they can outsource to an online platform management (OPM) tool

Services offered by OPMs range from tech platforms and course design to student recruitment, enrolment, and retention management

Without a system-wide strategy for OPM, Alberta is not leveraging economies of scale, institutions are duplicating work, and data is not always compatible

Benefits of consolidating OPMs

Increase margins (e.g. OPMs typically charge ~50% of tuition, could be reduced to 35-40%)

Increase top-line enrolment growth through marketing efficiencies and brand awareness, higher marketing ROI

Reduce duplicated work (e.g. digital marketing, call centre, curriculum development)

Better quality (e.g. pool of instructional designers, collective spending on better production value/technologies for online courses, etc.)

Better experience for students who gain familiarity with fewer tools

Reduce need for hard to find skills such as digital marketing and analytics

Considerations for an Alberta specific provider

Initial value comes from a volume-based approach to **procurement for an OPM**

Additional value is tied to OPM services and could be achieved through:

- Transition to cloud-based infrastructure
- Marketing for increased enrolment
- Enhanced student experience
- Simplified master data management

Run an **RFP and determine whether to adopt system-growth OPM or external provider**; OPMs charge ~40-50% of tuition fees

Incent institutional adoption

1.4.2: Top ranked institutions partner with 1-3 OPMs to meet their needs

CASE EXAMPLES

The AB system can consolidate to ~1-3 providers to gain benefits of scale and meet diverse needs and functions

University	Partner	Program or description of partnership
Harvard	Noodle, 2U, edX	2U: Courses - Engr & Comp Sci, Business, Healthcare, Education; Certificate - Business
MIT	2U, edX, Emeritus	2U: Courses - Business, Data Science & Analytics, Engr & Comp Sci Emeritus: Content creation for online certificates through business school
Yale	2U, Coursera	2U: Degree - Healthcare; Bootcamps - Business
UPenn	2U, edX, Emeritus	2U: Bootcamps - Engineering & Comp Sci, Data Science and Analytics, Business Emeritus: Content creation for online certificates through business school
Northwestern	2U, Coursera	2U: Degree - Counseling; Bootcamp - Engineering & Comp Sci, Data Science and Analytics, Business; Courses - Business
JHU	2U, Coursera	2U: Bootcamps - Engineering & Comp Sci, Data Science & Analytics
Vanderbilt	2U, edX	2U: Degrees - Education, Counseling, Engineering & Comp Sci; Bootcamps - Engineering & Comp Sci, Data Science and Analytics, Business
Rice	2U, Coursera, edX	2U: Degree - MBA; Bootcamp - Engineering & Comp Sci, Data Science and Analytics, Business; Courses - Business, Data Science and Analytics
WashU	2U	2U: Degree - Law; Bootcamps - Data Science and Analytics, Engineering & Comp Sci
USC	2U, Pearson	2U: Degrees - Education, Healthcare, Social Work, Gov't, Communications and Design; Bootcamps - Data Science and Analytics Pearson: Communication
Michigan	Noodle	Noodle: Degrees - Nursing, MBA

Key takeaways

Some institutions look to a few OPMs with different functionality, however there is opportunity for AB system is to consolidate to down to a single OPM that can meet diverse across the entire system

Source: 2U, Noodle, edX, Coursera, Pearson, Emeritus, Apollidon, Kadenze

Alberta

1.4.2: Roadmap

Establish an option for institutions to opt-into system-wide online program managers (OPM) to improve faculty and student experience

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24	Month 24-30	Month 30-
Understand current state of system digital infrastructure and set outcomes	Understand current state of digital infrastructure across all PSI	———					
	Determine appropriate end-state outcomes and goals	———					
Develop and submit a request for proposal for system OPM(s)	Develop criteria for OPM through stakeholder engagement	———					
	Determine initial number of institutions to opt-in to understand expected usage for OPM and ability to negotiate best deal	———					
	Launch RFP and evaluate and select provider(s)		———				
Pilot OPM transition	Pilot with initial set of institutions; transition additional institutions over 1-3 year timeframe			———	———	·····	·····

1.4.3: Expand access to digital infrastructure for online learning in rural and remote communities by pursuing federal funding and exploring industry partnerships

Initiative overview:

AAE will collaborate with Service Alberta to pursue federal funding for digital infrastructure and seek partnerships to ensure students have access to the internet through Smart Hubs or to be provided access to devices pre-loaded with course material. The vision for end-state is that access to internet will no longer be a barrier to post-secondary access.

Case for change

10% of households in Canada lack broadband internet[1], with the majority of those in rural and Indigenous communities. One in four of these households uses smartphones as their primary method for internet access[2]. For rural and Indigenous communities, online post-secondary has potential to increase access but is currently limited by these connectivity barriers.

Design considerations

- Telecom – Institution partnership opportunities (e.g. convene and/or provide matching funding to support Smart Hub access)
- Funding available to support accommodations (e.g. provide pre-loaded devices to students without internet access, matching grants to industry to support partnerships)

Risks and mitigation strategies

- Service Alberta Supernet does not receive adequate funding to move forward // AAE will need to fund accommodation opportunities to maintain access if broadband is not available

Interdependencies

- Service Alberta Supernet

Potential steps to implementation

Potential Activities	*Stakeholders**
Stand-up team responsible for expanding access to digital infrastructure in collaboration with Service Alberta	AAE Strategy Implementation Group (R, A), Service Alberta (C)
Collaborate with Service Alberta to pursue federal funding grants	AAE Department (R), Service Alberta (A)
Convene partnerships between telecom industry and institutions to expand access to digital infrastructure	AAE Department (R, A), Institutions (C), Industry (C)
Determine incremental AAE grants available to support expanded access	AAE Department (R, A), Institutions (C), Industry (C)

1. Report on Competitiveness: Alberta 2016; 2. The Future of Post-Secondary Education: On Campus, Online and On Demand, RBC, June 2020

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Contents

2: Skills for Jobs

DRAFT

Flagship initiatives

Objectives	Potential initiatives for consideration
Objective 2.1: Become the first province to offer every student access to work-integrated learning	1. **Become the first province in Canada to offer access to work-integrated learning to 100% of students**
Objective 2.2: Grow apprenticeships in careers and trades of the future	1. **Build, fund, and establish policy for apprenticeships in a wide range of occupations**, including emerging high-tech trades
Objective 2.3: Foster the strongest employer, industry, and post-secondary partnership environment in Canada	1. **Convene industry-led councils to assess workforce needs, advise on qualifications, and design or endorse programs,** including micro-credential programs, across PSIs 2. Promote an **agile program development process** to ensure PSIs can provide nimble, relevant, and effective learning opportunities, including micro-credentials 3. Provide **high-quality predictions of labour market needs** to PSIs and students to inform programs, credentials, and pathways 4. Support institutions to become the **go-to-provider of employer paid upskilling programs**

Alberta

2.1.1: Become the first province in Canada to offer access to work-integrated learning (WIL) to 100% of students

Initiative overview:

By 2028, every AB student can participate in WIL. AAE can support the expansion of WIL by 1) creating a provincial-wide framework to define WIL, 2) convening WIL partnerships and collaborating with regional organizations to reduce barriers for employers, and 3) providing "start up" funding for employers and students for new, paid placements

Case for change:

Through WIL, students gain real-world experience and find employment faster with higher salaries[1]. Employers gain access to a high-quality talent pipeline. PSIs build closer ties to industry, which supports curriculum development aligned with skills requirements. 83% of surveyed employers believe students who have gone through WIL are better equipped for employment, but only 35% of surveyed students in Alberta report having participated[2]. To provide access to WIL for all students by 2028, ~105k placements will need to be available[3]

Design considerations

- WIL options (e.g. apprenticeship, co-operative education, on the land learning in Indigenous communities)
- Incentive mechanism for employers and institutions (e.g., grants, tax incentives, require WIL in new programs)
- Mechanism to ensure accessibility for all students (e.g. student stipends, remote options)
- Mechanism to assess WIL quality by employers and students
- Opt-in v. Opt-out options for students

Risks and mitigation strategies

- Insufficient quality placements for all students // Monitor placements through quality assurance checks
- Lack of accessibility for all students // Flexibly define WIL, provide credit for WIL so participation doesn't extend program timeline, incent employers to provide paid WIL
- Lack of coordination between employers, students, and institutions // Leverage digital infrastructure to connect students with employers for WIL

Interdependencies

- Coordinate with organizations and institutions supporting WIL (e.g. BHER)
- New employers' ability and willingness to participate
- PSI practices and policies on WIL that affect student accessibility

Potential steps for implementation

Owner: AAE Strategy Implementation Group (SIG)

1. Convene a committee with institution, employer, and WIL organizational membership to refine roadmap to achieve 100% WIL

2. Develop a provincial-wide framework to define WIL requirements (e.g., guidance on credit, guidance on WIL as an opt-out requirement)

3. Convene employers and institutions to develop WIL partnerships

4. Develop a start-up funding incentive program for new paid WIL placements

5. Track growth in WIL across the system

1. Work Integrated Learning in Ontario's Postsecondary Sector The Pathways of Recent College and University Graduates, HECQO, 2014; 2. Alberta2030: Building Skills for Jobs student and employer survey; 3. See 2.1.1 business case

CASE EXAMPLES

2.1.1: How can AAE support a significant increase in WIL opportunities for students?

WIL is a natural win-win for students and employers	• Students: higher salaries, strong skill development, develop professional network earlier, successful transition to employment • Employers: affordable labour, ability to influence skill development, streamline hiring
Why is it not more pervasive?	• Culture for WIL is not pervasive in all areas (e.g. with historic employment opportunities, taking time for WIL delayed graduation and access to high paying employment, WIL is concentrated in areas such as nursing and engineering) • Employers are unsure of the best ways to engage students, and the process can be intimidating and bureaucratic
What can AAE do?	• Build awareness of benefits of WIL for students and employers through meaningful dialogue and partnership • Convene employers and institutions to facilitate relationship building • Provide safe, low-risk opportunities for employers to gain exposure (e.g. applied research projects instead of internships as a first step) • Provide “start up” funding to employers who are new to WIL • Conduct research to develop standardized yet flexible WIL opportunities that are flexible to student learning needs (e.g. a student living on a reserve can support their reserve as their WIL experience)
Where should AAE leverage existing resources?	• Intermediaries (e.g. BHER, Business Council of Alberta, CEWILL) • Third-party, arms length organizations to do research • Online platforms (e.g. Campus Connect, Riipen)

Source: Conversations with BHER, December 2020

Alberta

2.1.1: Enabling 100% of students access to WIL requires capacity from employers, funding, and employer support

Details on the next page

Capacity for WIL

There are many employment opportunities for all AB students to have access to WIL

Estimates for annual absorption in the prairies[1]:

2018: 180-223k placements

2028: 201-243k placements

Projected placements for 2028:

2028: ~105k students will require placement each year[2]

Potential funding needs

Employers: Range from $200 to $1150 per student to support capacity building of employers to offer WIL, could reduce to zero over time[3]

Students: Salary stipends for students range from $3-7.5k and can be reduced over time but not eliminated[4]

Institutions: Funding to provide student resources, program development, etc.

Stakeholder support

Tools to make it easier to offer WIL, not funding, is the most important factor to support employers to increase WIL[5]

Example tools include support understanding the type of WIL to suit their needs, understanding ROI, mentoring strategies, and assessment strategies

1.BHER analysis: Absorptive capacity for the prairies for 2028 is calculated by applying the compound annual growth rate (0.91%), forecasted by the Conference Board of Canada, to 2018's total absorptive capacity over a growth period of 10 years. It is assumed that growth in the number of Canadian firms from 2018 to 2028 aligns with increases in total Canadian employment over 2018 to 2028. The capacity per firm (by firm size) is based on data from the UK Department of Education. Firms with 5-49 employees have capacity for 1.96 WIL placements, firms with 50-199 employees have capacity for 4.51 WIL placements, and firms with 200+ employees have capacity for 22.89 WIL placements.
2.See 2.1.1 Business case
3.BHER
4. Ontario offers $3k tax break for employers, Student Work Placement Program (SWPP) provides up to $7.5k in wage subsidies
5. BHER led a series of regional and sectoral consultations in partnership with the Conference Board and other convening partners to understand how employers can be supported to increase WIL

Alberta

2.1.1: Business Case: Access to WIL for 100% of students

Scenario: AAE provides start-up funding to employers who offer their first WIL opportunity

Incremental investment: Average annual incremental investment to provide WIL access is **~$5M-$15M annually** over 10 years

Assumptions

- Access for 100% of students by 2028
- **Employer funding:** Cost/student ranges from ~$200 (e.g., micro-WIL, capstones) to ~$1150 (e.g., co-ops and internships) [1]
- **Student stipends:** $3000 for up to 25% of new WIL opportunities; assumes stipends are provided to 25-50% of students only for co-op/intern placements (targeted at 50% of new placements)
- **Institution support:** No incremental funding
- AAE FLE projections adjusted to headcount using a ratio of 1.6 (average from 2014-2018)[2]
- Average time in school is 3.3 years, with one placement per student[3]
- ~35% of students already participate in WIL[4] and AAE only funds incremental WIL opportunities to reflect a "start up" cost for new placements above the current 35%
- WIL becomes self-sustaining due to ROI for employers after 1 year of AAE investment

Supporting Analysis: Incremental investment for WIL

	2020	2022	2024	2026	2028	2030
Projected Headcount	281,597	290,751	305,701	326,070	345,942	362,131
% of students with WIL	0.4	0.5	0.7	0.8	1.0	1.0
# of students with WIL each year	29,866	45,155	62,530	82,753	104,831	109,737
# of new placements	-	7,785	9,037	10,466	11,143	2,481
Funding needed, low range $M	**0.0**	**4.6**	**5.4**	**6.2**	**6.6**	**1.5**
Funding needed, high range $M	**0.0**	**14.8**	**17.2**	**19.9**	**21.2**	**4.7**

Cumulative investment for Y1-3 ~$14M to $45M

Average annual investment: ~$5to $15M

1.Based of average BHER funding for WIL, not comprehensive of all WIL funding across Canada; 2. AAE internal analysis, assuming FT and PT ratio of learners remains the same; 3. Weighted average from financial model 4. Alberta2030: Building skills for jobs student survey

Source: LERS, FIRS

Alberta

2.1.1: Lessons from other jurisdictions that are offering WIL opportunities for all students; there is no one-size-fits-all solution

CASE EXAMPLES

AAE could support flexible and diverse WIL opportunities that fit the needs of each institution

Arizona State University, USA

- Through the **Experiential Learning Network, learners are required to participate in at least one activity from six of seven thematic areas of experience:** Leadership; Entrepreneurship and Innovation; Sustainability and Resilience; Global Engagement; Work + Learn; Undergraduate Research and Creative Activity; and Community Service
- Activities range from internships and applied research to service learning, study abroad, and institution leadership positions
- **Experiential learning activities are recorded, assessed and complemented with a digital portfolio**

Murdoch University, Australia

- WIL program available for undergrad and grad students (e.g. work placements, industry projects, and work simulations)
- WIL is embedded as a **formal component of the courses offered**
- WIL is **recognized through credit and assessment points**

Waterloo University, Canada

- Co-op program is **available to all students in all disciplines**
- The co-op can be outside of the student's field of study and **employers conduct a detailed evaluation of students**
- **Economic impact of Waterloo's co-op program is $410M** to Ontario's GDP in 2018/19, and there were 4,230 full-time equivalent jobs created or sustained across Ontario

Source: Institution websites; University of Waterloo Economic Impact Report 2018-19, Deloitte

2.1.1: AAE can collaborate with organizations to build on existing resources to support employers

BHER, Business Council AB, and others are already developing resources that can be tailored and leveraged to support WIL in AB

The Business + Higher Education Roundtable is currently developing a toolkit to support employers which includes:

Resource	Description	Primary audience
Decision tree	Provide new employers with WIL options, benefits and considerations based on their profile (e.g., sector, firm size, industry, region) and capacity (e.g., ability to offer placements)	Employers who are new to WIL
ROI Guide	Guide on steps and key factors to consider when determining ROI from WIL	Employers regardless of previous experience with WIL
Diversity and Inclusion (D&I) Engagement Strategies	Guide on recruitment and onboarding alongside tips and strategies to support effective D & I engagement of post-secondary students	Senior HR executives with talent management responsibilities, academic supervisors, and co-op staff
WIL Mentoring Strategies	Evidence-based insights from managers on effective mentorship in WIL	Student supervisors at host organizations, academic supervisors, and co-op staff
Assessment Strategies	Evidence-based insights from managers on effective assessment in WIL Performance	Senior executives in HR function, student supervisors, academic supervisors, and co-op staff
Financial supports guide	Guide on financial supports available for employers in Canada to support WIL	Employers regardless of previous experience with WIL

Source: The Business + Higher Education Roundtable (BHER) is a non-partisan, not-for-profit organization bringing together Canada's largest companies and leading post-secondary institutions. Since 2015, BHER has worked to harness the strengths of Canada's business and post-secondary education sectors to build opportunities for young Canadians, boost innovation and drive collaboration.

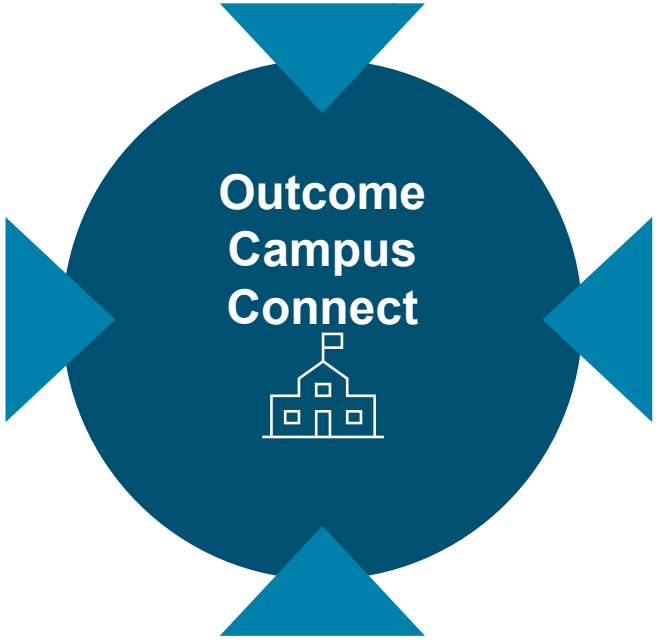
Implications for AB2030

- Opportunities for AAE to collaborate with organizations (e.g., BHER, BCA) already developing resources to support employers
- Consider developing a toolkit for institutions as well
- Create a plan to distribute resources to employers

2.1.1: AAE can support institutions to join existing databases to connect students with employers across Canada

CASE EXAMPLES

What is it: allows employers to share their work-integrated learning opportunities with more than 100 campus-based career centres, co-op and experiential learning programs across



Proposition: Connects employers with the right skills to match their business needs by streamlining student job postings, freeing up more time to stay informed on the ever-changing landscape and the skills of the future, and to focus on what matters – the students.

Employers connect with students from all schools in Canada with one posting

Funding: Eligible employers who hire Canadian post-secondary students can access wage subsidies through the Student Work Placement Program (SWPP)

Ownership: It is being developed by Orbis Communications and Magnet, Ryerson's digital, not-for-profit social innovation initiative

Considerations

Tech platforms are necessary to connect students and employers, but do not replace direct engagement to build awareness and develop diverse WIL opportunities

1. Paid opportunities for students include apprenticeships, co-ops, internships, entrepreneurship, service learning, applied research, work terms in academic programs, mandatory professional practicum/clinical placements, field placements, summer and part-time jobs.

Source: New online platform matches employers with students Campus Connect helps students find jobs that enhance learning, May 2019

2.1.1: There are many opportunities for AAE to leverage existing platforms to expand WIL opportunities

CASE EXAMPLES

AAE can evaluate options for existing platforms rather than building new, in-house portal

Career-launcher internships targets support to emerging industries

- **Description:** Career-launcher internships (run by CICan) facilitates the transition of highly skilled students to a fast changing labour market in specific industries, namely Clean Tech, Natural Resources, Digital Tech, and Impact. The program links employers with skilled students and graduates and provides up to $30,000 towards their internship costs and salaries
- **Funding:** The Government of Canada funds the program as part of the Youth Employment and Skills Strategy

Riipen incorporates real employer challenges directly into curriculum

- **Description:** Riipen is a Canadian-based platform that enables real employer projects to be facilitated by instructors and directly incorporated into students' curriculum. Projects become compulsory and are completed by more students
- Riipen can provide real-time data on student access and success in WIL
- **Funding:** Employers pay to post projects on the platform. Students do not receive payment

Parker Dewey offers paid micro-internships

- **Description:** Parker Dewey is a Chicago-based platform that enables employers to create needed real projects known as “micro-internships” that college students can complete
- **Funding:** Employers pay a fee to post their projects, and students are paid a fixed fee for their work

 Source: Career launcher website; Riipen website; Parkey Dewey website

2.1.1: Roadmap

Become the first province in Canada to offer access to work-integrated learning to 100% of students

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24	RACI*
Convene committee	Convene a working committee with representation from institutions, industry and employers, and organizations such as BHER and BCA that is accountable to develop road-map to expand WIL to 100% of students					AAE SIG (R, A)
Develop a provincial-wide framework to define WIL requirements	Define scope of WIL opportunities to allow for a diverse set of meaningful placements					AAE SIG (R, A), Committee (R), Institutions (C), Employers (C)
	Develop guidance for institutions on providing credit for WIL					
	Develop guidance for stipend provision for WIL					
	Support institutions to establish WIL as an opt-out requirement for graduation					
Convene employers and institutions to develop WIL partnerships	Convene institutional staff responsible for facilitating student placements to understand demand					AAE SIG (R, A), Committee (R), Institutions (C), Employers (C)
	Develop pipeline of partnerships with industry and employers to secure placements					
	Support institutions and employers to use existing platforms to match placements					
	Make available best-practice resources (e.g., WIL in a box) developed by organizations to reduce barriers to new partners					
Develop a start-up funding incentive program for new paid WIL placements	Determine incentive mechanism for employers (e.g., matching grant, stipend, tax incentive) to participate and provide paid WIL opportunities					AAE SIG (R, A), Committee (R), Employers (C)
	Establish metrics to track success of program					
	Confirm funding and administer incentives					
	Seek out federal funding opportunities to complement provincial investment					
	Track metrics and adjust program as needed					
Track growth in WIL across the system	Set performance targets for institutions to achieve growth in WIL placements					AAE SIG (R, A), Committee (R),
	Require institutions to report on WIL placements annually					

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2.2.1: Build, fund, and establish policy for apprenticeships in a wide range of occupations, including emerging high-tech trades

Initiative overview:

AAE will establish a framework for and fund a broad range of apprenticeship offerings across core (e.g. electrician) and emerging industries (e.g. cybersecurity). Apprentices are recognized with a credential (e.g. a diploma), and there are pathway options for future learning (e.g. select coursework transfers for credit to a diploma or degree program)

Case for change

As the most integrated form of WIL, apprentices gain immediate exposure to the workplace which develops strong professionals and promotes continued employment post-grad. Alberta has strong apprenticeship programs, but only for a small number of careers (47 vs. 200 in most European nations). There are ~44,000 registered apprentices in AB[2]. Expanding apprenticeship can be an effective way to train graduates for emerging industries and increase parity of esteem

Design considerations

- Flexibility for apprenticeship learning to be applied to a broader range of careers and professions
- How to enable laddering of apprenticeship credentials into more pathway options

Risks and mitigation strategies

- Misalignment between number of skilled workers and employment opportunities // Establish new apprenticeship programs more nimbly to reflect changing labour market needs; utilize labour market projections

Interdependencies

- Building Skills for Jobs Taskforce
- Other government ministries, e.g. JEI, Labour and Immigration, and Infrastructure will need to be consulted and informed on apprenticeship developments

Potential steps to implementation

Potential Activities	*Stakeholders**
Innovate a more flexible apprenticeship framework	AAE Department (R, A), Institutions (C), Employers (C)
Develop and launch new apprenticeship programs in high demand industries (one per year)	AAE Department (R, A), Institutions (C,I), Employers (C,I)

Financial implications

- 750k over 5 years to develop 5 new apprenticeships programs; one-time investment[3]

1. Alberta2030: Building Skills for Jobs student survey; 2. Apprenticeship statistical profiles 2019 3. Approximation based o n staff time (salary) to build the case for designation and create program standards;
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2.2.1: Roadmap

Build, fund, and establish policy for apprenticeships in a wide range of occupations, including emerging high-tech trades

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24	Month 24-30	Month 30-
Innovate a more flexible apprenticeship framework	Refine apprenticeship framework to enable more flexible apprenticeship programs	▬					
	Evaluate how apprenticeships can ladder into more pathway options	▬					
Develop and launch new apprenticeship programs in high demand industries (one per year)	Conduct an scan to determine high-potential industries for apprenticeship learning			▬		▬	
	Work with employers to develop high-quality curriculum			▬		▬	
	Submit new apprenticeship program for appropriate approvals			▬		▬	
	Working with institutions to conduct marketing of new apprenticeship offering				▬		▬
	Launch new apprenticeship program and track student, employer, and institution feedback					▬	▬

2.3.1: Convene industry-led councils to assess workforce needs, advise on qualifications, and design or endorse programs, including micro-credential programs, across PSIs

Initiative overview:

AAE will establish industry councils to provide input to the PSI system on workforce needs and, as needed, provide input on program design, including micro-credential programs, to ensure that students are graduating quickly with high-quality and in-demand skills. Councils will provide strategic view of future skill needs and include representation across communities (urban, rural, Indigenous) and geographies.

Case for change

Since the oil price drop and Covid-19, Alberta has lost ~7% of its employment base across service and goods-producing sectors[1]. With these disruptions and changing nature of work, AB institutions and students need to be able to respond quickly to labour market needs. However, 48% of employers experience barriers to collaborating with PSIs on skills development including uncertainty on how or when to engage and differing priorities[2]

Design considerations

- Roles and responsibilities of councils (e.g. set standards, advise on curriculum)
- Council structure, number, and representation
- Meeting frequency

Risks and mitigation strategies

- Narrow view of future labour force // Ensure diverse representation on councils
- Inaccurate assessment for future workforce // Councils can leverage labour market data provided by AAE
- Larger employers exert more influence than smaller employers // Include neutral representatives (e.g. no direct ties to any represented employers) on the councils to facilitate discussions
- Participation fatigue on behalf of employers and institutions // Coordinate with existing groups to reduce duplication

Interdependencies

- Direct influence on course offerings, therefore collaboration with PSI and faculty and instructors
- Coordination with existing groups to reduce duplicated efforts and participation fatigue
- Coordination with other ministries (e.g. Labour, JEI) on workforce priorities

Potential steps to implementation

Potential Activities	*Stakeholders**
Design industry-led councils to assess workforce needs and inform program development	AAE Department (R, A), Industry (C), Institutions (C)
Establish industry-led councils	AAE Department (R, A), Industry (C), Institutions (C)

1. Alberta2030: Labour market issue analysis; 2. Alberta 2030: Building skills for jobs employer survey

2.3.1: Roadmap

Convene industry-led councils to assess workforce needs, advise on qualifications, and design or endorse programs, including micro-credential programs, across AB PSI

Activity	Action	Month 0-6	Month 6-12	Month 12-18
Design industry-led councils to assess workforce needs and inform program development	Determine roles, responsibilities and accountability for industry-led councils		—	
	Evaluate industry and employer expertise needs at each institution		—	
	Determine number of councils needed across the system (e.g., 1 per institution, 1 per region)		—	
	Develop a competency matrix to inform council member participation		—	
Establish industry-led councils	Work with institutions to recruit council members		—	
	Work with institutions to onboard council members		—	
	Launch meetings		—	

2.3.2: Promote an agile program development process to ensure PSIs can provide nimble, relevant, and effective learning opportunities, including micro-credentials

Initiative overview: AAE can streamline program review to enable PSIs to better respond to labour market needs. Revisions can include a) simplified templates and data requirements, b) fast-tracked approvals for institutions with history of quality programs, c) expedited reviews for pilots, and d) clear timelines for review. Further, mandates will be enforced to minimize duplication.

Case for change: Public PSIs must seek approval from the system coordination review for any proposal that seeks to establish, change, sunset, or transfer a certificate, diploma, or degree program. Degree programs go through a second review with the Campus Alberta Quality Council (CAQC). The average approval time is 11 months[1] which discourages institutions from innovating new programs and limits response time to labour market need

Design considerations

- Review and approval process (e.g., new templates, data requirements, turnaround timelines)
- Role of system partners and government in review process
- Support for institutions (e.g. provide best practice support to streamline institutional processes)
- Adjustment to program approval to enable transfer between FNC and PSI

Risks and mitigation strategies

- Program quality deteriorates without a thorough review process // Trust institutions to develop the programming required for their students and re-evaluated in 3-5 years to assess progress
- Impacts on regulated programs and other Ministries that rely on AAE quality assurance process // Clear roles, responsibilities and accountability in updated process
- Institutions do not trust each other's programming and do not award transfer credit // Careful requirements for quality control

Interdependencies

- Sector mandates
- AAE system coordination review and CAQC degree review done
- Comprehensive review of post-secondary review process that is currently underway

Potential steps to implementation

Potential Activities	*Stakeholders**
Finalize review of program approval to identify processes to streamline	AAE Department (R, A),
Draft adjustments to program review process based on review	AAE (R, A), Institutions (C,I)
Pilot adjustments to program review process and assess effectiveness	AAE (R, A), Institutions (C,I)

1. 11 months for new degree proposals, including: three months for the initial SCR process, four months for the quality review by CAQC (in 2017/18, the range was 24 to 188 days), two to three weeks for institutions to respond to questions, and two to three weeks to secure the DM's signature on each stage of correspondence (referral to CAQC and then the final approval letter).

2.3.2: Roadmap

Promote an agile program development process to ensure PSIs can provide nimble, relevant, and effective learning opportunities, including micro-credentials

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24
Finalize review of program approval to identify processes to streamline	Finalize review of post-secondary review process (currently underway)				
Draft adjustments to program review process based on review	Determine roles of system partners and government in program review process				
	Simplify templates and data requirements				
	Develop timelines for review turnarounds				
Pilot adjustments to program review process and assess effectiveness	Pilot new templates and timelines				
	Review and assess new framework				

2.3.3: Provide high-quality predictions of labour market needs to PSIs and students to inform programs, credentials, and pathways

Initiative overview:

AAE will provide advanced labour market modelling to help employers, institutions and students understand current and future labour market needs. This could include labour market demand forecasting, cross-jurisdictional scanning of post-secondary trends, capacity planning, information on skills (soft and technical) and certifications in demand by employers and can lead to an expansion of micro-credentials.

Case for change

Alberta's current mix of post-secondary completions reflects labour market demand except in select sectors such as health and natural sciences[1]. However, since the oil price drop and Covid-19, Alberta has lost ~7% of its employment base across service and goods-producing sectors[1]. With these disruptions and changing nature of work, AB employers, institutions and students need to be able to respond quickly to labour market needs.

Design considerations

- Data sources and collection (e.g. employers, federal predictions, GoA ministries, investors)
- Model ownership, development, and maintenance (e.g. AAE, JEI, external vendor)
- Frequency of update

Risks and mitigation strategies

- Narrow or inaccurate view of future labour force // Model will include widest range of labour market data available
- Inadequate access to data from institutions or other ministries // Establish process around data sharing
- Lack of institution or employer engagement // Promote tool and demonstrate benefits to skills and talent development

Interdependencies

- This initiative is part of the Advanced Education Department Digital Plan lead by Service Alberta

Potential steps to implementation

Potential Activities	*Stakeholders**
Work with Service Alberta to set up an internal delivery team or hire a vendor to develop labour market tool	AAE Department (R, A), Service Alberta (R, A)
Develop and launch pilot for labour market tool	AAE Department (C), SA (R, A), vendor (R), Institutions (C,I)
Expand and improve labour market tool	AAE Department (C), SA (R, A) Institutions (C,I)

Financial implications

- Included in Initiative 1.1.2 (Streamlined Application) as part of the AAE Digital Plan

1. Alberta2030: Labour market issue analysis

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2.3.3: Roadmap

Provide high-quality predictions of labour market needs to PSIs and students to inform programs, credentials, and pathways

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24	Month 24-30	Month 30-42
Work with Service Alberta to set up an internal delivery team or hire a vendor to develop labour market tool	Consult with Labour, employers, PSIs and Students on their needs/requirements						
	Understand and develop necessary data sharing agreements and existing supports						
	Set up an internal delivery team with Service Alberta or identify an external vendor						
Develop and launch pilot for labour market tool	Identify specific functionality of the tool and which services will be pilot vs expansion						
	Develop and launch prototype with initial functionality						
Expand and improve labour market tool	Continuous improvement process to roll-out additional functionality and ensure ongoing, incremental improvements						

2.3.4: Support institutions to become the go-to-provider of employer paid upskilling programs

Initiative overview:

PSIs can partner with employers to expand programs that provide employee reskilling. These offerings are a revenue generation opportunity, and AAE can convene employers and institutions, provide labour market insights, and consider providing grants to institutions or scholarship to individuals to promote adoption

Case for change*:*

87% of executives are experiencing a skill gap in their workforce or expect one within a few years[1]. Many employees have technical and operational skills that need to be refined or upskilled to meet emerging digital needs. PSIs can provide tailored programs to reskill or upskill employees on behalf of employers

Design considerations

- Definition of areas of focus (i.e., professions, skill level, geographies)
- Financial incentive to institutions or individuals (e.g., matching grant with industry)
- Whether to create a micro-credential framework around these offerings

Risks and mitigation strategies

- Program offerings are not developed quickly enough // Provide institutions insights into emerging labour market needs and expedite program approvals for employer specific programs. Leverage known high quality upskilling providers, programs and methodologies to quickly go from identified need to first graduating class (i.e. Less than 3 months to launch program)
- Maintain rigor in program offerings // Define key performance metrics (e.g., completion, employment) and track them closely. Continuously assess graduate readiness to be productive on day one, and adjust offering accordingly. Adopt an agile mindset.

Interdependencies:

- Labour Ministry role to support reskilling opportunities
- Labour market modelling

Potential steps to implementation

Potential activities	*Stakeholders**
Work with institutions and employers to understand opportunity for AAE support	AAE Department (R, A), Employers (C), Institutions (C)
Convene employers and institutions	AAE Department (R, A), Employers (C), Institutions (C)
Evaluate potential to provide financial incentives for new programs	AAE Department (R, A)

1. Beyond hiring: How companies are reskilling to address talent gaps, McKinsey 2020

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Contents

3: Innovation and Commercialization

DRAFT

Flagship initiatives

Objectives	Potential initiatives for consideration
Objective 3.1: Attract and nurture world-class faculty and students	1. **Establish Alberta Innovation Researcher Fellowships** to attract top research talent and support faculty to pursue sabbaticals in innovative companies in priority industries 2. **Support institutions to adapt faculty promotion & tenure policies to incentivize faculty to pursue entrepreneurial activities** 3. **Establish and administer a Premier's Award for Research Innovation and Collaboration** to recognize faculty and students for innovative pursuits and collaborations
Objective 3.2: Drive Alberta's competitiveness in critical areas by aligning resources and incentives	1. **Align provincial contributions for post-secondary research to economic diversification priorities**: Collaborate with Ministries to align provincial research contributions to priority areas for economic diversification and consider separating AAE research contribution from the CAG and establishing performance based research funding 2. **Align, redistribute, and/or grow provincial contributions to incentivize research collaborations and commercialization** (e.g., establish matching grants for industry/institution collaboration, create fund specific for commercialization projects)
Objective 3.3: Set a national standard for policies and practices that foster commercialization	1. **Establish and fund a central entity to build and provide first-rate commercialization and entrepreneurship capabilities system-wide**: Central entity can provide IP and business development education, legal and contracting expertise and servicing for research sponsorships, and vet grant proposals 2. **Support institutions to streamline IP processes** across the system to foster industry/institution collaboration 3. **Convene institutions, industry, and investors together to advance cutting-edge research collaborations** in priority areas (e.g., extension of the Research Working Group, establish bi-annual industry/PSI research demo event) 4. **Showcase Alberta's world-class IP and infrastructure assets through the development of an online, publicly accessible, integrated repository**

Alberta

3.1.1: Establish Alberta Innovation Researcher Fellowships to attract top research talent and support faculty to pursue sabbaticals in innovative companies

Initiative overview:

AAE will support institutions to implement research fellowships, specifically to attract early-career researchers and support existing faculty. One fellowship can provide resources to attract early career researchers. Another fellowship can support existing faculty to take sabbaticals at innovative companies.

Case for change:

Institutions that drive research in high-performance innovation ecosystems attract, develop and retain top talent. Jurisdictions such as Singapore, Wales, and Georgia (US) use competitive fellowships[1]. Faculty cite the need for resources to support research and sabbatical opportunities, which can improve retention and industry collaboration.

Design considerations

- Fellowship structure (e.g., length of terms, selection process)
- Fellowship funding amount and source
- Ownership over fellowship selection and funding administration

Risks and mitigation strategies

- Fellowship does not draw in talented faculty // Publicize fellowship internationally and proactively reach out to and recruit top faculty
- Fellowship for existing faculty is underused due to lack of opportunities for sabbaticals // Support institutions and faculty in building relationships with industry partners to identify sabbatical options

Interdependencies

- Willingness of institutions to co-invest into program
- RWG recommendation #7

Potential steps to implementation

Potential activities	*Stakeholders**
Convene stakeholder group to define fellowship structure, selection process, and administration	AAE Strategy Implementation Group (SIG) (R, A), JEI (R), Institutions (C)
Confirm investment and launch and publicize Alberta Innovation Researcher Fellowship	AAE SIG (R, A), JEI (R) Institutions (A)
Monitor activity of fellowship cohorts and track return on investment	AAE Department (R, A), JEI (R)

1. Case examples on following page

*(R) Responsible - Stakeholders who do the work to complete the action or make the decision
(A) Accountable - Stakeholder who owns the work and signs off when the action is complete
(C) Consulted - Stakeholders who must provide input before the action is complete
(I) Informed - Stakeholders who must be kept up to date, but do not need to formally provide input

3.1.1: Business case

Initiative: Establish Alberta Innovation Researcher Fellowships to attract top research talent and support faculty to pursue sabbaticals in innovative companies in priority industries

Overview: Per benchmarks from jurisdictions with researcher fellowships, the incremental investment for Alberta can range from ~$0.1-3.8M. The range depends on the number of annual fellowships and contribution from government.

Benchmarks from other jurisdictions

	Wales	Georgia	Singapore	Finland
Fellowships or scholarships	Sêr Cymru Industrial Fellowships and Accelerator Awards	Georgia Research Alliance (GRA) Eminent Scholars	NRF Fellowship	EDUFI Fellowship
Description	Fellowships aimed to attract researchers to work in Welsh institutions with industry	Program aimed at recruiting top research talent to Georgia through endowed chair, research funding, and equipment support	Fellowship for early career researchers to conduct research in Singapore, over a five-year period	Fellowship for doctoral students to conduct thesis research in Finland and establish their careers in Finland
Number of fellows or scholars (~)	22	71	13	Not available
Fellowship or scholarship amount per person per year	87K-870K	Scholars hold endowed chairs supported by a min. 1-to-1 match of GRA investment	600K	14K

Estimated incremental investment

	Low estimate	High estimate	Assumptions
% faculty with fellowships	0.3%	0.7%	High estimate is comparable to GRA ratio
Number of fellowships	20	40	Apply ratio to number of faculty at U of C, U of A, U of L (~5,900)
Cost per fellowship	$ 95,000	$ 190,000	High estimate is median of comparable fellowships, low estimate is first quartile of comparable fellowships
% government contribution	5%	50%	High estimate 50% of fellowship is paid by government, low estimate assumes 5% of fellowship is matched by government (Wales)
Potential annual investment	**$ 95,000**	**3,800,000**	

Sources: ExpertiseWales, Ser Cymru Support and funding for researchers, Georgia Research Alliance: A novel way to grow Georgia's economy, National Research Foundation: Prime Minister's Office, Singapore, EDUFI Fellowship, Finnish National Agency for Education

3.1.1: Roadmap

Initiative: Establish Alberta Innovation Researcher Fellowships to attract top research talent and support faculty to pursue sabbaticals in innovative companies in priority industries

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24	Month 24-30	Month 30-36
Convene stakeholder group to define fellowship structure, selection process, and administration	Determine which stakeholders should provide input on fellowship						
	Convene stakeholders to finalize design choices						
	Finalize choices around fellowship amount, funding source, fellowship size, and selection process						
Confirm investment and launch and publicize Alberta Innovation Researcher Fellowship	Establish fellowship in partnership with institutions						
	Target key researchers who could complement the AB research ecosystem, reach out and explain fellowship						
	Select first cohort						
	Incorporate regular feedback from fellows to improve program						
Monitor activity of fellowship cohorts and track return on investment	Track expenses/funding requirements for fund and compare to research revenue brought into system						
	Adjust fellowship funding as necessary						

3.1.2: Support institutions to adapt faculty promotion & tenure policies to incentivize faculty to pursue entrepreneurial activities

Initiative overview:

AAE can consider incentivizing institutions to revise promotion & tenure (P&T) policies to include explicit consideration of commercialization and entrepreneurial activity to fulfil research requirements.

Case for change:

Alberta institutions produce high-quality research compared to BC and ON as evidenced by proportion of publications in the top 10% of the field but Alberta is lags peers at translating findings into real-world technologies, as measured by patents, licenses, and start-ups created[1]. Current career advancement policies foster a "publish or perish" mentality[2] that can affect faculty involvement in entrepreneurial pursuits. Leading jurisdictions include explicit direction in their P&T policies that provide faculty with the flexibility and incentives to pursue innovation activity.

Design considerations

- Mechanism for incentivizing institutions to adapt P&T policy (e.g., grant conditions, convening a working group, direction to the board)
- Areas of P&T for revision (e.g., flexible leave, weighting for P&T)

Risks and mitigation strategies

- Lack of institutional and faculty support // Strike a balance between providing an incentive and enabling institutions to redefine P&T policies autonomously

Interdependencies

- Existing or ongoing review processes to the P&T
- RWG recommendation #6, point 2

Potential steps to implementation

Potential activities	*Stakeholders**
Determine mechanism to incentivize institutions to adapt P&T policy	AAE Department (R, A)
Provide best practices to institutions on P&T	AAE Department (R, A)
Adapt P&T language	GFCs (R, A), Boards (I), AAE (I)
Approve P&T language	Boards (R), GFCs (A), AAE (I)

*(R) Responsible - Stakeholders who do the work to complete the action or make the decision
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1. On a per FT teaching staff basis. Sources: AUTM Statt Database and Statcan (2017)
2. Faculty roundtable discussions

3.1.2: Case examples of promotion and tenure (P&T) and flexible leave policies that encourage innovation activity

CASE EXAMPLES

Example	Context	Approach
Virginia Polytechnic Institute and State University	Policies established at the institutional level The Board of Visitors approves P&T	"Economic contributions and entrepreneurship: 1. **Start-up businesses** (including competitive grants and contracts such as SBIR awards and other notable business achievements**),** 2. **Commercialization of discoveries**, 3. Other. . .**Intellectual properties: i. Software, ii. Patents, iii. Disclosures (pre-patent)"**
University of Waterloo	Policies are established at the institutional level The Board of Governors approves P&T upon the President's recommendation	"Scholarship may take **several equally valuable forms**…the **discovery of new knowledge**… the **innovative coordination**, synthesis or integration of knowledge… significant **new applications of knowledge to the problems of society represent important scholarly contributions**…such as creative writing, design, fine and performing arts, innovative clinical or professional practice, and the **discovery, development and transfer of technology** for societal benefit. Peer-reviewed research…also constitute scholarly activity."
Stanford University	Policies established at the institutional level Flexible leave enables faculty to pursue sabbaticals without affecting their tenure; the same applies to periods of pure research	"**Sabbatical Leave**: The sabbatical leave program is provided to free faculty members from their normal University duties, enabling them to **pursue their scholarly interests full time and maintain their professional standing so that they may return to their posts with renewed vigor, perspective, and insight**. **Periods of sabbatical leave count towards tenure** and do not stop the seven year tenure clock..."

Source: Virginia Tech Faculty Handbook (2020);
Patents, commercialization for tenure & promotion Paul R. Sanberg, Morteza Gharib, Patrick T. Harker, Eric W. Kaler, Richard B. Marchase, Timothy D. Sands, Nasser Arshadi, Sudeep Sarkar (2014);
Proceedings of the National Academy of Sciences May 2014, 111 (18) 6542-6547; DOI:10.1073/pnas.1404094111;
Stanford P&T policy; University of Waterloo P&T policy

3.1.3: Establish and administer a Premier's Award for Research Innovation & Collaboration to recognize faculty and students for innovative pursuits

Initiative overview:

AAE will establish a Provincial Prize to recognize two faculty and two students annually for entrepreneurial pursuits. Faculty and students will be nominated by peers and reviewed by a Prize committee. Winners of the Provincial Prize will receive provincial recognition and an opportunity to highlight their work.

Case for change:

Alberta institutions produce high-quality research compared to BC and ON as evidenced by proportion of publications in the top 10% of the field but Alberta is lags peers at translating findings into real-world technologies, as measured by patents, licenses, and start-ups created[1]. High performing innovation ecosystems reward and recognize faculty for innovative pursuits (e.g., 'Faculty Technology Commercialization Award' (Ohio) and 'Excellence in Innovation and Entrepreneurship' (London)). Per roundtables, faculty value awards and recognition that can help to distinguish themselves in their field.

Design considerations

- Mechanism for identifying candidates and receiving applications
- Selection criteria and makeup of the selection committee
- Non-financial bonuses which accompany the award (e.g. dinner with premier, recognition in provincial journals, publicity via AAE)

Risks and mitigation strategies

- Awards do not attract any interest // Consult researchers to understand what type of honors would be appealing
- Awards create conflict or friction between institutions/other stakeholders // Establish an unbiased selection committee, potentially elected (rather than appointed)

Interdependencies

- Coordination with ASTECH and ASTECH Awards
- Eligibility for previous award winners

Potential steps to implementation

Potential activities	*Stakeholders**
Design award terms of reference and define selection committee	AAE Department (R, A), JEI (R, A), ASTECH (C) Institutions (I)
Launch and publicize award and winners	AAE Department (R, A), JEI (R, A)

1. On a per FT teaching staff basis. Source: AUTM Statt Database and Statcan (2017)

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3.1.3: Awards can be used to recognize faculty for innovation and commercialization

CASE EXAMPLES

Example	Awards
Imperial College London	**Award for Excellence in Innovation and Entrepreneurship** "celebrates the achievements of academics at Imperial, recognizing unique activities breaking new frontiers, the effective and appropriate exploitation of research, and realized or prospective economic or social impact"
University of Michigan, Medical School	**Innovation & Commercialization Award** "recognizes a faculty member or group of faculty members who have developed a new research method, technology or innovative service that will radically improve or transform patient health"
University System of Ohio	**Ohio Faculty Council Technology Commercialization Award** "recognize(s) a faculty member in the state university system … for exceptional research discoveries and the role they have played in supporting the translation of these discoveries into marketable products and/or services. In partnership with VentureOhio, with its 90 members (including major VC funds, angel groups, incubators, and corporations), the OFC celebrates the success of faculty in working toward creating a collaborative and resourceful statewide entrepreneurial ecosystem that allows high-potential companies to grow and prosper"

Source: University of Michigan Medical School, Ohio Faculty Council, Imperial College

3.1.3: Roadmap

Initiative: Establish and administer a Premier's Award for Research Innovation and Collaboration to recognize faculty and students for innovative pursuits and collaboration

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24	Month 24-30	Month 30-36	Month 36-42
Design award terms of reference and define selection committee	Consult researchers/institutions on desired award areas		▬					
	Compare to current awards, ensure no overlap		▬					
	Design award ToR (e.g., prize amount/type, selection criteria, non-financial components)		▬					
	Define selection committee		▬					
Launch and publicize award and winners	Develop communications/marketing plan		▬					
	Work with institutions to promote provincial award		▬					
	Review submissions for the previous FY		▬	▬				
	Select winner(s)			▬				
	Administer award			▬				

3.2.1: Align provincial contributions for post-secondary research to economic diversification priorities

Initiative overview:

AAE will collaborate with Ministries (e.g., JEI, Health, Energy, Agriculture and Forestry) to align research grants with diversification priorities, and b) evaluate whether to separate AAE's research contribution from CAG to better direct research allocation. The Alberta Recovery Plan, Research Working Group, Alberta Research and Innovation Framework, and forthcoming Alberta Technology and Innovation Strategy can inform priority sectors.

Case for change:

Higher education R&D expenditures from provincial sources totaled $260M+ in 2017[1], however there is no coordinated approach between different Ministries that provide research funding. AAE does not separate provincial research contributions from the CAG which prevents AAE from directly incentivizing research in economic diversification priority areas or from setting a bar for performance on research. Other jurisdictions such as New Zealand and the UK use a performance-based approach[2].

Design considerations

- Decision whether to separate AAE research contribution from CAG and design of AAE research contribution (e.g., size of fund, allocation method, transition and phase in timeline)
- Method to track effectiveness and ROI of fund alignment

Risks and mitigation strategies

- Institutions lack research capacity in priority areas // Ensure institutions have appetite and capability for research in priority areas before adapting funding
- Limited institution and faculty support // Consult with institutions and faculty on research areas to support before enacting changes, regularly collect feedback on new funding scheme
- If AAE research contribution is separated and too large, the operational grant will be at risk // Establish a phase-in timeline to separate research contribution gradually over a multi-year period

Interdependencies

- Strategic plans of individual Ministries
- Funding allocation model for CAG

Potential steps to implementation

Coordinate Ministries (if pursued)

1. Create a joint AAE-JEI working team accountable to work with Ministries to align research funding
2. Document and assess alignment between current research funding envelopes across GoA and economic diversification priorities
3. Prioritize largest areas of misalignment and convene with Ministries to understand priorities and path to alignment

Separate AAE research contribution (if pursued)

1. Create a joint AAE-JEI working team to evaluate options to separate CAG and research grant
2. Test and validate different design options for fund size, allocation method, phase-in timeline with institution research offices, faculty, and students
3. Obtain relevant approvals to adapt funding allocation model
4. Pilot a slow phase-in of new allocation and assess results before scaling

1. Statcan Higher Ed R&D expenditures by source of funds (2017)
2. New Zealand Performance-Based Research Fund (PBRF) website, UK Research Excellence Framework (REF) website

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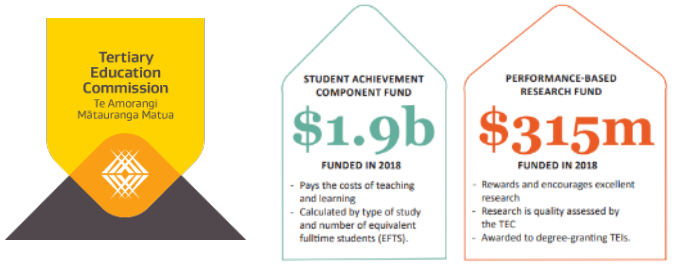
3.2.1: New Zealand uses performance based research funding (PBRF) to allocate NZ$315M annually to its institutions

Overview

The **Tertiary Education Commission allocates NZ $315M** across degree granting institutions using PBRF

PBRF is used to allocate ~20% of total government funding for research



The **PBRF is awarded is based on three criteria:**:

- **Quality Evaluation** (55%): scientific importance, citations, evidence of impact in industry, receipt of prizes/recognition, commercialization expenditure
- **Research Degree Completion** (25%): annual number of PBRF-eligible postgraduate research-based degrees completed
- **External Research Income** (20%): amount and type of income received by institutions from external sources for research purposes

TEC assesses research based on **evidence portfolios** submitted by institutions

Results

- **Positive feedback and support from universities and researchers**; belief that PBRF aligns well with researcher career advancement goals and contributes to **overall efficiency** of the NZ research sytstem[1]
- **Funding has shifted to large research institutions** from colleges / polytechnics and **towards STEM fields**
- PBRF institution Total Scores have been shown to **correlate very strongly to Leiden measures and the Nature Index**[2]
- Research[3] indicates a stark **improvement in NZ university research quality based on international comparative research institution rankings** during the PBRF lifespan.

Considerations for Alberta

For AAE to implement, it will be important to **separate CAG operational funding from research funding** to align research funding to specific areas

Scheme could **allocate funding for research degree completions** to ensure talent development for an innovation ecosystem

Using a PBRF model can **align institutions and prominent researchers** on topic areas (e.g. NZ has targeted Maori knowledge and development)

PBRF model can incentivize institutions to seek out **increased external funding** as part of the model's metrics

1. PBRF Review, Universities New Zealand's submission, 2019
2. Education Central, What can we learn from the 2018 PBRF results?, 2019
3. The Evolution of Research Quality in New Zealand, Universities as Measured by the Performance-Based Research, Buckle and Creedy, 2018

3.2.1: Performance-based research funding the UK has been effective but remains controversial

CASE EXAMPLES

Overview

REF 2021 Research Excellence Framework

The UK government uses REF to assess the **quantity and quality of research** funded with public money

REF results inform **allocation of ~US$2.6B** to 2,400+ departments across 154 institutions

REF assesses **3 elements:**

- **Research outputs** (e.g., quality publications) **(60%)**
- **Impact (25%)** (demonstrated economic or societal benefits)
- **Environment (15%)**[1] (how the research environment supports excellent research and its dissemination)

Universities assemble "**departmental portfolios**" of their most esteemed researchers' works and apply to the REF every cycle

A **cycle is every 6-7 years** on average to allow researchers to build up relevant works, and to allow for assessment

Results

Strengths[2]

- **Indexes and organizes the system's research funding**
- Higher **PBRF scoring attracts third stream income (TSI)** (i.e. external funding)[3]
- **Cost-effective to administer** (administration is only 9% of funds disbursed)

Considerations

- Concerns around **funding consistency** from UK researchers (in Feb 2020, many protested) [4]
- **Number of assessors** required given the number of institutions[5, 6]
- Heavily quantitative assessments **disadvantages research in the humanities**[5, 6]

Considerations for Alberta

Alberta has one tenth of the institutions that the UK does which suggests implementation and administration could be more streamlined in Alberta

REF is **purely focused on research funding** – AAE would need to determine if degrees in priority fields should be included in a scheme and add mechanisms

Alberta will need to assess appropriate admin cost if implemented; REF has an admin cost that is 9% of total funds administered

1. What is REF?, LSE, 2020
2. In defence of the Research Excellence Framework, The Guardian, 2015
3. Review of the Research Excellence Framework, Technopolis, 2018
4. Will the latest UK Research Excellence Framework turn out to be the last?, Nature, 2020
5. Beware the 'Research Excellence Framework' ranking in the humanities, Study International, 2018
6. Our research funding system is shortchanging the humanities, The Guardian, 2018

Alberta

3.2.1: Roadmap

Initiative: Align provincial contributions for post-secondary research to economic diversification priorities

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24	RACI*
Create a joint AAE-JEI working team accountable to coordinate across Ministries to align funding (if pursued)	Create a joint AAE-JEI working team accountable to work with Ministries to align research funding					AAE Strategy Implementation Group (R, A), JEI (R, A), Ministries (C, A)
	Document and assess alignment between current research funding envelopes across GoA and economic diversification priorities					
	Prioritize largest areas of misalignment and convene with Ministries to understand priorities and path to alignment					
	Support other Ministries, as needed, to implement					
Separate AAE research contribution from Campus Alberta Grant (if pursued)	Create a joint AAE-JEI working team to evaluate options to separate CAG and research grant					AAE Strategy Implementation Group (R, A), JEI (C), GoA (C), Institutions (C), Faculty (C), Students (C)
	Test and validate different design options for fund size, allocation method, phase-in timeline with institution research offices, faculty, and students					
	Obtain relevant approvals to adapt funding allocation model					
	Pilot a slow phase-in of new allocation and assess results before scaling					

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3.2.2: Align, redistribute, and/or grow provincial contributions to incentivize research collaborations and commercialization

Initiative overview:

AAE will grow and/or redistribute provincial research contributions to incentivize research collaborations and commercialization. Options include establishing matching grants for industry commercialization with institutions (e.g. re-instate ASBIRI), creating a fund dedicated to inter-institutional and industry collaborations, aligning incentives within existing funds (MIF, RCP), and providing matching funds to build alumni seed funds.

Case for change:

Alberta lags provincial peers in commercialization outcomes. Alberta's IP licenses per full-time teaching staff (8 licenses) is lower than BC (10) and ON (21) [1]. Alberta's start-up formation per full time teaching staff (2 start-ups) is lower than BC (4) and ON (3)[1]. Institutional IP is often too risky to attract private investment[2], and AB's VC investment as a % of GDP (0.1%) is lower than the national average (0.2%)[3]. Leading jurisdictions have dedicated public funds to incent research collaboration and commercialization (e.g., matching grants, funds).

Design considerations

- Whether to add new investment, re-distribute existing investment, or maintain existing investment and adapt requirements for institutions applying for investment; growth needs to be sustained
- The funding mechanism used (e.g., matching grant, stand-alone fund)
- Administration of new or redistributed funds

Risks and mitigation strategies

- Low return on investment // Consider piloting before scaling, ensuring that there is sufficient funding or incentivize provided to generate expected ROI, and rigorous review process to provide funding to high quality projects
- Low funding application rates // Coordinate with institutions to market availability of funding to high potential applications and encourage institutions to provide potential applicants with application support

Interdependencies

- Budget available for incremental provincial funding
- Ensure no unnecessary duplication with existing funds
- RWG recommendation #2

Potential steps to implementation

Potential activities	*Stakeholders**
Map existing funds to align and/or redistribute current funds	AAE Strategy Implementation Group (SIG) (R, A), JEI (R, A)
Evaluate need for new fund and determine size to grow provincial contribution	AAE SIG (R, A), JEI (R, A)

Additional actions and stakeholders to be determined as they vary depending on the design choices made

1. AUTM Statt Database (2017); Statcan (2017)
2. Roundtable feedback
3. Canadian Venture Capital Association (VC investment, VC deals) (2019)

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(C) Consulted - Stakeholders who must provide input
(I) Informed - Stakeholders who must be kept up to date,

3.2.2: Business case

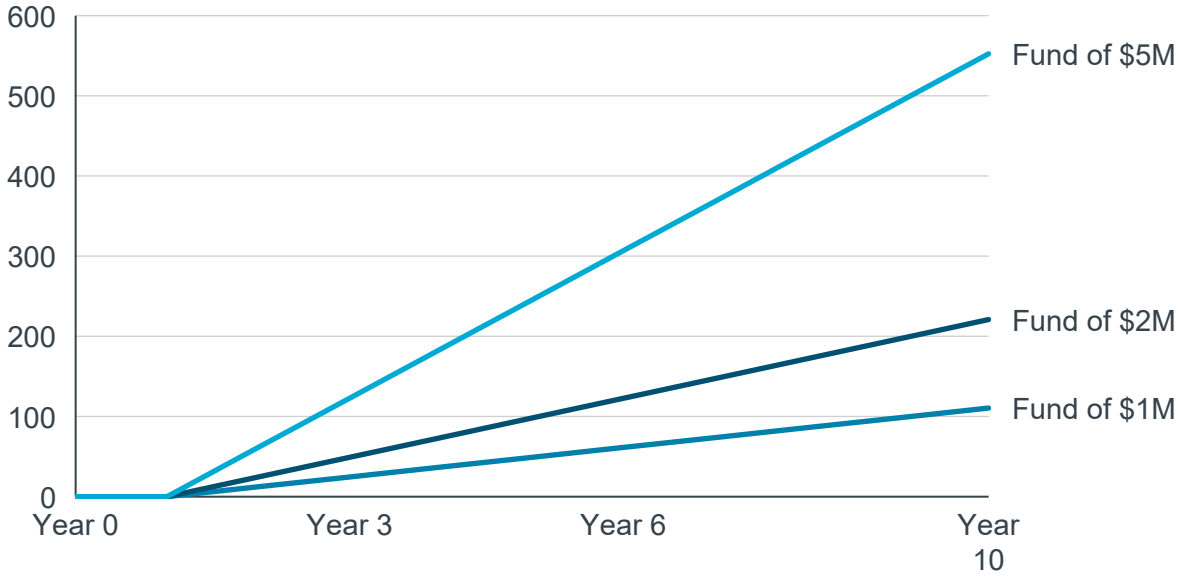
Initiative: Align, redistribute, and/or grow provincial contributions to incentivize research collaborations and commercialization

Overview: A fund focused on incentivizing research collaboration and translation has the potential to generate $12.3M in investment attraction opportunity for every $1M disbursed.

Fund returns assumptions

Assume variable fund sizes as detailed below. Using similar funds[1] as benchmarks, assume an external investment multiplier of 12.3x per $1M fund size. Assume a lag of 1 year for fund establishment and first cohort of projects to mature.[2]

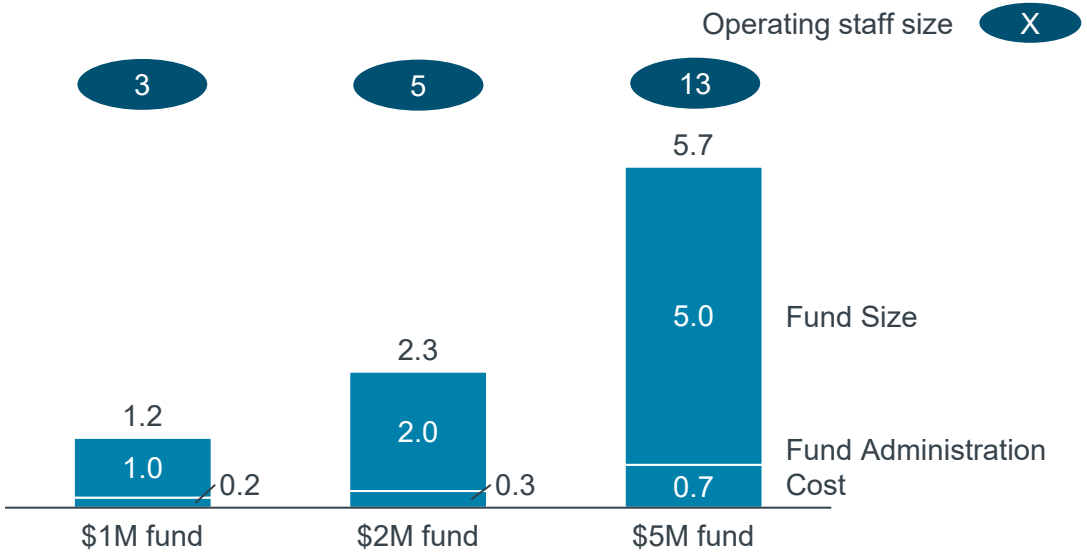
External investment attracted ($M)



Provincial investment assumptions

Assume 2.5 employees per $1M fund size[2]. Assume salaries[3] represent the majority of operational cost. Note, if fund is managed by an existing entity, overhead is negligible.

Fund administration cost for three fund sizes, $M



1. Maryland Industrial Partnerships, Georgia Research Alliance, Connecting Capability Fund;
2. Maryland Industrial Partnerships, Impact assessment, 2020;
3. Indeed.ca, University Project Manager: $55,000

3.2.2: Case examples for funds that incentivize commercialization

CASE EXAMPLES

Example	Context	Approach	Select impact to date
Connecting Capability Fund – UK	**Government fund** for projects stimulating collaboration between universities	Fund will provide £100M for projects from 2018-2021, allocated through a **competitive bid process** Winning bids involves **3+ post-secondary institutions** collaborating on knowledge transfer and commercialization Projects take the form of **hubs, clusters, incubators, accelerators and educational programs** (e.g. Clean Growth UK; The Ceres Agritech Knowledge Exchange Accelerator) Research England: 8 FT staff members (managing multiple funds)	**60** collaborating universities **100+** businesses engaged **£375M+** additional investment as of Y2 (4.4x multiplier compared to funds disbursed) **5.2x** anticipated investment multiplier by Y3
Maryland Industrial Partnerships	**Matching funds program** funded by state government, operated out of the U. of Maryland	Provides **$100K USD / project in matching funds to industry for research translation projects** Industry leverages their R&D funds and gains access to the system's talent and research base 5 FT staff members, volunteer advisory committee (scientific and economic experts for project selection)	**$50M+** USD in state funding **$40B+** USD in company revenues from MIPS products **38x** ROI for state tax income compared to state program funding
Georgia Research Alliance (GRA)	**Independent non-profit that partners with** The University System of Georgia Department of Economic Development	**Actively recruits superstar scientists** for R&D in areas with the most promising potential of generating new companies **Provides seed capital and executive guidance** to new companies formed in universities through GRA Venture Fund **Fosters cross-university research and collaboration** on federal funding applications across the state's 8 institutions Operations are privately funded; investments are state-funded 5 FT staff members, advisory committee of 5 members	**160** new companies **$1.2B** USD in venture investment **7.6x** multiplier for total investment and matching grants received compared to state investment

Source: Research England; Maryland Industrial Partnerships; GRA

3.2.2: Roadmap

Initiative: Align, redistribute, and/or grow provincial contributions to incentivize research collaborations and commercialization (e.g., establish matching grants for industry/institution collaboration, create fund specific for commercialization projects)

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24	Month 24-30	Month 30-36	Month 36-42
Map existing funds to align and/or redistribute current funds	Map existing funds and criteria to better understand funding landscape	■						
	Revise criteria to align with collaboration and commercialization objectives in research priority areas	■						
	Evaluate whether select funds can be combined or redistributed to be more effective	■	■					
	Work across ministries and institutions to establish publicize revised criteria		■					
	Track return on investment			■	■	■	■	■
	Adjust criteria as necessary to maintain alignment with research goals						■	■
Evaluate need for new fund and determine size to grow provincial contribution	Evaluate need for a new fund to incentivize collaboration and commercialization	■						
	Identify size, funding mechanism (e.g., matching grants), criteria, timeline for administration	■						
	Determine fund administration process and staffing needs	■	■					
	Validate with relevant stakeholders (e.g., researchers, industry)		■					
	Obtain approval for fund & set up team		■					
	Begin pilot with new fund		■					
	Promote fund with industry / researchers		■	■	■	■	■	■
	Track performance (e.g., conduct economic impact study after 3 years)		■	■	■	■	■	■
	Adjust as necessary to improve performance						■	■

3.3.1: Establish and fund a central entity to build and provide first-rate commercialization and entrepreneurship capabilities system-wide

Initiative overview: AAE and JEI will develop a central, one-stop shop that will: 1) provide legal and contracting advise and services for research and IP agreements, 2) offer IP and business development education resources, and 3) coordinate and vet inter-institutional grant applications. The central entity can facilitate standardizing IP policies and processes (see initiative 3.3.2), manage an online repository of assets (see initiative 3.3.4), and advise institution tech transfer offices (TTOs) to better serve faculty commercialization activities

Case for change: Alberta lags provincial peers (BC, ON) in federal funding for research and commercialization outcomes as measured by patents, licenses, and start-ups per full-time teaching staff[1]. According to stakeholder feedback, there is a lack of a coordinated approach to federal funding applications, varying capacity and capability at institutional TTOs to facilitate commercialization, and faculty and students lack the expertise needed to commercialize. To improve grant competitiveness, leading jurisdictions provide dedicated resources to coordinate multi-disciplinary, inter-institutional grants. To strengthen commercialization, leading jurisdictions are trending toward more integrated TTO offices and centralizing specialized resources to provide leverage to more institutions.

Design considerations

- Services and resources to centralized (e.g., IP education, legal and contracting)
- Organization structure (e.g., size, mandate) and oversight / advisory group
- Funding model for centralized provision (e.g. co-investment between PSIs and AAE)
- Staffing (individuals with expertise in IP, VC, etc.)

Risks and mitigation strategies

- Entity roles/responsibilities are unclear and entity is underutilized // Define role of central entity in relative to other organizations in AB research ecosystem and promote services/resources to ensure awareness and engagement
- Resources are not applicable to all levels of research // Consult researchers from all types of institutions before developing ‘curriculum’ or repertoire of centralized resources

Interdependencies

- Balance the right level of capacity in institutional TTOs and in central entity
- Network collaborations and resource sharing with municipal organizations
- RWG recommendation #6

Potential steps for implementation

1. Appoint a sub-committee of the research working group to refine initiative design and implementation plan
2. Test and validate entity services, structure, and funding model
3. Confirm investment and relevant approvals to stand-up central entity
4. Stand-up central entity

1. AUTM Statt Database (2017); Statcan (2017)

3.3.1: Business case

Initiative: Establish and fund a central entity to build and provide first-rate commercialization and entrepreneurship capabilities system-wide

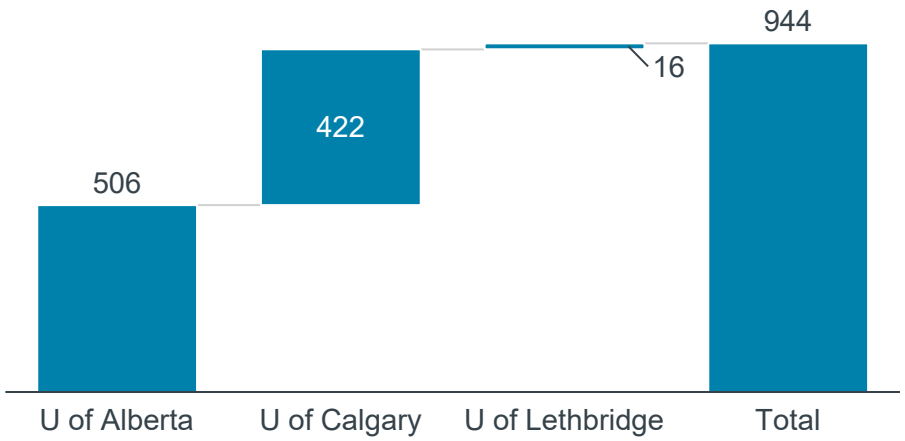
Overview: Creating and operating a centralized entity that provides select resources (grant-writing, IP policy, legal, contracting) is estimated to cost **~$1M - $3M** annually based on benchmarks of similar offices. The net incremental investment is expected to be lower given that the centralized entity would perform a subset of functions currently performed by existing institution research services and tech transfer offices. Furthermore, funding would be determined based on a shared model with institutions.

Approach

To generate a ranged estimate:

- Apply benchmarks of tech transfer office operating budget as a % of total research revenue to Alberta's total research revenue to estimate the operating budget for a centralized entity
- Apply benchmarks of the University of California System's central Research & Innovation Office estimated operating budget as a % of the system's total research revenue to Alberta's total research revenue. The central office provides support for grant-writing, contracts and grants, research policies and guidelines, patent prosecution, and IP management services

Institution research spend ($M)



Investment estimation using benchmarking	Low estimate	High estimate
Benchmark: Operating budget as a % of research revenue	0.07%[1]	0.20%[2]
Baseline: Alberta PSI research revenue, (2019)[3]	$944M	$944M
Potential investment	**$1M**	**$2M**

Note: performing a bottom-up estimation of office size yields between 25-30 staff (with an operational cost of **~$3M**), however comparative estimation (proportionally based on UC system research revenues) yields 9 staff (with a cost just below **$1M**)

1. IP Handbook: Benchmarking of Technology Transfer Offices and What It Means for Developing Countries: Chapter 3.5, 2007
2. Estimate of University of California system's commercialization office employees' salary using online sources for similar roles
3. University of Calgary, Alberta, and Lethbridge annual reports and public research statistics, 2018/2019

3.3.1: Case example: University of California (UC) System Research & Innovation Office

CASE EXAMPLES

Most relevant for AB

UCOP R&I Office[1]

Departments	Description	No. of staff
Research Grants Program Office	Provides funding for UC research and grant administration services	**38**
Natural Reserve System	Manages a network of 41 natural areas throughout California used for teaching, research and public service	Advisory committee of **17**
Innovation & Entrepreneur-ship	Build a strong entrepreneurship culture between all 10 UC campuses through education and mentoring events, providing access to a start-up incubator, and providing funding for proof-of-concept work.	**5**
Research Policy Analysis Coordination	Provides guidance on UC policies, state and federal laws and regulations governing research, coordinates across campuses to provide one unified voice on research policy issues, and serves as the systemwide resource on administration and negotiation of research agreements	**13**
Knowledge Transfer Office	Supports UC campuses in technology transfer operations, and provides information systems, financial management, patent prosecution and intellectual property management services	**20**

1. University of California Office of the President, Research & Innovation page

FY2018 Impact:

Patents issued: **615**

Active inventions in portfolio: **12,257**

Start-up companies formed: **93**

Considerations for Alberta:

Opportunity to provide select resources at a central level:

IP education

Policy development and coordination for research

Legal and contracting expertise

Financial management, patent prosecution, and IP management services

3.3.1: Case example: Ontario IP Action Plan

CASE EXAMPLES

Context

Ontario Intellectual Property Action Plan

Ontario

The government of Ontario is establishing a new IP Action Plan.

This follows the recommendation of an Expert Panel on Intellectual Property engaged by government in May 2019.

Case for change[1]

The panel was brought together to address issues in the following areas:

- Lack of standardized IP model makes industry collaboration difficult
- Limited access to IP expertise for SMEs (in-house or 3rd party)
- Reduced TTO budgets
- Limited IP/commercialization education
- Lack of domestic industry receptors for postsecondary knowledge

Implementation

The Special Implementation team of the IP Action Plan will focus on:

- Standardized, digital basic and advanced Intellectual Property education curriculums
- Governance framework for organizations supporting entrepreneurial and innovation activities
- Access to Intellectual Property legal expertise

1. Report: Intellectual Property in Ontario's Innovation Ecosystem, Expert Panel on Intellectual PropertyReport to the Government of Ontario, February 2020

Alberta

3.3.1: The University of Auckland has an autonomous TTO that also supports national commercialization activity

CASE EXAMPLES

Context

Uniservices is the University of Auckland's TTO and a core partner for the government's Commercialization Partner Network

Approach

Operates as U. of Auckland's integrated TTO

- Identifies discoveries with commercial potential
- Sources industry partners around the globe
- Provides full commercialization service (contract research, licensing, incubation and financing)
- Manage the relationships between funders and academics

Operates two national programs, funded by the Ministry of Business, Innovation, and Employment**, that foster collaboration with other institutions and industry**

- Return on Science program provides coaching and capital to researchers, academics, other tech transfer offices, business, and start-ups
- Momentum is a national student-led investment committee

Hires staff with high business and science orientation

- Executive Team with 5 members with external market experience
- ~600 staff (e.g., ~25 people business development, up to 300 engineers and product specialists which is vital for prototyping)
- Board: 2 out of 6 members from business

Select impact (2018)

$180M+ NZD revenues from contract research, consulting, and education programs

Executed **89 licenses for IP** and created **6+ businesses**

Spin-out companies **have raised $250M+ NDZ of investment** in the last 6 years

21 publicly funded research organizations and 98 organizations engaged through the national Return on Science program over a 6-year period

Source: Uniservices, Return on Science, Momentum, and Ministry of Business, Innovation, and Employment

3.3.1: Roadmap

Initiative: Establish and fund a central entity to build and provide first-rate commercialization and entrepreneurship capabilities system-wide

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24	Month 24-30	Month 30-36	Month 36-42	RACI*
Appoint a sub-committee of the research working group to refine initiative design and implementation plan	Appoint members from JEI, AAE, institutions, and commercialization experts		■						AAE SIG / JEI (R, A)
	Define mandate to refine design of entity and implementation plan		■						
Test and validate entity services, structure, and funding model	Validate services and resources to centralized (e.g., IP education, legal and contracting) and implications for existing TTOs		■						AAE SIG / JEI (A), sub-committee (R), Institutions (C)
	Define organization structure (e.g., size, mandate) and oversight / advisory group		■						
	Assess funding model for centralized provision (e.g. co-investment between PSIs and AAE)		■	■					
Confirm investment and relevant approvals to stand-up central entity	Propose refined initiative design and implementation plan to AAE, JEI, and/or institutions			■					AAE SIG / JEI (A), sub-committee (R), Institutions (C)
	Confirm stage-gated investments from AAE, JEI, and/or institutions (depending on funding model)			■					
	Obtain relevant government approvals (depending on oversight group for entity)			■	■				
Stand-up central entity	Hire staff and/or transition staff from existing institution offices			■					AAE SIG / JEI (R, A), institutions (R) [depends on model]
	Conduct centralization of select resources and develop new resources per entity design			■	■				
	Establish, document, and train institution and industry stakeholders on how to best use central entity				■				
	Track performance and adjust operation as necessary				■	■	■	■	

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3.3.2: Support institutions to streamline IP processes across the system to foster industry/institution collaboration

Initiative overview:

AAE will support institutions to standardize and streamline IP processes (e.g. fee schedules, partnership structures, key stages in the process and deadlines) across the system to improve industry/institution collaboration.

Case for change:

Alberta lags provincial peers (BC, ON) commercialization outcomes as measured by licenses per full-time teaching staff (AB: 8, BC: 10, ON: 21)[1] and licensing revenue as a % of higher ed R&D expenditures (AB: 0.12%, BC: 0.46%, ON: 0.62%)[1]. Feedback from industry indicates inconsistent IP processes across PSIs and a rigid focus on IP protection that discourages private sector engagement and lengthens contracting.

Design considerations

- Processes to streamline (e.g. fee schedules, licensing agreements, JV structures)
- The mechanism for streamlining (e.g., support development of boilerplate contracts, financially incentivize behavior)
- Ownership for regular process review, updates, distribution, and publication

Risks and mitigation strategies

- Lack of institutional engagement // Incentivize institutions to collaborate to standardize processes
- Standardized processes do not reflect unique institutional needs // Encourage institutions to lead and define the standardization process such that it meets their needs

Interdependencies

- Existing institutional and industry processes will need to align
- RWG recommendation #4

Potential steps to implementation

Potential activities	*Stakeholders**
Convene a working group to streamline IP processes	AAE Strategy Implementation Group (R, A), JEI (R), Institutions (C), Industry (C)
Evaluate IP processes and draft adjustments	Working group (R), AAE SIG (A), Institutions (C), Industry (C), JEI (C)
Determine and administer incentive mechanism for institutions to adjust processes	Working group (R), AAE SIG (A), JEI (C), Institutions (I)
Support institutions to publicize changes to IP processes	Working group (R), AAE SIG (A), JEI (C), Institutions (R)

1. AUTM Statt Database (2017); Statcan (2017)

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3.3.2: The University of Texas System publishes a comprehensive list of IP agreements and templates to increase ease of partnership

CASE EXAMPLES

Context

THE UNIVERSITY of TEXAS SYSTEM
FOURTEEN INSTITUTIONS. UNLIMITED POSSIBILITIES.

Public system

14 institutions (8 public universities, 6 health institutions)

240,000K+ students

$3.1B USD in research expenditures (2019)

Approach

Standardized set of IP agreements and forms across the system including contract negotiation, material transfer, patent license, sponsored research, clinical trial, technology transfer

Published forms for easy access and download online

Provides **autonomy to each institution to adapt agreements** as needed

Select impact

- 25% of R&D funded by private sources (2019)
- ~$62M USD in licensing revenue (2% of total R&D expenditure) (2018)
- 35 start-up companies formed (2018)
- Ranked #11 in Reuter's World's Most Innovative University ranking (2019) as measured by patents filed and patent success rate among other metrics

Source: University of Texas System

Alberta

3.3.2: Roadmap

Initiative: Support institutions to streamline IP processes across the system to foster industry/institution collaboration

Activity	Action	Month 0-6	6-12	12-18	18-24
Convene a working group to streamline IP processes	Convene working group (potentially a sub-group of the RWG) to determine which processes need to be streamlined and to develop a set of standardized processes				
Evaluate IP processes and draft adjustments	Gather, review, and benchmark existing IP documentation and processes				
	Draft proposed changes to IP processes and validate with faculty, grad students, and industry				
Determine and administer incentive mechanism for institutions to adjust processes	Determine incentive mechanism for institutions to standardize per the recommended approach				
	Provide incentives (e.g., financial grant upon completion)				
	Establish process to ensure accountability for implementing IP process changes				
Support institutions to publicize changes to IP processes	Support institutions to publicize new IP guidelines to users				
	Solicit feedback from institutions and industry and adjust IP processes as necessary				

3.3.3: Convene institutions, industry, and investors together to advance cutting-edge research collaborations in priority areas

Initiative overview:

AAE will collaborate with JEI to support pathways for institution-industry communication through 1) the extension or expansion of the existing Research Working Group and 2) a bi-annual showcase of industry, investors, and researchers to demo research (potentially through expansion of Inventures)

Case for change:

Only 8% of Alberta's higher ed R&D expenditures is funded by industry[1]. Alberta's annual growth rate of this funding sources lags provincial peers (AB: 2%, BC: 8%, ON: 9%) [1,2]. To grow and diversify research funding, Alberta PSIs need to improve industry/institutional collaboration. PSIs have varying approaches to proactively cultivate and build new industry partners and indicate a need for AAE to play a convening role.

Design considerations

- RWG structure, attendees, meeting frequency, and coordinating entity (AAE/JEI)
- Mechanism to ensure accountability for action on RWG recommendations
- Showcase structure, attendees, and coordinating entity (e.g., AAE/JEI)

Risks and mitigation strategies

- Lack of clarity in terms of reference // Use extensive stakeholder engagement from Roundtables, RWG, and interviews to identify priority topics and set expectations for meeting outcomes
- Lack of attendee engagement // Coordinate among AAE, JEI, industry, and institutions to identify appropriate attendees of showcases and meetings; source feedback to improve
- Stale membership // Rotate membership to enable representation from different stakeholders

Interdependencies

- Coordination with existing groups and councils
- PSI future goals and strategic direction – need to align with forum
- RWG recommendations #4, #5, and #6

Potential steps to implementation

Potential activities	*Stakeholders**
Align with RWG 2.0 recommendation to launch extension / expansion of RWG	AAE Department (R, A), JEI (R), RWG (R), Industry (C), Institutions (C), Alberta Innovates (C)
Launch forum or working group and showcase	AAE Department (R, A), Stakeholder selected for meeting ownership (R, A)

1. Per full-time teaching staff. Source: Statcan Higher Ed R&D expenditures by source of funds (2017); Statcan Full-time academic staff at public universities (2017)
2. Annual CAGR (2013-17)

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3.3.3: Roadmap

Initiative: Convene institutions, industry, and investors together to advance cutting-edge research collaborations in priority areas

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24	Month 24-30	Month 30-36	Month 36-42
Align with RWG 2.0 recommendation to launch extension / expansion of RWG	Align with RWG 2.0 recommendations							
	Determine meeting topic and group ToR, as well as showcase goals and mission							
	Decide meeting structure and frequency (e.g., all-hands quarterly or semi-annually, sub-committees based on topic meet monthly)							
	Select attendees for both meeting and showcase (e.g., institutions, employers, investors, GoA agencies and ministries, municipal innovation organizations)							
	Define meeting and showcase ownership and coordination (e.g., exclusively RWG, AAE, institutions)							
	Develop method to ensure accountability for action on meeting recommendations							
Launch forum or working group and showcase	Secure participation from relevant attendees for both events							
	Launch meetings, establish showcase and send invites							
	Follow-up on meeting progress regularly, canvas showcase attendants for feedback							

3.3.4: Showcase Alberta's world-class IP and infrastructure assets through the development of an online, publicly accessible, integrated repository

Initiative overview:

AAE will develop a publicly accessible online platform to display PSI research capabilities, equipment and labs, and available IP and technologies for commercialization to industry and PSIs to promote partnerships.

Case for change:

Industry lacks clarity about the scope of offerings at an institutional and system level which causes barriers to working together. An integrated repository of assets improves the accessibility of ongoing research and showcases assets to potential industry partners and improves system management of investment in assets. Leading jurisdictions such as Israel and California have searchable repositories to promote partnership opportunities.

Design considerations

- Assets and capabilities that will be displayed on the platform
- Repository ownership (e.g., AAE, JEI, Central Entity from Initiative 3.3.1)
- Funding for ongoing maintenance (e.g., pay-per-use, sponsorship, grants)

Risks and mitigation strategies

- Repository is underutilized // Promote resources and obtain feedback to improve user experience
- Repository is not regularly updated // Dedicate capacity and/or consider incentivizing institutions to update repository

Interdependencies

- Relevance of resources available – contingent upon institutions investing time and effort to categorize and display their capabilities
- Industry input – platform must cater to industry goals
- RWG recommendation #6

Potential steps to implementation

Potential activities	*Stakeholders**
Determine where to host repository	AAE Strategy Implementation Group (R, A), JEI (R)
Engage stakeholders on design and assets to display	AAE SIG /JEI (R, A), Industry (C), Institutions (C)
Design online repository	AAE SIG /JEI (R, A)
Upload and update content regularly	AAE SIG/JEI (A), Institutions (R)
Provide feedback on utilization of repository	AAE SIG/JEI (A), Industry (R), Institutions (R)

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Contents

5: Financial Sustainability

DRAFT

Flagship initiatives

Objectives	Potential initiatives for consideration
Objective 5.1: Set a global bar for efficiency, transparency, and accountability in the post-secondary system	1. **Sponsor a shared service centre for academic** (e.g., enrolment) **and non-academic areas** (e.g., HR, finance) 2. **Support institutions to streamline procurement**: Evaluate opportunity to coordinate sourcing approach to reduce procurement spend (e.g., consolidate volumes, benchmark suppliers) 3. **Implement a clear, transparent funding allocation model** 4. **Implement a performance-based funding model**

Objective 5.2: Enable institutions to compete for and grow non-provincial sources of funding, while preserving access for all Albertans	1. **Deconsolidate institution financials**[1] to provide institutions with greater financial flexibility to grow own-source revenues. *If institutions remain consolidated*,
	  1. **Streamline surplus spending request and approval process** to enable institutions to strategically spend surpluses
	  2. **Streamline review of Commercial Enterprises** (e.g., commercial land development, real-estate deals, overseas campuses) from 12-18 months to 3-6 months
	2. **Increase tuition flexibility and needs-based student aid**[2]: Enable tuition flexibility, within defined guardrails and for select programs, to allow institutions the discretion to set tuition levels and increase need-based financial aid to ensure that tuition increases do not decrease access for Albertans

1. Also included in Goal 6: Governance
2. Needs based aid also included in Goal 1: Improve Access

Alberta

5.1.1: Sponsor a shared service centre for academic (e.g., enrolment) and non-academic areas (e.g., HR, finance)

Initiative overview: AAE will support institutions to pilot a shared service model for academic administration (e.g. enrolment, student services) and support functions (e.g., HR, finance). A pilot can be conducted by select Northern Alberta Colleges, to build on existing collaborations in select back-office services. AAE can provide technical assistance and/or financial incentives to institutions to implement shared services.

Case for change: Most institutions have their own academic and back-office support functions, but shared services can enable institutions to conduct operations more cost-efficiently. There is opportunity to achieve run-rate savings through consolidating select back- and front-office functions.

Design considerations

How to incentivize institutions to consolidate functions, e.g.,

- Offer discretionary grant to cover upfront costs or provide funding upon completion
- Provide technical assistance to manage consolidation

Which support functions to consolidate (e.g., student services, HR, Finance) and for which institutions

Risks and mitigation strategies

Potential local job losses due to consolidation // Re-allocate labour when appropriate, otherwise provide transition support

Lack of institutional support // Pilot a single function consolidation with a subset of institutions to demonstrate the opportunity to other institutions and for replicating with other functions

Lack of change management to adapt existing processes // Support institutions with technical assistance to adapt processes to new system or mode of operation

Interdependencies

- Coordinating and streamlining existing systems and processes used in independent institution functions
- Infrastructure (physical and system/administrative) to operate and manage a (potentially large) shared services centre

Potential steps to implementation

Owner: AAE Strategy Implementation Group (SIG)

1. Appoint team with relevant expertise to create a plan to shared services
2. Determine mechanism to incentivize institutions to participate
3. Design a shared service pilot for a target function for a subset of institutions
4. Launch pilot and track results to inform expansion

5.1.1: Roadmap

Initiative: Sponsor a shared service centre for academic (e.g., enrolment) and non-academic areas (e.g., HR, finance)

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24	Month 24-30	RACI*
Appoint team with relevant expertise	Appoint AAE department members to develop a plan to expand shared services						AAE SIG (R, A), Experts (C)
	Bring in external experts with shared service expertise to advise working team						
Determine mechanism to incentivize institutions to participate in shared service pilot	Determine whether to offer discretionary grant to cover upfront costs or provide funding upon completion						AAE SIG (R, A), Experts (C)
	Determine whether to provide technical assistance to manage consolidation						
	Engage external experts or vendor to conduct pilot design (if required)						
Design a shared service pilot for a target function for a subset of institutions	Identify institutions to participate in pilot						AAE SIG (R, A), Experts (C), Vendor (R)
	Identify target function(s) for consolidation (e.g. HR, finance)						
	Perform deep dive on function pain points and map function interdependencies						
	Determine consolidation lever(s): digitization, org structure, lean management						
	Determine project management support needed						
	Develop project plan, budget, and change management process						
Launch pilot and track results to inform expansion	Provide project and change management support						AAE SIG (R, A), Experts (C), Vendor (R)
	Track performance of consolidated entity						
	Analyze lessons learned to inform pilot expansion						
	Expand pilot: initiative, plan, perform KT from pilot, execute						

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5.1.1: Best practices in establishing a Shared Service centre

A shared service model has 3 distinct structural characteristics

Service consolidation
Support services are carved out from multiple functions (institutions) and consolidated into one organization unit

Service standardization
Consistent processes exist across and within support functions

Service digitization
Next-generation capabilities through automation/AI driven under a common operating environment

Improved efficiencies through economies of scale and a central operating model

Improved effectiveness driven by sharing of practices and adopting a service oriented mindset

Increased competitiveness driven by innovation and enhanced user experience

Shared services benefit from:

Lower costs
30%+ savings in most transactional processes

Faster processes
25-30% faster E2E processes

Increased flexibility and consistency
Ability to reliably operate 24/7 and scale with system demand

Improved quality
20-30% improvement in quality of service

Deeper insights and innovations
Unique view into drivers of growth and expenses

5.1.2: Support institutions to streamline procurement: Evaluate opportunity to coordinate sourcing approach to reduce procurement spend

Initiative overview:

AAE will support institutions to identify areas to streamline procurement spend through different levers such as demand management, supplier base consolidation, and renegotiation based on consolidated volumes. One area of immediate opportunity may be to support institutions to adopt the GoA's enterprise resource planning system (1GX).

Case for change:

Supplies and services spend is the second largest expense category ($0.9B; $0.6B addressable). There is an opportunity to conduct a deeper analysis of spend by procurement category to identify areas where a system approach can generate savings. Based on benchmarks, a 5-10% reduction can be achieved on a baseline of $0.6B addressable spend (~$30-60M potential savings)

Design considerations

- Mechanism to provide support (e.g., dedicate finance resources to provide fact pack of opportunities to institutions, convene procurement officers of institutions)
- Which procurement categories to prioritize (e.g., start with 1GX)

Risks and mitigation strategies

- Lack of institutional support // Pilot approach with a single procurement category with a subset of institutions to demonstrate the opportunity to other institutions and for replication

Interdependencies

- Coordinating among existing procurement consortiums and efforts to streamline procurement across institutions

Potential steps to implementation

Potential activities	*Stakeholders**
Convene a working group with procurement expertise and institution procurement officers to evaluate opportunity	AAE Strategy Implementation group (SIG) (R, A), Institutions (C)
Establish procurement baseline and determine high spend, high potential categories for savings	Working group (R), AAE SIG (A)
Prioritize subset of categories and develop initiatives (e.g., renegotiate contracts consolidate supplier base)	Working group (R), AAE SIG (A)
Support institutions to implement initiatives	Working group (R), AAE SIG (A)
Track savings realized and expand efforts to additional categories	Working group (R), AAE SIG (A)

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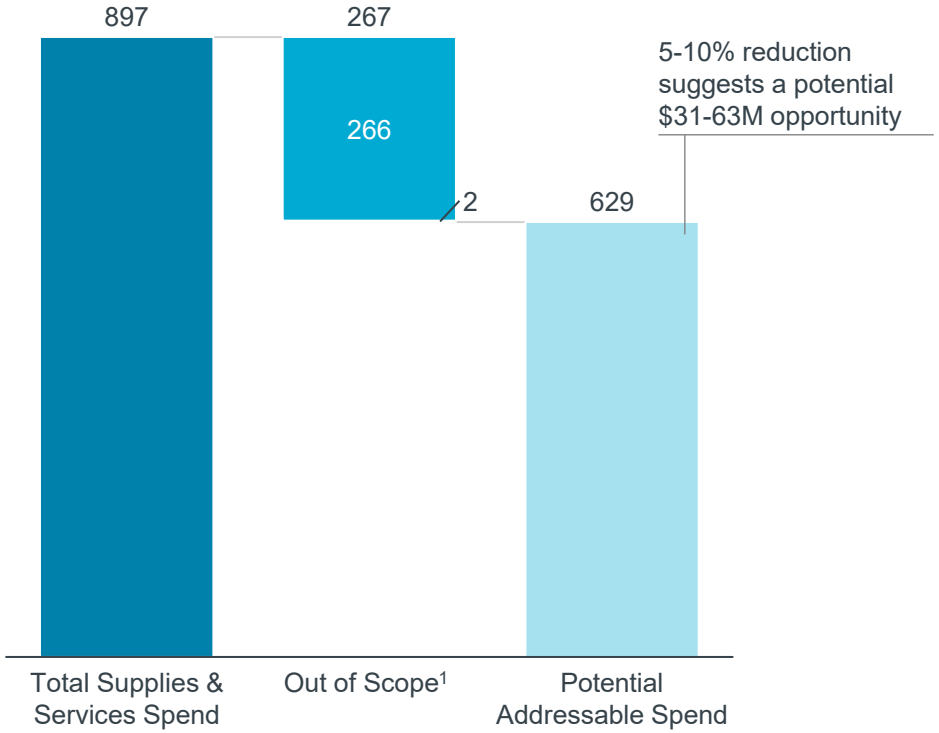
5.1.2: Business Case

Initiative: Support institutions to streamline procurement: Evaluate opportunity to coordinate sourcing approach to reduce procurement spend (e.g., consolidate volumes, benchmark suppliers)

Potential opportunity

Supplies and Services Spend, 18/19, $M



Sample levers by category and typical savings ranges (non-exhaustive)

Construction (1-5%)
- Consolidate supplier base for structural, plumbing, and finishing
- Default to design / bid / build for new construction
- Conduct system-wide portfolio planning

Professional services (2-4%)
- Consolidate supplier base
- Evaluate demand
- Migrate to more affordable training channels

IT Hardware (5-10%) and Software (5-15%)
- Manage hardware and software centrally
- Renegotiate contracts with larger volume
- Negotiate directly with OEMs

Facilities (5-7%)
- Consolidate supplier base
- Renegotiate contracts based on benchmarked internal cost

Scientific (1-5%)
- Manage select specialized assets centrally
- Consolidate supply base at preferred pricing
- Renegotiate contracts to obtain explicit volume-based discounts

Food Products & Services (3-5%)
- Consolidate supplier base
- Renegotiate volume-based discounts with concentrated supplier base
- Redefine service agreements

1. Sponsored research and business enterprise expense functions are excluded from the addressable spend
Source: FIRS

5.1.2: Roadmap

Initiative: Support institutions to streamline procurement: Evaluate opportunity to coordinate sourcing approach to reduce procurement spend (e.g., consolidate volumes, benchmark suppliers)

Activity	Month 0-6	Month 6-12	Month 12-18	Month 18-24	Month 24-30
Convene a working group with procurement expertise and institution procurement officers to evaluate opportunity					
Establish procurement baseline and determine high spend, high potential categories for savings					
Prioritize subset of categories and develop initiatives (e.g., renegotiate contracts consolidate supplier base)					
Support institutions to implement initiatives					
Track performance					
Track savings realized and expand efforts to additional categories					

5.1.3: Implement a clear, transparent funding allocation model

Initiative overview: AAE can implement a refined version of its new funding allocation model. The funding model will account for enrolment with modifiers for institutional mandate, programming mix, and stewardship region. The model will modify enrolment to ensure that collaborative efforts (e.g., transfers, collaborative degrees) are incentivized (e.g. create a 'shared' FLE modifier to maximize access and reduce duplication in programming).

Case for change: AAE funds institutions based on historical allocations. Institutions desire a transparent, clear funding model that is predictable and enables them to budget appropriately. Although AAE used a new funding allocation model to inform allocation last year, the new model wasn't used in an official capacity

Design considerations

- Phase-in timeline
- Stop-loss guarantees to prevent institutions from losing more than a specified amount in the first years of implementation based on the formulaic output
- Funding model modifiers

Risks and mitigation strategies

- Lack of institutional awareness or support for the new funding model // Conduct extensive engagement to onboard institutions on the new model and implications for their budgets
- Variation in allocation between current and proposed model // Implement stop-loss guarantees to prevent institutions from losing more than a specified amount. This will "smooth" out differences between the current and proposed model in the first years of implementation

Interdependencies

- Coordination with other initiatives that affect institutional revenue generation
- Potential need for support and approval from key stakeholders and their input to craft model and design choices

Potential steps to implementation

Owner: AAE Strategy Implementation Group

1. Refine base funding allocation model and identify additional funding envelopes for strategic priorities
2. Communicate funding model and process to institution and board stakeholders
3. Pilot funding allocation model for upcoming FY
4. Solicit stakeholders for feedback and adapt for future allocations

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5.1.3: Funding models can be input and/or output based

Type	Description[1]	Considerations
Input- or enrolment-based	Primary determinants of funding amount are the costs associated with instruction, student services, and administration for a specified number of students	⊕ Encourages institutions to promote programs and increase number of seats ⊖ May incentivize institutions to over-enroll students with low probability of graduation
Output- or performance-based	Output-based funding focuses on institution performance against defined metrics which can include student achievement, graduation rates, and other general indicators of student success	⊕ Incentivizes selection of students who will progress successfully through course ⊖ Institutions might raise entrance bar to the reducing enrolment opportunities ⊖ Institutions might lower course quality or graduate quality to meet budget target

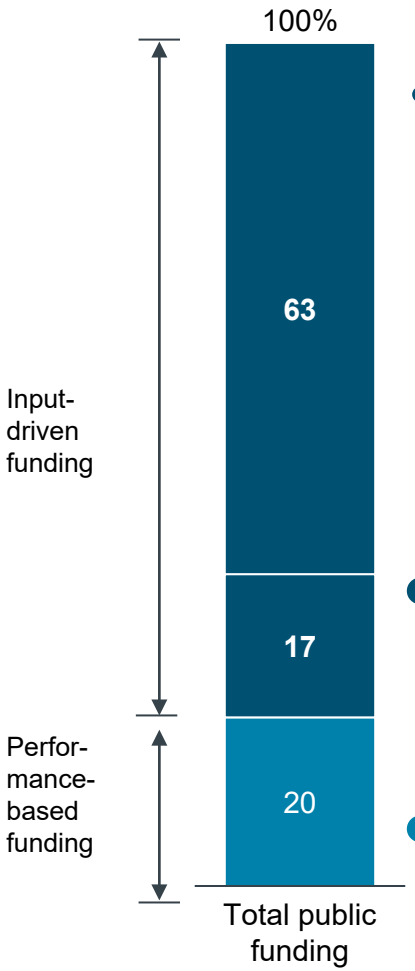
Many jurisdictions use a combination of input- and output-based measures

1. Interactive Database: State Postsecondary Governance and Finance Policies, NCSL, 2019

Alberta

5.1.3: Case example: Louisiana, USA is in its second iteration of PBF using a combination of input-driven funding and outcomes-based funding

Funding breakdown



Base funding

- Funding is proportional to the previous year's allocation
- Amount is slowly being reduced as funding priority shifts to cost-based and outcomes-based

Cost component

- Credit hours, weighted by course type, multiplied by base value (based on average faculty salaries, class size, full-time student workloads and other factors) and adjusted for withdrawal rates, operations and maintenance, general support based on institution type

Outcomes component

- Completion (by degree level, time-to-award, retention and progression), Research (grant-funded amount), Workforce (job placements), and Equity (completion by under-represented minorities)

Context

- Iteration 1: GRAD Act was adopted in 2010 and encouraged institutions to increase graduation and retention rates and align study programs with workforce needs through a 6-year performance funding model
- Iteration 2: In 2014, Louisiana explored a new model which had a partial cost focus and a partial outcomes focus
  - Outcomes are aligned with state priorities: increasing **completion rates** for all students, **increasing grant-funded research** in the state, increasing numbers of **graduates landing high-paying jobs**, and improving **graduation rates for mature and minority students**. The model was implemented in 2016 and phased in through 2020

Lessons Learned

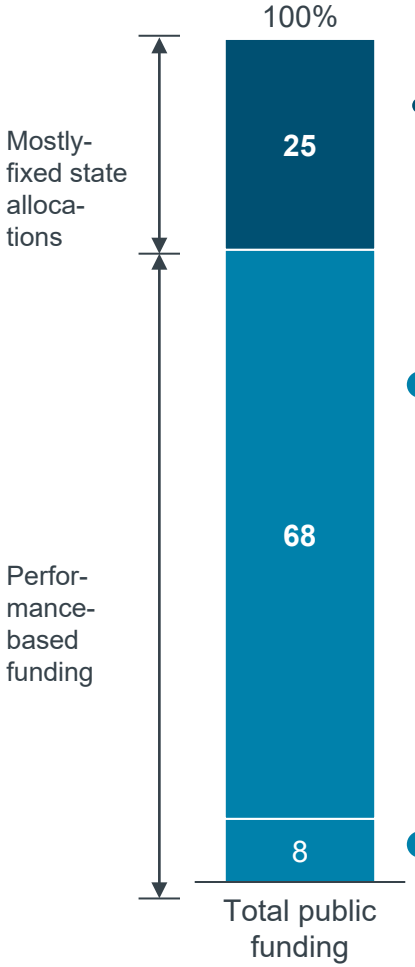
From first iteration (2010-2016, GRAD Act)

- The legislature failed to appropriate extra funds for the performance-based portion, so funds for that part were taken from core (input) funding
- As a result, institutions were overly conservative in setting performance agreement targets
- 2/3 of schools saw an increase in freshmen retention by the fifth year of the program

Sources: University of Louisiana Board of Regents; Centre for Higher Education Policy Studies, Universiteit Twente, Outcomes Based Funding – Strategy Labs and Lumina foundation review, 2019

5.1.3: Case example: Denmark funds through a mix of fixed state allocations and performance based research and education funding

Funding breakdown[1]



Basic grants / other

- Calculated as 25% of the educational funding allocated the individual institutions in 2017
- Will be re-evaluated in 2023

Student activity based grant

- 'Taxi-meter' system allocates funds based on students passed exams. Exams are accredited by a national body (EVA)
- Funding is subtracted for students who do not complete degrees on time
- Taxi-meter tariffs and bonuses vary by groups of academic fields (e.g. STEM vs humanities)

Results-based grant

- Based on two indicators:
  - Duration of study: average time for students to complete studies against institution baseline target (prescribed length of program + 3 months)
  - Employment: rate of employment for graduates against general national rate of employment

Context

- With the introduction of the University Act in 2003, universities became state-financed self-owned institutions with more autonomy
- In 2006, the Globalization Council announced a strategy to link public funding to quality / performance, increase participation rates, improve completion times, double the number of PhDs, stimulate internationalization and implement an accreditation system
- In 2017, a grants reform increased allocations to roughly 75% performance-based

Lessons learned

2000-2014

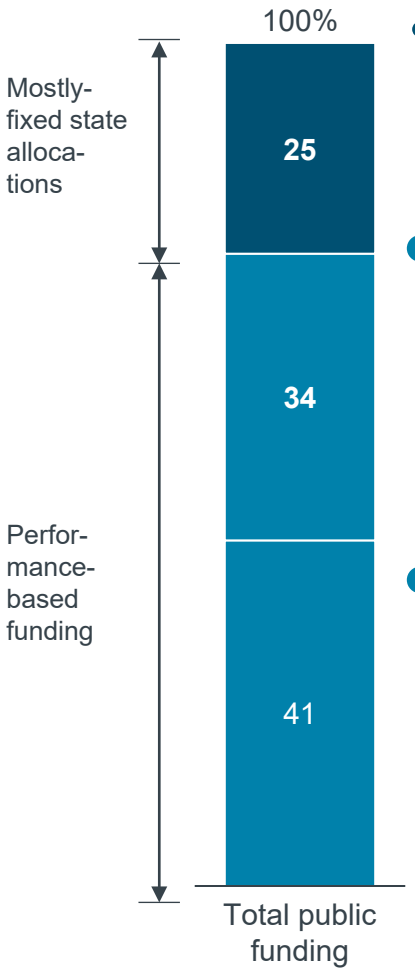
- 2007-2013 average annual increase in external research funding by 10% [not proven causality]
- Research publication counts have increased
- 2006-2014 average annual increase in 25-year-olds with completed Bachelor's of 7.71%
- National budget allocation to higher education has increased in proportion with the growth in number of students in the system

1. Funding breakdown is for research universities as of 2017

Sources: Center for Higher Education Policy Studies, Universiteit Twente; Ministry of Higher Education and Science

5.1.3: Case example: Finland funds through a mix of fixed state allocations and performance based research and education funding

Funding breakdown[1]



Other education and science-related considerations (weight %)

- Strategic development (10%)
- Field-specific funding (8%)
- National duties (7%)

Outcome-driven research funding

- Scientific publications (13%)
- Number of PhDs (9%)
- Competitive research funding (9%)
- International teaching and research personnel (2%)
- PhD degrees awarded to foreign nationals (1%)

Performance-based education

- Master's degrees (14%)
- Fast proceeding students (12%)
- Bachelor's degree (6%)
- Student feedback (3%)
- Study credits in open universities and non-degree programs (2%)
- Number of employed graduates (1%)

Context

- University reform in 2009; Aalto and Tampere University of Technology became entities under private law, other universities chose to become public corporations
- The funding for universities was adjusted in 2013: more emphasis was put on internationalization, effectiveness, and quality
- Agreement terms for university funding and follow-up cover three years, actual period is 2013-2016

Lessons learned

2009 – 2016

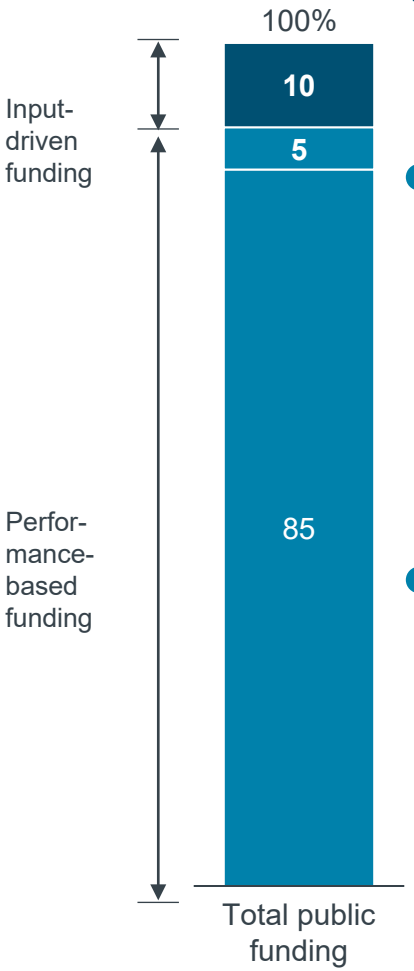
- Due to PBF metrics, there was a stark drop in research publications in the Finnish language (and a drastic increase in English publications)
- Similarly, there was an increase in level 0 and level 1 journals compared to previous preference for level 3 journals: researchers published material much more liberally to achieve metrics
- PBF also generated more pressure to get students "through the system quickly"
- State budget for 2016 cut funding to universities and education in general

1. Funding breakdown is for research universities as of 2017

Sources: Center for Higher Education Policy Studies - Performance based funding, Ministry of Education Finland, European University Association Following the money? Performance-based funding and the changing publication patterns of Finnish academics, Mathies, Kivisto, & Birnbaum, 2019

5.1.3: Case example: Tennessee has one of the most aggressive performance based funding models

Funding breakdown



Fixed line budget items

- Operations & maintenance
- Equipment
- Utilities

Quality outcomes

- Quality of student learning and engagement
  - General education standards
  - Major fields programmes
  - Accreditation
  - Student satisfaction surveys
  - Graduate employment
- Quality of student access and success
  - Students from underrepresented groups

Completion outcomes

- Student progression: 24 credit hours
- Student progression: 48 credit hours
- Student progression: 72 credit hours
- Bachelor's degrees
- Master's degrees
- Doctoral / Law degrees
- Research / Grant funding
- Student Transfers
- Degrees per 100 FTE
- Graduation rate

Context

- State was amongst lowest ranked in educational attainment
- Launched in 2010 as part of overarching reform to transform public higher education and Tennessee's Drive to 55, an initiative aimed at increasing the state's education attainment rate to 55 percent by 2025
- Expanded on first iteration of system (2010-2015), shifted from over 60% input driven to 10% input driven
- Second iteration of PBF is almost entirely output-based; funds are distributed based on institution's improved performance compared to previous years and other institutions

Lessons learned/impacts

Iteration outcomes-based funding (2010-2015)

- Bachelor's degrees awarded increased by 4.5% p.a. (previously 2.6% p.a.)
- Associate degrees awarded have increased by 10.7% p.a. (previously 2.8% p.a.)
- Institutional changes in academic policies and student services
- Possible weakening of academic standards and increasing compliance costs

Source: Tennessee Higher Education Commission; Center for Higher Education Policy Studies

5.1.3: Roadmap

Initiative: Implement a clear, transparent funding allocation model

Activity	Action	Month 0-6	6-12	12-18	18-24	24-30	30-36	36-42	RACI*
Refine base funding allocation model and identify additional funding envelopes for strategic priorities	Refine base funding allocation model for upcoming budget year	■	■		■		■		AAE Strategy Implementation Group (SIG) (R, A)
	Calculate expected allocation and incorporate stop loss provisions	■	■		■		■		
	Identify potential for separate funding envelopes or grants to fund strategic priorities	■	■		■		■		
	Determine phase in timeline	■	■		■		■		
Communicate funding model and process to institution and board stakeholders	Share projected allocation and model with institutions		■		■		■		AAE SIG (R, A), Institutions (C)
	Address stakeholder questions and concerns		■		■		■		
	Prepare communications plan for broader stakeholder group (e.g., students)		■	■					
	Communicate funding allocation model broadly			■					
Pilot funding allocation model	Pilot funding allocation model for upcoming FY		■		■		■		AAE (R, A)
Solicit stakeholders for feedback and adapt for future allocations	Gain any relevant stakeholder approvals on fund allocation		■		■		■		AAE SIG (R, A), Institutions (C)
	Solicit feedback from stakeholders on implementation			■	■	■	■	■	

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5.1.4: Implement a performance-based funding model

Initiative overview: AAE can consider implementing a performance based funding model under which a portion of CAG funding is tied to performance. AAE can enter into investment management agreements (IMAs) with the PSIs that define performance targets

Case for change: There is a desire for a transparent, clear funding model. A PBF model is a more accountable and transparent funding model and aligns grant funding to desired outcomes. Other jurisdictions that have implemented PBF have seen modest effects when bonuses are provided for specific degree fields, but these need to be balanced with potential unintended consequences[1].

Design considerations

- Metrics, targets, and weighting, including the balance of progression v. completion metrics and equity metrics (e.g., enrolment for underrepresented students)
- % of funds allocated through PBF and phase-in (e.g., year 1 – 0% or a learning year, year 2 – 15%, year 3 – 25%, year 4 – 35%, year 5 – 40%)
- Stop-loss guarantees to prevent institutions from losing more than a specified amount in the first years of implementation

Risks and mitigation strategies

- Lack of institutional support // Involve institutions in determining PBF metrics and targets
- Funding instability // Implement stop-loss guarantees and a gradual phase-in
- Institutions increase admission selectivity to better position themselves to achieve outcomes // Include equity metrics (e.g., enrolment of underrepresented students)
- Metrics do not incent outcomes // Model metrics off successful PBF implementations and create a process to gather feedback and evaluate and adjust the model
- Gaming of incentive structure // Ensure metrics do not encourage institutions to optimize for quantity over quality (e.g., avoid time-bound metrics that are more easily gamed)

Interdependencies

- Coordination with other initiatives that affect institutional revenue generation Existing institutional data collection and reporting timelines will need to be coordinated with PBF allocations

Potential steps to implementation

Owner: AAE Strategy Implementation Group (SIG)

1. Refine PBF model, metrics, and targets to account for best practices and institutional differences
2. Determine % of funds allocated through PBF over a phase-in timeline
3. Syndicate PBF model and metrics with system
4. Draft and sign investment management agreements
5. Set up reporting and monitoring infrastructure to track performance and solicit feedback from stakeholders
6. Adjust PBF model and/or implementation as needed through scale-up

1. Australian Government, Department of Education, Skills and Employment; Pennsylvania State System of Higher Education; Performance-Based Funding in American Higher Education, Ortagus/Kelchen/Rosinger/Voorhees, 2020

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5.1.4: Performance-based funding (PBF) best practices

Best practices for designing and implementing PBF models

1. **Choose metrics wisely:**
   - **Select 3-10** metrics that are tailored to incent the outcomes desired and can be tracked easily
   - **Ensure a mix of progression and completion metrics** so that there are leading and lagging indicators. Overemphasizing completion metrics can adversely affect low-performing institutions given the time lag to see improvement in completion rates
   - **Commit to equity metrics** (e.g., enrolments and completions for historically underserved students) to offset potential unintended consequences of institutions increasing admission selectivity

2. **Implement with financial stability in mind:** Plan the ramp up of performance based funding over multiple years to balance incentivizing behavior and potential disruptions to institutional budgets. Stop loss provisions are common features of PBF models used offset potential funding instability during the first years of phase-in.

3. **Be prepared to provide "start-up capital"**: Over the first 3-5 years of implementation, institutions may need to significantly change their operations in order to achieve the performance targets. Many systems set-aside funds (e.g., grants, loans) to provide institutions with capital needed to adapt operations

4. **Engage stakeholders early and often:** Conduct extensive stakeholder engagement to ensure that institutions understand and support the new funding model. Create channels for ongoing feedback and mechanisms to incorporate feedback into the model and/or implementation process to improve effectiveness

5.1.4: Lessons learned from US performance-based funding

Trends in PBF in the US

32 states have some type of PBF system

Transition from incremental to punitive PBF model:

"PBF 1.0" started in 1990s and 1% to 5% of funding was typically allocated as 'bonus' funding to base amount

"PBF 2.0" began in 2000s, places a portion of base state appropriations at risk in an effort to incentivize change

Both methods present an opportunity to include system-specific goals, but PBF 2.0 is more common as it is more resilient to economic downturns

Percentage of funding linked to performance:

Proportion: studies recommend between 5% and 25%1 however states vary as listed below2:

15 states – <5%

11 states – 5-20%

6 states – 20%+

18 states – none

Common metrics

Metrics are generally a balance between progression- and completion-focused metrics, with 2/3 of states also including equity metrics. Common metrics include:

- Degree completion
- Student retention
- Community college students who transfer to a 4-year institution
- Credit hours accumulated
- Graduation in specific (e.g. high-demand) fields

Results*:

Retention and graduation: null or modestly positive,

slightly positive for PBF programs that provide bonuses for specific degree fields (e.g. STEM)

Access: often unintended consequences

(e.g. institutions respond to PBF by raising admissions standards, which can affect underserved sub-groups

*According to PBF in American Higher Ed report, based on a study of 46 articles examining PBF in America over 21 years

1. Higher Education Outcomes-based Funding Models and Academic Quality, Lumina Foundation, 2016
2. Performance-Based Funding in American Higher Education, Ortagus/Kelchen/Rosinger/Voorhees, 2020

5.1.4: Case examples: Two different approaches to performance-based funding

CASE EXAMPLES

Jurisdiction	Description of model	Metrics used	Results / Lessons learned
Australian Government, Department of Education, Skills and Employment	**$7 billion** annually accessible without any reference to institution performance **$17 billion total** available annually for higher education and research[1] **Incremental model** (acts as bonus funding with available amounts increasing over time) Funding in 2020 is **~$80M, equivalent to 1.36% of total funding** and will ultimately **reach 7.5%**	**4 metrics**: Graduate employment outcomes (40%) Student experience (20%) Student success (20%) Indigenous participation (20%)	New model launched in 2020 and will be phased in over ~7 years. Expected productivity gains from **improving graduate employment outcomes and lifting completion rates are worth an estimated $3.1 billion** a year by 2030[2]
Pennsylvania State System of Higher Education	**Punitive model** (funding is taken away if performance is not achieved) **8% (36M) funding** set aside in state appropriation All of the targets had to be met in order for colleges to receive a share of these funds Applies to 14 universities and colleges	**5 key measures**: Number of degrees awarded Graduation rates Reduction in achievement gaps Diversity of the faculty Private donations **5 performance indicators unique to the University**	**10% increase in overall graduation** rates, **15% increase in retention rates for Hispanic students**. Many colleges have noted a positive change in institutional culture—focused on **solving issues and increasing efficiency**[3] System moved **to 5 common and 5 institution-specific metrics from 8 metrics** to better address unique institutional goals Model also **reduces competition over performance funds** by eliminating policy that provided additional funding for colleges that exceed performance measures

Considerations

Design choices will be critical:

- The performance-based **funding percentage** will depend on institution and system financial health
- **Performance criteria** need to be tailored to initiations, balance progression and completion, and ensure support for underserved learners

1. Performance-Based Funding for the Commonwealth Grant Scheme, education.gov.au
2. Fund (as a percentage of Commonwealth Grant Scheme funding) will grow at a rate equal to population growth until it reaches 7.5% of CGS, Source: The future of Australian universities focuses on achievement, Ministers Media Centre, Department of Education, Skills and Employment, 2019
3. Performance-Based Funding of Higher Education, Centre for American Progress, 2012

5.1.4: Roadmap

Initiative: Implement a performance-based funding model

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24	Month 24-30	Month 30-36	Month 36-42	RACI
Refine PBF model, metrics, and targets to account for best practices	Refine institutional metrics and targets; hire PBF experts to provide input if needed								AAE SIG (R, A)
	Determine process for re-allocation (if pursued)								
	Determine stop loss provisions								
Determine phase-in	Determine % of funds allocated through PBF over a phase-in timeline								AAE SIG (R, A)
Syndicate PBF model and metrics with system	Syndicate metrics and targets with institutional leadership								AAE SIG (R, A), Institutions (C)
	Prepare communications plan for broader stakeholder group (e.g., students, faculty)								
	Communicate PBF model to stakeholders								
Draft and sign IMAs	Draft IMAs								AAE (R, A), Institutions (R)
	Review and sign IMAs								
Set up reporting and monitoring infrastructure to track performance and solicit feedback from stakeholders	Set up appropriate data collection and tracking processes								AAE SIG (R, A), Institutions (C)
	Onboard institutions								
	Collect and track data on performance								
	Solicit feedback from institutions								
Adjust PBF model and/or implementation as needed	Adjust PBF model as needed								AAE SIG (R, A)
	Adjust implementation based on feedback								

5.2.1: Deconsolidate institution financials to provide institutions with greater financial flexibility to grow own-source revenues

Initiative overview

AAE can consider financial deconsolidation as one mechanism to provide institutions greater flexibility to grow own-source revenues and improve financial sustainability. In doing so, GoA will no longer have institutions accounted for in its financial statements and will no longer appoint the majority of institution boards

Case for change:

AAE would like institutions to achieve greater financial sustainability through growing own source revenues. Due to financial consolidation, institutions must seek approval to sell/lease property, establish new entities, and borrow, and face restrictions on use of reserves. Transfers from reserves are not considered in-year revenues which forces institutions to create an in-year deficit or find an in-year revenue source to use reserves for anything from large expenditure projects to deferred maintenance. Further, unspent unrestricted donations are accounted for as reserves which makes spending these donations in the fiscal year after they are given more difficult. Institutions also incur costs for financial reporting and management related to consolidation

Design considerations

- Which institutions to deconsolidate
- The percentage of the board to be appointed by the government and board chair selection

Risks and mitigation strategies

- Potential credit downgrade for GoA // Bank of Canada announced that interest rates will remain near zero until 2023 so the impact on short-term borrowing may be lower. Further, a phased approach to deconsolidate all institutions over 10 years could stagger the impact on the balance sheet
- Perceived reduction in accountability // Maintain accountability through the remaining government appointed board members, investment management agreements, and reporting

Interdependencies

- The GoA will need to conduct assessment of the impact of deconsolidation on Moody's credit rating for the GoA
- Board appointment process

Potential steps for implementation

Owner: AAE Strategy Implementation Group (SIG)

1. Evaluate benefits and considerations of different deconsolidation options including assessment of the impact on Moody's credit rating
2. Finalize implementation plan for deconsolidation including implications for board appointments and adjustments to processes for other controls
3. Obtain approvals needed to implement deconsolidation and deconsolidate
4. Maintain accountability through investment management agreements and monitor risk through reporting

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5.2.1: Options for deconsolidation

Option	Rationale / Benefits	Potential risks/mitigation
No institutions (no change)	GoA can retain strong oversight with no risk of credit downgrade resulting from deconsolidation	**Deter and/or slow down financially consolidated institutions from generating own-source revenue** // Address restrictions on use of reserves and streamline approvals for commercial business ventures, borrowing, and disposition of land
CARUs only	Deconsolidation better enables institutions to strategically invest, manage capital assets, borrow for long-term financing, and ultimately grow own-source revenues. CARUs are perhaps best positioned to generate own-source revenue given their size and assets. By keeping remaining institutions consolidated, GoA can retain strong oversight and limit potential impact on its balance sheet	**Deter and/or slow down remaining institutions from generating own-source revenue** // Address restrictions on use of reserves and streamline approvals for commercial business ventures, borrowing, and disposition of land **Loss of momentum to financially deconsolidate remaining institutions** // Lay the policy groundwork to keep the option to deconsolidate all institutions open (if desired in the future) **Potential credit downgrade for GoA** // Bank of Canada announced that interest rates will remain near zero until 2023 so the impact on short-term borrowing may be lower
All institutions	Deconsolidation better enables institutions to strategically invest, manage capital assets, borrow for long-term financing, and ultimately grow own-source revenues. The decision to deconsolidate all institutions avoids the need to start a second deconsolidation process from the ground up in the future. Further, GoA can deconsolidate all institutions but implement in a phased approach	**Potential credit downgrade for GoA** // Bank of Canada announced that interest rates will remain near zero until 2023 so the impact on short-term borrowing may be lower. Further, a phased approach to deconsolidate all institutions over 10 years could stagger the impact on the balance sheet

5.2.1: Roadmap

Initiative: Deconsolidate institution financials to provide institutions with greater financial flexibility to grow own-source revenues

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24	RACI*
Evaluate benefits and considerations of deconsolidation options	Test deconsolidation options with different stakeholders					AAE SIG (R, A), Treasury (R), Auditor General (C), Controller (C), Institutions (I)
	Work with Treasury to estimate financial / credit implications of deconsolidation					
Finalize implementation plan for deconsolidation	Confirm which institutions to deconsolidate					AAE SIG (R, A), GoA (R)
	Determine adjustment to board appointment process such that government appoints minority of the board					
	Determine adjustments to other areas of government control (e.g., borrowing) as a result of deconsolidation					
	Obtain relevant approvals					
Obtain approvals needed to implement and deconsolidate	Prepare guidelines for institutions on implications to processes and communicate to stakeholders					AAE SIG (R, A), GoA (R)
	Action deconsolidation					
Maintain accountability	Maintain accountability through investment management agreements and monitor risk through reporting					AAE Department (R, A)

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5.2.1.1: Streamline surplus spending request and approval process to enable institutions to strategically spend surpluses

Initiative overview:

AAE will create a standard process, templates, requirements, and timeline, tied to the budget submission process, to provide institutions with guidance to submit requests to strategically spend their surplus. AAE will seek Treasury support to carve out a contingency fund at the front end of the budget cycle should an institution develop a strong business case to spend in deficit. This will remove the need for AAE to seek approval from Treasury after the budget submission process (unless there is an extraordinary circumstance).

Case for change:

Financial consolidation creates barriers for institutions to generate own-source revenue and achieve greater financial sustainability. Institutions are required to seek approval from AAE to run a deficit budget, but there is no standardized process or timeline which can be inefficient and discourage institutions.

Design considerations

- Process, requirements, and timeline for submission
- Whether to seek a contingency carve out and the amount

Risks and mitigation strategies

- New process incentivizes institutions to submit requests without strong business case // Provide clear expectations for business case requirement and templates
- Insufficient flexibility to respond to extraordinary event // Establish clear guidelines for requests in extraordinary situations and expedite review of request

Interdependencies

- Budgeting cycle
- If deconsolidation is pursued, this initiative will not need to be pursued

Potential steps to implementation

Potential activities	*Stakeholders**
Create a process map and identify areas to streamline	AAE Department (R, A), Treasury (C), Institutions (C)
Determine contingency fund design choice	AAE Department (R, A), Treasury (C)
Pilot new surplus spending request and approval process	AAE Department (R, A), Treasury (C), Institutions (I)

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5.2.1.1: Roadmap

Initiative: Streamline surplus spending request and approval process to enable institutions to strategically spend surpluses

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24	Month 24-30	Month 30-36	Month 36-42
Create a process map and identify areas to streamline	Outline standard process for submissions and review							
	Create templates and guidelines for intuitions							
	Train relevant stakeholders at institutions and those reviewing submissions on new process							
Determine contingency fund design choice	Determine whether to carve out contingency fund							
	Work with Treasury to determine process and obtain support							
	Carve out contingency							
Pilot new surplus spending request and approval process	Pilot new process in upcoming budget cycle							
	Monitor implementation, solicit feedback, and improve as necessary in next year							

5.2.1.2: Streamline review of Commercial Enterprises (e.g., commercial land development, real estate, overseas campuses) from 12-18 months to 3-6 months

Initiative overview:

Institutions have the flexibility to pursue new ventures to generate own-source revenue with the appropriate oversight. AAE can consider two options: 1) continue to streamline the review and approval process for commercial enterprises from 12-18 months to 3-6 months or 2) remove commercial enterprises from requiring minister approval

Case for change:

Financial consolidation creates barriers for institutions to generate own-source revenue and achieve greater financial sustainability. While Auxiliary/Ancillary Services and Academic Enterprises do not require AAE approval, Commercial Enterprises require extensive approval that is a pain point for institutions. A streamlined process for Commercial Enterprises will provide additional flexibility to institutions while ensuring associated risks of new ventures are considered

Design considerations

- Level of AAE oversight over institutional decisions to pursue commercial enterprises
- If AAE maintains oversight through reviews, consider which review processes can be shorted (e.g., require fewer layers of sign-off) and how (e.g., provide templates for business cases)

Risks and mitigation strategies

- Quality of the review and assessment of risk // Triage areas that require additional oversight due to risk in the application process
- Loss of charitable status due to commercial enterprise // Maintain AAE oversight through a streamlined approval process rather than no oversight
- Commercial enterprise fails putting institution at risk // Maintain AAE oversight through a streamlined approval process rather than no oversight

Interdependencies

- If deconsolidation is pursued, this initiative will not need to be pursued

Potential steps to implementation

Potential activities	*Stakeholders**
Determine level of AAE oversight over commercial enterprises	AAE Department (R, A)
Revise and approve new process; detail to follow for scenarios in which AAE maintains or relinquishes oversight	AAE Department (R, A)

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5.2.1.2: Roadmap

Initiative: Streamline review of Commercial Enterprises (e.g., commercial land development, real-estate deals, overseas campuses) from 12-18 months to 3-6 months

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24
Determine level of AAE oversight over commercial enterprises	Determine level of oversight over commercial enterprises and associated risks				
Revise process: **Activities if relinquishing oversight**	Revise self-generated revenue process to no longer require approval				
	Provide guidance on implications of new changes for relevant stakeholders				
	Externally monitor risk of commercial enterprise activity				
Revise process: **Activities if maintaining oversight**	Identify review processes that can be shorted				
	Create updated process and supporting material (e.g., templates)				
	Train relevant stakeholders at institutions and those reviewing submissions on new process				
	Monitor implementation, solicit feedback, and improve as necessary				

5.2.4: Increase tuition flexibility and needs-based student aid

Initiative overview: In order to enable greater financial sustainability and align tuition fees to market rates, institutions could have discretion to set tuition levels for their programs within guardrails set by the government such as increases that are capped or tied to CPI. Total deregulation is not suggested given the range of risks. If tuition flexibility within guardrails is pursued, AAE will need to increase needs-based financial aid to ensure that accessibility is not compromised as a result of potential tuition flexibility.

Case for change: Tuition flexibility can be considered as one mechanism to manage the rising cost of post-secondary education. Some of Alberta's PSI programs are not charging market competitive rates (AB undergrad tuition is 22% below ON and grad tuition is 30% below BC)[1]. Specifically, tuition in AB is 43% of government contribution to institutions, that same figure is 157% for ON and 96% for BC[2]. However, guardrails and financial aid must accompany tuition flexibility as financial stress is the number one concern faced by students.[3]

Design considerations

- Level of flexibility: E.g., market-based exceptions to current regulation policy, flexibility for grad programs, tie tuition increases to CPI
- Source of financial aid (e.g., new investment, redistribution from merit-based aid, redistribution from savings from reduction of tuition and education tax credits)

Risks and mitigation strategies

- Reduction in participation // Establish guardrails on tuition growth and support institutions to take a data-based approach to determine tuition increases
- Financial aid is insufficient; access decreases and student debt increases // Increase financial aid to maintain or lower current median debt load
- Price differential between programs affects mix of graduates available to meet labour market needs // Adjust price differentials or financial aid to nudge students into high demand programs

Interdependencies

- Students' ability and willingness to pay
- Market rates for similar programs in other jurisdictions
- Sources of existing financial aid (e.g., province, national, institutional)

Potential steps to implementation

Owner: AAE Strategy Implementation Group (SIG)

1. Convene department team with expertise on tuition regulation and financial aid to refine options
2. Propose options to relevant government committees and stakeholders
3. Determine whether to pursue alternative tuition option than current state based on stakeholder input
4. If pursued, confirm incremental investment for financial aid and administer in parallel to change to tuition flexibility

Implementation dependent on design choices made and flexibility provided

1. StatCan table 37-10-0045-01: Tuition fees for degree programs, 2018/2019
2. StatCan table 37-10-0026-01: Revenues of universities and degree-granting colleges (x 1,000), 2018/2019
3. Alberta2030: Building Skills for Jobs student survey

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(A) Accountable - Stakeholder who owns the work and signs off when the action is complete
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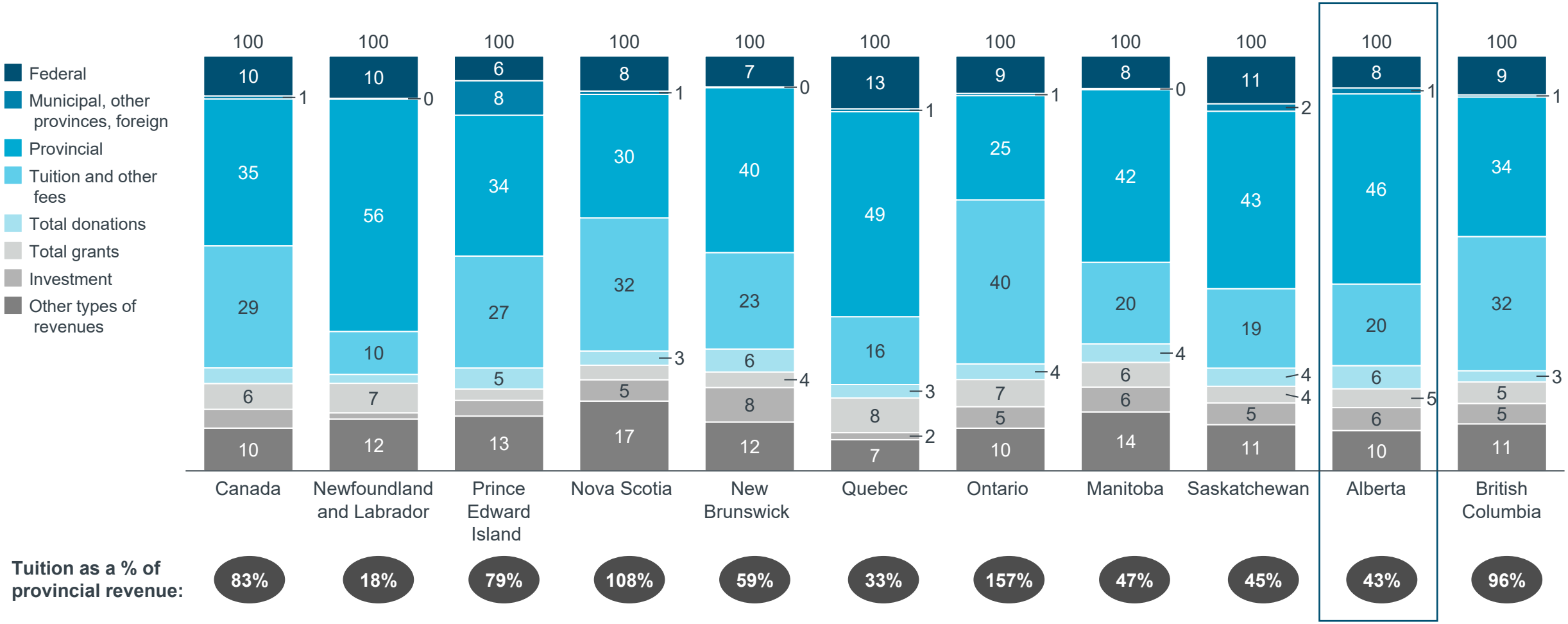
5.2.4 Alberta institutions rely heavily on provincial funding relative to tuition revenue compared to other provinces

Tuition as a % of provincial revenue is 43% for Alberta, compared to 96% in BC, and 157% in ON



Source: StatCan Revenues of universities and degree-granting colleges, Table: 37-10-0026-01 (2018/2019)

5.2.4: Alberta's undergraduate and grad tuition is below national average, while college tuition is higher than national average

Province	Weighted average undergraduate tuition incl. compulsory fees (2020/21)[1]	CAGR (15/16-20/21)[1]	Graduate tuition incl. compulsory fees (2020/21)[1]	CAGR (15/16-20/21)[1]	College tuition excl. compulsory fees (2020/21)[2]	CAGR (15/16-20/21)[2]
Nova Scotia	9,651	4.0%	10,579	2.4%	3,515	2.0%
Ontario	8,899	0.3%	10,576	0.9%	2,726	-0.3%
Saskatchewan	8,596	2.6%	4,626	2.1%	4,957	2.6%
New Brunswick	8,474	3.5%	7,285	2.6%	3,380	1.2%
Prince Edward Island	7,532	1.8%	5,746	0.7%	4,160	1.5%
Alberta	7,278	**0.9%**	7,855	**2.3%**	4,766	**3.9%**
British Columbia	6,808	2.0%	10,235	2.3%	3,420	1.6%
Manitoba	5,882	3.9%	5,963	2.3%	3,325	6.9%
Quebec	4,184	2.4%	4,260	2.9%	0	N/A
Newfoundland & Labrador	3,827	4.2%	3,471	3.9%	1,452	0.0%
Canada	7,525	1.1%	8,175	1.8%	4,628	2.2%

Key takeaways:

- Undergrad and grad **tuition are below national averages,** with grad tuition ~35% below that of ON and BC
- **AB undergrad tuition increases have been among the slowest** due to tuition freezes
- However, Alberta has one of the **highest college tuition rates** and is growing faster than national average

1. Statcan, Table: 37-10-0003-01: Canadian and international tuition fees by level of study, 2020/2021, Statcan, Table: 37-10-0046-01: Canadian students additional compulsory fees by level of study, 2020/2021
2. AAE procured from 3rd party source

5.2.4: Most provinces allow for institutional autonomy up to a certain limit – Ministry involvement is more common within smaller systems

Province	% of revenue from tuition	Tuition regulation overview	Base tuition regulation	Annual increase limits	Exceptions	Aux. and ancillary fee limits
BC	30%	Institutions set initial tuition fees for new programs. Annual tuition increases are limited to inflation	New programs exempt; Ministerial approval required to increase existing programs	Inflation	Int'l students, new programs	Inflation
MB	18%	Tuition required to be lower than average of institutions in any province west of MB	May not exceed lowest average fees in any province west of MN	5%+ CPI two years in a row	2 Universities, Mennonite College	N/A
NB	24%	Base tuition and annual increases determined and set by institutions, subject to Minister approval	Set by individual institutions, subject to Minister approval	Set by individual institutions, subject to Minister approval	Set by individual institutions	Set by individual institutions
NL	11%	Institutions have flexibility to set tuition; Ministry works closely with boards	Set by individual institutions	Set by individual institutions	N/A	N/A
NS	31%	Tuition raises are regulated on an application basis except graduate, medicine, dentistry, and law programs	No limits on setting base tuition	Max increase of 3%, institutions must apply	Non-N.S., grad students, professional programs	Must be cost-based, Minister approved
ON	38%	Reduction for 19/20 fees (10% lower relative to 18/19 fees). In the past, Ministry has set limits on new program fees and increase limits	10% reduction in fees for 19/20 Previously, new program tuition had to be below the average of existing programs	20/21 freeze Previously: gov. placed a 3% limit on increases from 2016-18	N/A	No compulsory tuition-related ancillary fees
QC	16%	CEGEP (public): Quebec citizens exempt from all fees. Non-QC students pay tuition set by government	Government sets fees for CEGEPS (public) based on budget	Set by individual institutions	Set by individual institutions	Each individual fee capped at ~$30
SK	19%	Institutions have flexibility to tuition	Set by individual institutions	Set by individual institutions	Set by individual institutions	Set by individual institutions

Source: Individual provincial Ministries of Advanced Education websites and policy documents

5.2.4: Options for tuition flexibility

	Current AAE plan	Tuition flexibility for grad programs	Tuition flexibility for undergrad and grad programs
Description	7% maximum average annual tuition increase for 3 years (starting in 2020/21); then annual tuition increases tied to CPI	Tuition flexibility applies to grad degree programs. Institutions can apply for a market-based exception to adjust tuition. Annual increases for all other programs are tied to CPI	Tuition flexibility applies to undergrad and grad degree programs. Institutions can apply for a market-based exception to adjust tuition. Otherwise max annual tuition increases tied to CPI
Rationale	Allow institutions to approach market rates, maintain accessibility and predictability for students. Give time to understand pandemic impacts and AB2030/SFJ changes	Balance accessibility and affordability for students in need with deregulation for select, high-earning programs and close the gap between current grad tuition and average grad tuition in Canada	Likely that most institutions will raise both undergrad and grad tuitions to reach market rates but provides stability/predictability in tying to CPI once market rate is achieved and 'target' tuition level for institutions
Potential risks / mitigation	AB tuition is discounted relative to the market value of the program, limiting non-government revenue generation // Reduce red tape around exceptional tuition increases Reduction in participation // Increase needs-based financial aid to ensure accessibility is not compromised	Reduction in participation // Establish guardrails on tuition growth, increase financial aid Lack of student support // Work with student leaders to understand and address concerns Cost and complexity to administer // Determine appropriate oversight and accountability at AAE and boards Institutions create a 'market anomaly' within AB, resulting in repetitive increases // Set guardrails to disincentivize this behavior from spiraling	Reduction in participation // Establish guardrails on tuition growth and increase financial aid for in need students Lack of clarity in exception review and approval policy // Exemptions should be clearly defined ahead of time Cost and complexity to administer // Determine appropriate oversight and accountability at AAE and boards Institutions create a 'market anomaly' within AB, resulting in repetitive increases // Set guardrails to disincentivize this behavior from spiraling
Estimated financial aid implications (average annual 2020-30)	**Scenario**: 3.5-7% annual increases in tuition between 2020-2024, followed by CPI[1] FLEs to be retained through financial aid: **1,000 to 3,000** Incremental financial aid[2]: **$20M to $31M**	**Scenario**: Achieve Canada national average or Ontario grad tuition[3]; all other program increases tied to CPI[1] FLEs to be retained through financial aid : **1,000 to 2,100** Incremental financial aid: **$18M to $20M**	**Scenario**: Achieve Canada national average or Ontario tuition for UG and grad programs[3]; all other program increases tied to CPI[1] FLEs to be retained through financial aid : **1,100 to 2,800** Incremental financial aid: **$28M to $30M**

Total deregulation is not considered given the full range of risks and unpredictable and often undesirable outcomes

1. CPI equated to 5-year average of inflation (1.7%) retrieved from the Bank of Canada, 07/2014 – 07/2019
2. See initiative 1.2.1: Financial Aid
3. Statcan, Canadian and international tuition fees by level of study, 2019/2020

5.2.4: Literature review of tuition flexibility in North America and Australia

Program/ geography	Study and year of publication	Change in enrolment (elasticity)	Notes
4-year, Canada	Tuition elasticity of demand as a tool to manage higher ed institutions, 2014	-0.555%: research institutions -0.88%: comprehensive universities	Focus on publicly-funded universities in Ontario
2-year, USA	Estimating the Average Tuition Elasticity of Enrollment for Two-Year Public Colleges, 2015	-0.263% in credit hour enrolment for all students	
4-year, Canada and USA	Explaining Canada-U.S. Differences in University Enrollment Rates, 2005	-0.15% for both countries	Differences across provinces/states and tuition levels
4-year, 2-year, USA	A comparative analysis of the demand for higher education: results from a meta-analysis of elasticities, 2007	-0.6%	Meta-analysis of 60 studies, mean elasticity is -0.6%
4-year, Canada and USA	Tuition Fees and University Enrollment: A Meta-Analysis, 2017	0%	Meta-analysis of 43 studies, found negligible partial correlation
2-year, USA	College on the Cheap: Consequences of Community College Tuition Reductions, 2017	-0.29%	Effects of community college tuition on college enrolment
4-year, Australia	Students' College Preferences in Response to Tuition Changes, 2017	-0.15%	Analysis of elasticities using changes in tuition policy in Australia in the mid 2000s

Considerations

- While tuition is relatively inelastic, it still has a measurable effect on participation which makes needs-based financial aid imperative
- Most-affected student groups are consistently underrepresented learners (e.g. minorities, low-income background)

Alberta

Contents

6: Governance

DRAFT

Flagship initiatives

Objectives	Potential initiatives for consideration
Objective 6.1: Establish a world-class governance framework to sustain system outcomes	1. **Deconsolidate institution financials**[1] to provide institutions with greater financial flexibility to grow own-source revenues 2. **Reinforce and strengthen mandates** to provide clear accountabilities for system- and institution-level outcomes in teaching, research, and collaboration 3. **Establish a system-level, independent advisory council to the Ministry** on strategic priorities and the implementation of system-wide initiatives 4. **Revise institutional board appointment and composition** to enable institutions to appoint a majority of the board, use a skillset matrix to inform appointments, and lengthen board tenure to minimize turnover

1. Also included in Goal 5: Financial Sustainability

6.1.1: Deconsolidate institution financials to provide institutions with greater financial flexibility to grow own-source revenues

Initiative overview

AAE can consider financial deconsolidation as one mechanism to provide institutions greater flexibility to grow own-source revenues and improve financial sustainability. In doing so, GoA will no longer have institutions accounted for in its financial statements and will no longer appoint the majority of institution boards

Case for change:

AAE would like institutions to achieve greater financial sustainability through growing own source revenues. Due to financial consolidation, institutions must seek approval to sell/lease property, establish new entities, and borrow, and face restrictions on use of reserves. Transfers from reserves are not considered in-year revenues which forces institutions to create an in-year deficit or find an in-year revenue source to use reserves for anything from large expenditure projects to deferred maintenance. Further, unspent unrestricted donations are accounted for as reserves which makes spending these donations in the fiscal year after they are given more difficult. Institutions also incur costs for financial reporting and management related to consolidation

Design considerations

- Which institutions to deconsolidate
- The percentage of the board to be appointed by the government and board chair selection

Risks and mitigation strategies

- Potential credit downgrade for GoA // Bank of Canada announced that interest rates will remain near zero until 2023 so the impact on short-term borrowing may be lower. Further, a phased approach to deconsolidate all institutions over 10 years could stagger the impact on the balance sheet
- Perceived reduction in accountability // Maintain accountability through the remaining government appointed board members, investment management agreements, and reporting

Interdependencies

- The GoA will need to conduct assessment of the impact of deconsolidation on Moody's credit rating for the GoA
- Board appointment process

Potential steps for implementation

Owner: AAE Strategy Implementation Group (SIG)

1. Evaluate benefits and considerations of different deconsolidation options including assessment of the impact on Moody's credit rating
2. Finalize implementation plan for deconsolidation including implications for board appointments and adjustments to processes for other controls
3. Obtain approvals needed to implement deconsolidation and deconsolidate
4. Maintain accountability through investment management agreements and monitor risk through reporting

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6.1.1: Options for deconsolidation

Option	Rationale / Benefits	Potential risks/mitigation
No institutions (no change)	GoA can retain strong oversight with no risk of credit downgrade resulting from deconsolidation	**Deter and/or slow down financially consolidated institutions from generating own-source revenue** // Address restrictions on use of reserves and streamline approvals for commercial business ventures, borrowing, and disposition of land
CARUs only	Deconsolidation better enables institutions to strategically invest, manage capital assets, borrow for long-term financing, and ultimately grow own-source revenues. CARUs are perhaps best positioned to generate own-source revenue given their size and assets. By keeping remaining institutions consolidated, GoA can retain strong oversight and limit potential impact on its balance sheet	**Deter and/or slow down remaining institutions from generating own-source revenue** // Address restrictions on use of reserves and streamline approvals for commercial business ventures, borrowing, and disposition of land **Loss of momentum to financially deconsolidate remaining institutions** // Lay the policy groundwork to keep the option to deconsolidate all institutions open (if desired in the future) **Potential credit downgrade for GoA** // Bank of Canada announced that interest rates will remain near zero until 2023 so the impact on short-term borrowing may be lower
All institutions	Deconsolidation better enables institutions to strategically invest, manage capital assets, borrow for long-term financing, and ultimately grow own-source revenues. The decision to deconsolidate all institutions avoids the need to start a second deconsolidation process from the ground up in the future. Further, GoA can deconsolidate all institutions but implement in a phased approach	**Potential credit downgrade for GoA** // Bank of Canada announced that interest rates will remain near zero until 2023 so the impact on short-term borrowing may be lower. Further, a phased approach to deconsolidate all institutions over 10 years could stagger the impact on the balance sheet

6.1.1: Roadmap

Initiative: Deconsolidate institution financials to provide institutions with greater financial flexibility to grow own-source revenues

Activity	Action	Month 0-6	Month 6-12	Month 12-18	Month 18-24	RACI*
Evaluate benefits and considerations of deconsolidation options	Test deconsolidation options with different stakeholders					AAE SIG (R, A), Treasury (R), Auditor General (C), Controller (C), Institutions (I)
	Work with Treasury to estimate financial / credit implications of deconsolidation					
Finalize implementation plan for deconsolidation	Confirm which institutions to deconsolidate					AAE SIG (R, A), GoA (R)
	Determine adjustment to board appointment process such that government appoints minority of the board					
	Determine adjustments to other areas of government control (e.g., borrowing) as a result of deconsolidation					
	Obtain relevant approvals					
Obtain approvals needed to implement and deconsolidate	Prepare guidelines for institutions on implications to processes and communicate to stakeholders					AAE SIG (R, A), GoA (R)
	Action deconsolidation					
Maintain accountability	Maintain accountability through investment management agreements and monitor risk through reporting					AAE Department (R, A)

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6.1.2: Reinforce and strengthen mandates to provide clear accountabilities for outcomes in teaching, research, and collaboration

Initiative overview:

Strengthen and enforce existing sector mandates to provide clear expectations and accountability for teaching, research, and collaboration. AAE can consider maintaining a six sector model or simplifying to a five sector model, and transferring the Specialized Arts sector to another Ministry. To minimize duplication in degrees, enforce mandate for CCCs to offer degrees only in collaboration with degree-granting PSIs. As part of the mandate review, AAE can reassess which institutions belong in each sector and then hold each institution accountable to its mandate following the review.

Case for change:

The six sector model was introduced to differentiate institutions to maximize public investment in post-secondary. When institutions have been permitted to operate outside of their mandates (e.g., CCC offering autonomous degrees), this has led to examples of unnecessary duplication and rise in cost. Differentiated and enforced mandates are important to limit unnecessary duplication

Design considerations

- Sector differentiation for teaching and research
- Mandated collaborations
- Process to evaluate requests for exemption to sector mandates

Risks and mitigation strategies

- Restrictions on programming may adversely affect local access // Encourage collaborative degree programming (in-person or digital) and improve transferability
- Restrictions on programming may limit institutions' ability to launch new programs to generate own-source revenue // Support institutions to grow own-source within their mandates and/or partner with other institutions and share revenues from dual programs
- Mandates are not upheld due to exemptions // Create clear bright lines for exemptions and uphold them

Interdependencies

- Governing structure for the revised sectors
- Funding allocation and performance based funding

Potential steps to implementation

Potential Activities	*Stakeholders**
Refine sector mandates	AAE Department (R, A), Institutions (C)
Test and validate revised mandates with institutions	AAE Department (R, A), Institutions (C)
Establish process to track adherence to mandates	AAE Department (R, A)
Implement mandate revisions	AAE Department (R, A)
Track adherence and adjust as needed	AAE Department (R, A)

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6.1.2: Review of current sector mandates

			CARUs	UUs	IAIs	PIs	CCCs	Arts
Mandate	Teaching	UG Degrees	Required	Required	Optional	Optional	Optional[1]	No
		Grad Degrees	Required	No	Optional	No	No	No
		Apprenticeship	No	No	No	Required	Optional	No
		Diploma	Optional	Optional	Optional	Required	Required	Optional
		Certificate	Optional	Optional	Optional	Required	Required	Optional
		Foundational Learning	No	Optional	Optional	Optional	Required	No
		Non-credential	No	No	No	No	No	Optional
	Research	Discovery	Optional	No	No	No	No	No
		Applied research and scholarly activity	Optional	Optional	Optional	Optional	Optional	Optional
	Collaborations	Support regional access to UG degree programs	Optional	Required	Optional	Optional	Required	No
		Support regional access to foundational learning, diploma, and certificate programming	No	No	No	Optional	Required	No
		Support regional access to polytechnic education	No	No	No	Required	No	No
		Support regional access to specialized arts and culture programming	No	No	No	No	No	Optional

Required — Institution must provide
Optional — Institution may provide
No — Institution may not provide or not referenced in framework

Considerations for mandate revisions

CARUs differ from all other sectors due to mandate to provide grad degrees and option to conduct discovery research

UUs and CARUs are required to offer UG degrees, but only UUs are required to support regional access to UG programs

PIs are required to provide apprenticeships, and CCCs have the option to do so as well

CCCs are supposed to partner to provide UG degrees, but have been able to do so autonomously with GoA approval

Specialized Arts do not offer credentialed programs

IAIs have the option to provide any programming except apprenticeship

1. Primarily in collaboration with a degree granting institution, or autonomously under particular conditions and subject to Ministerial approval.

Source: Roles and Mandates Policy Framework, PSLA

Potential fit for Alberta

6.1.2 Options for a sector model

Sectors	Description	Rationale / Benefits	Considerations / Risks
6-sector model	Maintain mandates for CARU, UU, PI, IAI, SA Enforce that CCCs offer degrees only in collaboration	Differentiate mandates to reduce unnecessary duplication and incent collaboration Minimizes disruption to the system	Requires institutions to collaborate to ensure access to degrees at CCC Potential duplication in diploma/ certificates between CARU, UU, PI, and CCC
5-sector model: **CARUs, UUs, PIs, CCCs, IAIs**	Maintain mandates for CARU, UU, PI, IAI Enforce that CCCs offer degrees only in collaboration Transfer Specialized Arts sector to another Ministry	*See rationale for 6-sector model plus:* Remove sectors that do not offer credentials	*See considerations for 6-sector model plus:* Potential loss of diverse programming option within post-secondary
4-sector model: **CARUs, UUs, PIs, CCCs**	Maintain mandates for CARU, UU, PI Enforce that CCCs offer degrees only in collaboration Transfer Specialized Arts sector to another Ministry Remove IAI sector; maintain funding or offer to be private	*See rationale for 5-sector model plus:* Recognize that IAIs are governed differently, but maintain funding relationship to incent collaboration	*See considerations for 5-sector model plus:* If IAIs were to become private, there may be a reduction in student choice and incentive for IAIs to collaborate with other PSIs
3-sector model: **CARUs, UUs, PIs/CCCs**	Maintain mandates for CARU, UU Combine CCC and PI sector Transfer Specialized Arts sector to another Ministry Remove IAI sector; maintain funding or offer to be private	Differentiate mandates for CARU/UU to reduce unnecessary duplication Provide more flexibility for CCC to innovate which can increase revenue and local program offerings Remove sectors that do not offer credentials Recognize that IAIs are governed differently, but maintain funding relationship to incent collaboration	Duplication of program offerings between CCC and PI which may result in increased cost Potential duplication in diploma/ certificates between CARU, UU, PI/CCC If IAIs were to become private, there may be a reduction in student choice, loss of diverse programs, and incentive for IAIs to collaborate with other PSIs
2-sector model: **CARUs/UUs, PIs/CCCs**	Combine CARU and UU sector Combine CCC and PI sector Transfer Specialized Arts sector to another Ministry Remove IAI sector; maintain funding	Expand mandates for institutions which can increase innovation, revenue and local program offerings Remove sectors that do not offer credentials Recognize that IAIs are governed differently, but maintain funding relationship to incent collaboration	Lack of differentiation or clarity on institutional mandates may lead to less collaboration, increase cost, and unnecessary duplication unless there is a forcing governing structure If IAIs were to become private, there may be a reduction in student choice, loss of diverse programs, and incentive for IAIs to collaborate with other PSIs

6.1.3: Establish a system-level, independent advisory council to the Ministry on strategic priorities and the implementation of system-wide initiatives

Initiative overview:

AAE can consider establishing a system-level, independent advisory council that brings together a representative and non-partisan group of stakeholders to advise the Ministry on strategic priorities and initiative implementation. The council can provide a perspective to ensure that the system is strategically responding to global trends and local needs. AAE will also leverage its role to set mandates and performance metrics, allocate funding, and review and approve programs to incentivize institutional collaboration and reduce unnecessary duplication.

Case for change:

There are five key goals Alberta's governance structure must seek to accomplish: 1) increase institutional collaboration 2) reduce unnecessary duplication, 3) reduce politicized decision-making, 4) reduce red-tape, and 5) maintain institutional identity and local representation. Through enforcing mandates, allocating funding, setting performance metrics, and strengthening program review, AAE is well positioned to drive these outcomes and support implementation of system-wide initiatives. An independent advisory council will provide the consultative input needed to drive towards these goals.

Design considerations

- Structure and composition for advisory council
- Roles and responsibilities for advisory council
- Accountability framework for advisory council

Risks and mitigation strategies

- Lack of authority to deliver on mandate // Ensure advisory council have the authority and necessary tools and support structure to deliver on mandate and adjust as needed
- Lack of accountability and role clarity // Establish accountability framework, document roles and relationships, and conduct extensive onboarding
- Structures do not increase institutional collaboration or reduce duplication // Evaluate root cause of issue and re-assess alternative options detailed on following pages

Interdependencies:

- Existing governance structure
- Funding allocation models and process
- Implementation infrastructure for AB2030

Potential steps to implementation

Potential Activities	*Stakeholders**
Decide on governance option	AAE (R, A), Institutions (C)
Develop new governance structure and outline roles, responsibilities and accountability framework	AAE (R, A)
Recruit for advisory council	AAE (R, A)
Stand-up and launch advisory council	AAE (R, A)

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6.1.3: There are four common post-secondary governance structures used to drive change

	A **Multiple sector-wide coordinating or governing boards**	B **Single, system-wide coordinating board**	C **Single, system-wide governing board**	D **Support agencies**
Description	Each sectors has its own governing board. No system-wide entity coordinates or governs across sectors Institutions may or may not have their own governing boards	Coordinating board oversees specific aspects of a government's role with the system Coordinates sectors or institutions with own governing boards	Governing board has broad authority over institutions across the system Governs sectors or institutions that may or may not have their own governing boards	Agencies (independent or government) oversee different services (e.g., financial aid distribution). Agencies accompany structures A, B, or C.
Roles and responsibilities (non-exhaustive)	Roles depends on whether the sector-wide board is coordinating or governing. See B and C	• Develop strategic plans • Advise government leaders • Approve PSI mandates • Approve or oversee tuition • Review/approve academic policies and programs • Develop and ensure accountability to KPIs • Review/recommend budgets and capital plans	Coordinating board roles plus: • Approve budget requests / recommend budgets to government • Hire president and set compensation • Approve/award credentials • Approve/administer bonds • Govern sectors or institutions	• Administer programs and services • Conduct research and analysis • Provide data to institutions • Engage in strategic planning • Develop/administer academic policies and programs (e.g., transfers) • Authorize new institutions
Case examples	California	Colorado	Utah	New Zealand

 Source: Education Commission of the States, OECD; University Websites

6.1.3.A: California has three systems with a distinct mission, and each sector, instead of each institution, has a board

CASE EXAMPLES

Sectors (referred to as systems)	University of California	California State University	California Community Colleges
Description	Research University Awards bachelor degrees Awards masters and doctoral degrees **10 institutions** 285K+ students $34.5B+ USD operating budget	Four-year undergraduate university Awards masters on variety of disciplines Awards doctoral degrees on Education, Nursing and Physical therapy plus a few select in partnership with a UC **23 campuses** 480K+ students $5.8B+ USD operating budget	Two-year undergraduate university Awards associate degrees and certificates Graduates are guaranteed transfer to the CSU or UC system to complete bachelor's degree **115 physical campus organized in 73 districts** Launched CalBright – a fully online offering 2.1 million+ students $10.3+B USD operating budget
Governance	System led by President Michael Drake **Board of Regents with 26 members 18 are appointed by the Governor on 12 year terms; one is a student regent and 7 are ex-officio** System academic senate **Each institution is led by a Chancellor** **Institutions have a Board of Advisors with no fiduciary duty** **Each institution has own academic senate**	System led by Chancellor Tim White **Board of Trustees with 25 members 16 are appointed by the Governor on 8 year terms; plus 2 student, 1 alumni, 1 faculty and 5 are ex-officio** **Each institution is led by a President**	System led by Chancellor Eloy Oakley **Board of Governors with 17 members Member are appointed by governor** **Each district is led by a chancellor and the institution by a President** **Districts have a Board of Trustees locally elected within the community**

Note: There are two polytechnics in the California State University system. Apprenticeship programs are housed within organizing committees or employers. Program sponsors contract with community colleges or other local education agencies, including high schools, school districts, regional occupational centres, or adult schools.
In addition to the three systems outlined on this page, there are also ~150 private non-profit colleges and ~160 for-profit institutions including Stanford and Harvey Mudd

Source: University Websites

6.1.3.A: While successful, the California system is establishing a system-wide coordinating council to support collaboration across sectors

CASE EXAMPLES

Success of the California model

Combined exceptional quality with broad access for students

Transformed a collection of uncoordinated and competing colleges and universities into a coherent system

Established a broad framework for higher education that encourages each of the three public higher education segments to concentrate on creating its own kind of excellence within its own particular set of responsibilities

Envisioned higher education in California as a single continuum of educational opportunity, from small private colleges to large public universities

Considerations for Alberta

The model functions in an economy that would rank ~5th in the world1 with a population of ~40M people2

Due to concerns that sectors were operating in silos, the Governor announced the formation of a coordinating council, the Council for Post-secondary Education, in 2019

The new council will serve as an independent consultative resource, providing input on enrolment planning, transfers, and state-wide coordination

1. International Monetary Fund, 2019;
2. US Census Bank 2019

Source: University Websites

6.1.3.B: Colorado has a state-wide coordinating board with three sector-level governing boards

CASE EXAMPLES

State-wide coordinating board

Colorado Commission on Higher Education

Coordinates four-year, public two-year and other (e.g., Independent/non-profit institutions)

Main responsibilities:

- Approve institutional missions
- Develop and/or administer academic policies or programs (e.g., review programs for duplication and direct discontinuation of programs)
- Develop master/strategic plans for state or system
- License or approve/authorize specified institutions
- Oversee residency requirements for tuition purposes
- Recommend or approve establishing, merging or closing institutions
- Review or approve facility/capital construction plans
- Review and recommend budget for institutions

11 board members appointed by Governor with approval of Senate or Legislature

System governing boards[1]

	University of Colorado Boulder | Colorado Springs | Denver | Anschutz Medical Campus	CSU SYSTEM COLORADO STATE UNIVERSITY	COLORADO COMMUNITY COLLEGE SYSTEM
Description	Research University, 4 campuses Undergraduate and graduate degrees 65K+ students $4.1B+ USD operating budget	Public 4-year institutions, 3 campuses Awards select masters, PhD and doctorate degrees CSU Global campus is an independent 100% online public university 60K+ students $1.2B+ USD operating budget	Public 2-year institutions Awards certificates, associate degrees, 8 bachelor degrees and 1 masters degree Guarantees admission to participating 4-year institution upon completion of Associate degree 13 colleges, 40 locations 137K+ students
Governance	Board of Regents 9 members, 6-year terms Elected from each of CO's 7 districts and two from the state Responsible for the supervision of the university and the exclusive control and direction of all funds of and appropriations to the university Sector-level faculty council with campus-level faculty assemblies	Board of Governors 15 members 9 voting members appointed by governor to serve 4 year terms (maximum 2 terms) 6 non-voting members elected on 1 year term with one faculty member and one student leader from each campus	State Board 11 members 9 voting members appointed by governor; 1 per each US congressional district plus 2 at large members. No more than 5 from a single political party. 4 year terms 2 non-voting members elected on 1 year term with one faculty member and one student rep Sector-level Faculty Advisory Council and college-level faculty councils

1. The Independent Higher Education of Colorado is a membership entity for independent colleges

Source: University Websites

6.1.3.C: Utah recently transitioned to a state-wide governing board from sector-level governing boards

CASE EXAMPLES

UTAH SYSTEM OF HIGHER EDUCATION

Case for Utah's governance reform

Before July 2020, **Utah had two systems: the Utah System of Higher Education and the Utah System of Technical Colleges.** Each system had 8 institutions and a governing board

Utah experienced the following challenges:

- **Duplication in programming** without coordination, specifically in technical education
- **Duplication in outreach and administrative services**
- **Unnecessary competition** for students and resources

In July 2020, **Utah merged the Utah System of Higher Education and Utah System of Technical Colleges** creating a joint system, the Utah System of Higher Education, with one governing board in order to achieve:

- Comprehensive strategic planning
- Accessible, affordable opportunities in higher ed
- Seamless pathways from certificates to degrees
- Institutional collaboration

New state-wide governing board

Utah Board of Higher Education is the governing board for Utah System of Higher Education

The system consists of 16 institutions[1]. Each institution has its own governing Board of Trustees

Main responsibilities:

- Select and evaluate institutional presidents
- Review programs and degrees
- Approve institutional missions
- Creating a strategic financial plan that includes performance funding, facilities, and setting tuition
- Submit a unified higher education budget request to the Governor and State Legislator
- Establish performance metrics
- Establish shared administrative services
- Delegate oversight to institutional boards of trustees
- Delegating institutional management to presidents

18 board members appointed by the Governor including 2 students, 1 from a college or university and 1 from a technical college

16 members have **6 year stagger terms**; student members have **1 year terms**

Considerations for Alberta

- **System-wide governance structure** seen as an opportunity for **greater cross-sector collaboration** in front and back-office
- **Governance model for a relatively smaller post-secondary system** (131K+ students across 16 institutions)
- **Changes are newly implemented** so it will take time to understand if governance changes were successful

1. 2 research universities, 4 regional universities, 2 community colleges, and 8 technical colleges

Source: Utah System of Higher Education; University Websites

Alberta

6.1.3.D: Overview of New Zealand's tertiary education organizations and relevant agencies

CASE EXAMPLES

Relationship between Education Agencies, the Tertiary Education Institution (TEI) Councils and Presidents at New Zealand's tertiary education institutions

Authority

Accountability

Education agencies

- Ministry of Education (sets overall strategy)
- New Zealand Qualifications Authority (oversees qualifications framework and overall quality assurance)
- Education New Zealand (promotes NZ as a study destination and supports NZ learners to study abroad)
- Tertiary Education Commission (allocates government tertiary education funds and monitors performance)

Detail to follow

Tertiary education institution councils

- Govern the post-secondary institution
- TEIs are held accountable through their annual reports and through the investment planning and performance monitoring role of the TEC
- Academic quality in a TEI is monitored by a TEI's academic board and by external quality assurance bodies

Academic Boards

- Established by Council and includes chief executive, staff and students
- Council must request advice from academic board before making any decision related to academic matters
- Academic boards are responsible for academic related programming

Tertiary Education Institution Chief Executive

- Appointed by and held accountable by the Council
- Delegated authority to manage the TEI by the Council
- The Council can delegate any its functions or powers t the chief executive with exception of the ability to appoint the chief executive

Source: NZ Governance Guide for Council Members, University Websites

6.1.3: Case example D: New Zealand's tertiary education institutions have governing councils while the tertiary education commission determines funding allocation

CASE EXAMPLES		
Entity	**Tertiary Education Commission (TEC)**	**Tertiary Education Institutions (TEI) and TEI Councils**
Description	TEC invests NZ $3B in and monitors the performance of New Zealand's tertiary education organizations TEC also provides information and advise to the Ministry and institutions on funding and institution performance TECs interact with tertiary education institution (TEI) governing councils through: • Establishing TEI investment plans • Monitoring TEI performance and implementation on investment plan • Approval for borrowing and asset disposal • Ministry appointments to councils	TEIs (8 universities, 16 polytechnics – recently consolidated into 1 institute, 3 wānanga[1]) TEIs are independently governed by TEI Councils. Councils have the following responsibilities: • Determine institution strategic direction, allocation of resources, and performance goals • Ensuring institutional financial sustainability and viability • Risk management • Appoint Chief Executive • Review/approve academic policies and programs
Governance	Board of Commissioners is responsible for setting strategic direction, making decisions about funding allocation, and monitoring performance and risk 7 members 3 year terms Appointed by Minister	8-12 council members (8 for polytechnics; 10-12 for other universities and wananga) 4 year terms (8 years maximum) 3-4 members appointed by TEC on behalf of the ministry University and wananga chairs are elected by the council; PI chairs are elected by Minister Council members are paid a fee for their services

Considerations for Alberta:

- Potential to establish an separate agency for funding allocation and performance monitoring
- Potential to maintain institutional governing boards, but improve efficiency through a reduction in board size and increase autonomy through a reduction in government appointments

1. New Zealand's three wānanga provide quality education using Māori ways of teaching and learning; contributing towards the survival and well-being of Māori as a people

Source: NZ Governance Guide for Council Members, University Websites

6.1.3: Creating bespoke options for Alberta based on common governance structures

NON-EXHAUSTIVE

1 System coordinating board

A coordinating board that oversees specific aspects of AAE's role in the system (e.g., transfers) and coordinate across institutions and sectors

Potential responsibilities:

- Advise government leaders
- Develop strategic plans
- Review and approve academic programming change
- Advise on budget development and resource allocation
- Develop and ensure accountability to KPIs
- Oversees province-wide projects and initiatives

2 Sector governing structure and institutional advisory boards

A sector governing structure (board and executive team) operates and manages PSIs in accordance with fiduciary duty.

Institutional advisory boards provide strategic direction and replace institutional governing boards

Potential responsibilities:

Coordinating board responsibilities plus:

- Distribute funding to institutions
- Hire president and set compensation
- Approve/award credentials
- Approve/administer bonds
- Govern sectors or institutions

3 System support agency

An independent agency (e.g., similar to New Zealand's Tertiary Education Commission) that allocates funding and tracks institutional performance

Potential responsibilities:

- Allocate funding to institutions
- Monitor institutional performance and implementation on investment plans
- Review and approve programs

4 System advisory council and Ministry

Ministry retains existing responsibilities and an advisory committee brings key stakeholders to advise Ministry how to better advance strategic priorities

Potential advisory committee responsibilities:

- Provide advice to government on how to advance strategic priorities
- Provide input to ensure the system has an evergreen strategy
- Offer perspective on the how the implementation of strategic initiatives is progressing and provide thought leadership on how to unblock challenges

Ministry retains responsibilities such as:

- Set strategic direction for the system
- Develop policy and legislative frameworks (incl. tuition fees)
- Set system- and sector- level performance measures
- Allocate funding to institutions
- Review and approve programs

6.1.3: Evaluating governance structures

There are five key goals Alberta's governance structure should seek to accomplish:

Increase institutional collaboration in front (e.g., program delivery, transfers) and back office (e.g., shared services)

Reduce unnecessary duplication in front (e.g., programming) and back office (e.g., admin)

Reduce politicized decision-making

Reduce red-tape

Maintain institutional identity and local representation

For any governance structure, a key implementation consideration includes level of system disruption and complexity of transition

Potential fit for Alberta

6.1.3 Comparison of governance options

✓ Yes ✓ Potentially ✗ No

NON-EXHAUSTIVE

Structure	Increase collaboration	Reduce duplication	Reduce politicized decision-making	Reduce red-tape	Maintain institutional identity	Minimize system disruption	What you have to believe for this to succeed?
1. System coordinating board	✓	✓	✓	✗	✓	✗	• System coordinating board has the appropriate scope of authority to hold institutions accountable through program review and approval and performance metrics (funding is not a direct lever) • There is support, capacity, and resources to stand-up a sector governing structure
2. Sector governing structure and institutional advisory boards	✓	✓	✓	✓	✓	✗	• Sector governing structure is best positioned to hold institutions accountable through funding mechanisms, program review and approval, and performance metrics • Clear roles, responsibilities, and relationships can be defined for the new governance structure • There is support, capacity, and resources to stand-up a sector governing structure
3. System support agency	✓	✓	✓	✓	✓	✗	• System support agency is best positioned to hold institutions accountable through allocating funding • There is support, capacity, and resources to stand-up a new entity with a full-time executive team and sub-teams
4. Ministry and system advisory council	✓	✓	✓	✓	✓	✓	• AAE is best positioned to hold institutions accountable through funding mechanisms, program review and approval, and performance metrics • Advisory council can provide a system perspective on strategic priorities and implementation progress to AAE • A representative and non-partisan advisory council including appropriate representation from students, faculty, staff, institution leaders, Indigenous communities, and industry and employers can be assembled

Relies on changes to current ways of working

Alberta

6.1.4: Revise institutional board appointment and composition to enable institutions to appoint a majority of the board, use a skillset matrix to inform appointments, and lengthen board tenure to minimize turnover

Descriptions and end state vision: AAE can revise the board appointment process and board composition to strengthen board effectiveness. AAE can consider enabling more independent boards (no more than 50% of board members are elected by the government), lengthening and staggering board terms to ensure stability, and providing a skillset matrix to ensure board members have appropriate qualifications

Case for change: PSI boards are appointed by the government, which can result in turnover when there are changes to government. Further, if deconsolidation is pursued, the government will need to appoint less than 50% of board members. Board expertise varies by institutions and there is a need to ensure that board members bring an appropriate skillset to their roles.

Design choices:

- Board size, composition, and compensation
- Board term length
- Board member and chair selection process

Risks and mitigation strategies

- Loss of accountability // Maintain accountability through the remaining government appointed board members and investment management agreements
- Board size growth and dilution of existing voices if new members are added // Balance the relative composition of each type of member
- Complete changes in boards that can destabilize institution // Stagger board terms

Interdependencies:

- The board structure (e.g., governing sector boards)
- Deconsolidation
- Potential implications for current appointed boards need to considered

Potential steps to implementation

Potential activities	*Stakeholders**
Refine design choices and test with institution management and boards	AAE (R, A), GoA (C), Institutions (C)
Obtain relevant stakeholder approvals to revise board appointment and composition	AAE (R, A), GoA (R)
Conduct a board effectiveness assessment to track performance	AAE (R, A)

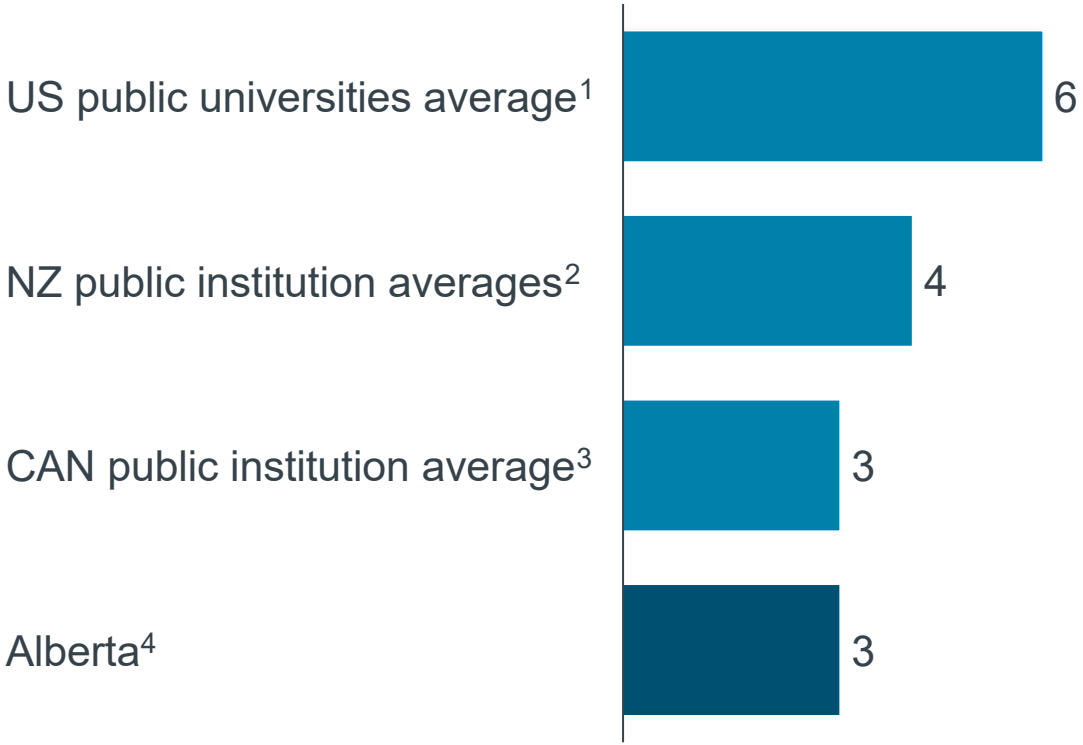
*(R) Responsible - Stakeholders who do the work to complete the action or make the decision
(A) Accountable - Stakeholder who owns the work and signs off when the action is complete
(C) Consulted - Stakeholders who must provide input before the action is complete
(I) Informed - Stakeholders who must be kept up to date, but do not need to formally provide input

6.1.4: Alberta's 3-year term lengths are consistent with Canadian averages but turnover can present challenges

CASE EXAMPLES

Average maximum board term lengths

Years



Considerations

Alberta board term lengths are 3 years as compared to 4 years in NZ and 6 years in the US

While AB's 3 year term lengths are consistent with Canadian averages, roundtable feedback highlighted the challenge with potential turnover in membership[2]

Boards with a mix of term lengths that are staggered can reduce turnover challenges and increase ability to adapt membership to changing needs (e.g., relevant industry experience)

1. Association of Governing Boards of Universities and Colleges (US),
2. Governance Guide for council members of tertiary education (NZ)
3. Scan included ON,BC, NS, QC, MN and SK: University of British Columbia, Dalhousie University, Université Laval, University of Manitoba, McGill University, McMaster University, Université de Montréal, University of Ottawa, Queen's University, University of Saskatchewan, University of Toronto, University of Waterloo, University of Western Ontario, Northern Lights College, Selkirk College, North Island College, College of the Rockies, Langara College, Camosun College, Okanagan College, Kwantlen University College, Conestoga College, St. Lawrence College, Georgian College, Fleming College, Seneca College, Sheridan College, Fanshawe College, St. Clair College
4. Scan included 21 public PSI

6.1.4: Board appointments vary by jurisdiction, but many boards have the authority to select their chair

CASE EXAMPLES

	Board appointments for public institutions	Board chair selection
Alberta	Government appoints majority (50-75%) for public boards[1]	Government appoints chair
Canada scan[2]	Governments appointments range from 0% to 75%, government appoints <50% for the majority of institutions	Selected by board
USA	At 70% of institutions, board members are appointed by government, ~10% are popularly elected[3]; sector level boards also commonly appointed by government[4]	Selected by board at 92% of institutions[3]
New Zealand[5]	<50% appointed by government	Selected by board

Considerations

Boards that are appointed by the government can be more responsive to government priorities, and can be more prone to turnover

Notes: Includes both public colleges and public universities
1. IAI appoint their own boards, and Banff center has majority appointed by the board
2. Scan included ON,BC, NS, QC, MN and SK: University of British Columbia, Dalhousie University, Université Laval, University of Manitoba, McGill University, McMaster University, Université de Montréal, University of Ottawa, Queen's University, University of Saskatchewan, University of Toronto, University of Waterloo, University of Western Ontario, Northern Lights College, Selkirk College, North Island College, College of the Rockies, Langara College, Camosun College, Okanagan College, Kwantlen University College, Conestoga College, St. Lawrence College, Georgian College, Fleming College, Seneca College, Sheridan College, Fanshawe College, St. Clair College
3. Association of Governing Boards of Universities and Colleges (US) (2016);
4. Education Commission of the States
5. Governance Guide for council members of tertiary education (NZ)

Alberta

6.1.4: Most boards have representation from the general public, students, faculty, and staff

CASE EXAMPLES

Typical institution board composition[1]

Of institution boards scanned in Canada have **representation from CEO/ President, students, faculty, staff and general public**[1]

Some institution boards **specify specific faculty (e.g. Deans and provosts) and general public positions (e.g. alumni),** or specify an "other" category[1]

Some boards also include membership from the **chairman, rector, chancellor, vice-chancellor, and senate when applicable**[1]

Across Canada, **most institution board members are voting members** (exceptions include U of A)

Typical sector board composition[2]

Sector level boards in the US have **broader membership and sometimes include Governors, education super-intendants and specific employers**

Some **sector level boards have diversity conditions** (e.g., no more than a certain percentage can be from same political party, or reside in the same county, or be employees of the postsecondary institutions)

Considerations

Consider diversity in board membership across a variety of demographics and skillset areas to ensure the board has the expertise and perspectives needed to fulfill its duties

In Alberta, local representation was highlighted as a key strength across stakeholder engagement; consider board composition that reflects local communities and Indigenous voices[3]

1. Scan included ON,BC, NS, QC, MN and SK: University of British Columbia, Dalhousie University, Université Laval, University of Manitoba, McGill University, McMaster University, Université de Montréal, University of Ottawa, Queen's University, University of Saskatchewan, University of Toronto, University of Waterloo, University of Western Ontario, Northern Lights College, Selkirk College, North Island College, College of the Rockies, Langara College, Camosun College, Okanagan College, Kwantlen University College, Conestoga College, St. Lawrence College, Georgian College, Fleming College, Seneca College, Sheridan College, Fanshawe College, St. Clair College, and 21 public PSI in AB
2. IPEDS data
3. Alberta2030: Stakeholder interviews

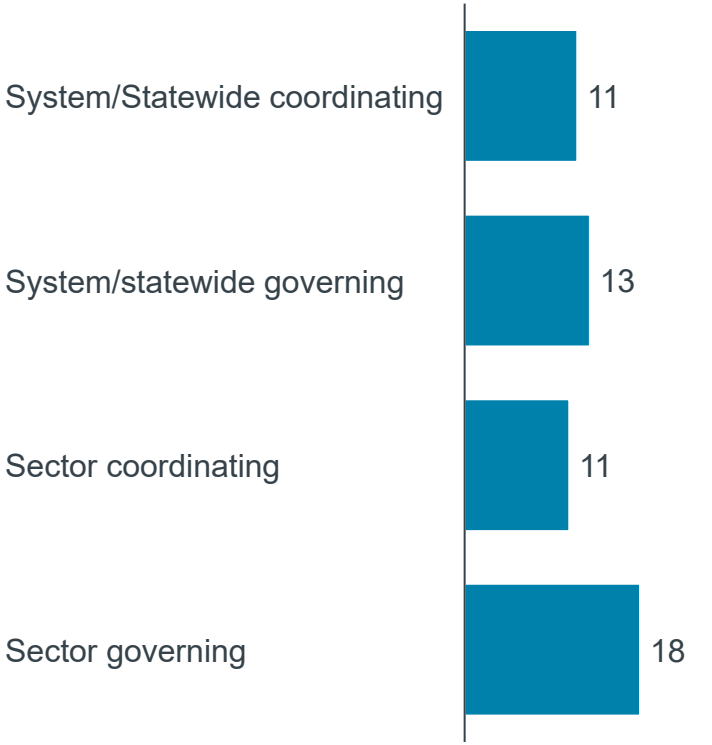
Alberta

6.1.4: Alberta's average board size is consistent with Canadian peers, but larger than other jurisdictions

CASE EXAMPLES

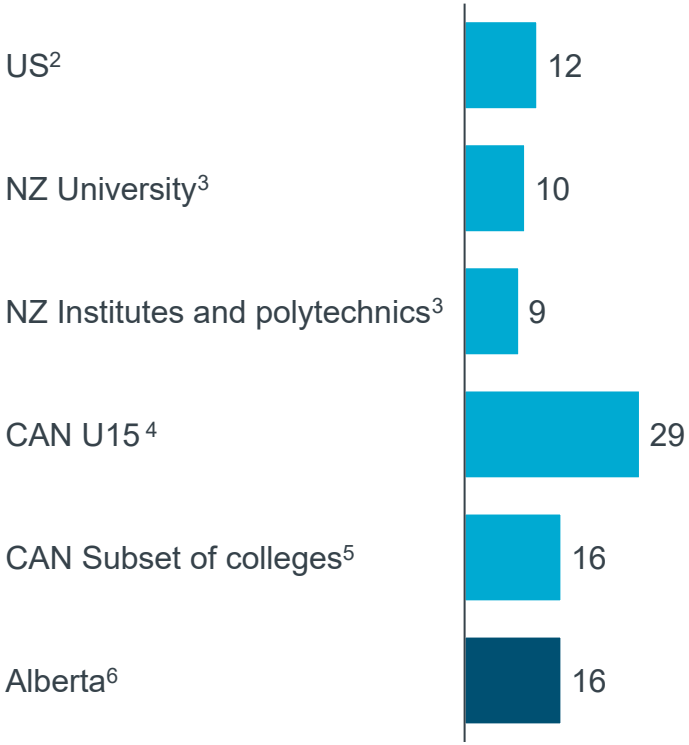
System or sector board sizes in the Unites States[1]

Number of members, averages



Public institution board sizes

Number of members, averages



Considerations for board size

Public system or sector boards have 11-18 board members, while comparable public institution boards range from 9-29

Best practice is to balance expertise over size given challenges with large boards (e.g., attendances, slow decision-making, meetings prone to groupthink or dominated by louder voices)

For larger board sizes, consider making an executive committee

Notes: Includes both public colleges and public universities

1. Education Commission of the States, 2. Association of Governing Boards of Universities and Colleges, 2016 3. Governance Guide for council members of tertiary education (NZ); 4. Institution websites for Canada; 5. Includes: Northern Lights College, Selkirk College, North Island College, College of the Rockies, Langara College, Camosun College, Okanagan College, Kwantlen University College, Conestoga College, St. Lawrence College, Georgian College, Fleming College, Seneca College, Sheridan College, Fanshawe College, St. Clair College; 6. 21 Public PSI in AB

6.1.4: One option to make a large Board more effective is by establishing a smaller executive committee

Executive committees are composed of a subset of Board members and serve as the primary liaison between the Board and President

Responsibilities

- Hires, evaluates, and recommends compensation for President
- Serves as proxy for full Board between meetings
- Approves formation and appointment of subcommittees

Composition

- Board Chair
- Vice Chair
- All Committee Chairs

Contents

To achieve the Alberta 2030 vision, there are six guiding principles for success

Implement to improve outcomes: Initiative implementation should uphold and enhance access and quality of Alberta's post-secondary education system.

Empower institutions: Provide system-wide support and structure to enable institutions provide the best possible experience and value for their students, faculty, staff and community.

Focus on sustainability: Maintain a holistic view of revenue generation as well as cost savings. Continue to focus on value capture and capacity building to sustain impact over time.

Generate momentum: Show results early with key initiatives that deliver impact within one to two years.

Measure progress and adapt: Use clear key performance indicators to measure progress and adapt implementation to improve the outcomes of implementation.

Engage continuously and authentically: Throughout implementation, Alberta 2030 should continue to ensure widespread engagement and input of diverse stakeholders, including students, faculty, staff, employers, and the broader community.

Guiding by articulated principles, there are 10 essential actions required to implement the AB2030 strategy and accelerate change

Detail to follow

1: Commit to full potential: Identify and align on aspiration

2: Design, prioritize, and scale initiatives: Design initiatives as part of a scalable, executable plan to achieve the aspiration

3: Create conviction: Engage the system with a compelling change story and communications plan

4: Lead by example: Build ability of senior leaders to role model the change

5: Lock in change: Design processes and operating model to support change

6: Launch transformation infrastructure: Stand-up performance management system to orchestrate impact

7: (Re)deploy talent: Position the right talent in critical roles to drive value

8: (Re)invest in capabilities: Build and refine leadership, functional and executional skills

9: Activate influencers: Use formal and informal change agents to catalyze the change

10: Reward behavior: Establish financial and non-financial incentives to help achieve outcomes

1&2: Successful implementation will require commitment from system stakeholders to the strategy vision, goals, objectives, outcomes and initiatives

1: Commit to full potential

Successful transformations have a

- **Compelling strategic vision and goals**
- Clear **understanding of system's current state**
- **Leadership committed and aligned** to strategic plans

AAE is committed to the strategy vision, goals, objectives, and outcomes, **however successful implementation will also require commitment from system stakeholders** (e.g., Presidents, Boards, Faculty, students)

As AAE prepares to reveal and launch the final strategy, commitment needs to be demonstrated through actions (e.g., stand up an implementation office, allocate funding to priority initiatives)

2: Design, prioritize, and scale initiatives

The AB2030 effort has:

- **Ideated 100+ initiatives**
- **Prioritized, designed, and created implementation roadmaps for 35+ high-potential initiatives**

If human and financial resources are limited, AAE will need to prioritize among the high-potential initiatives for implementation **and consider**:

- **Piloting and scaling** based on the system's ability to absorb change
- **Monitoring and refining initiatives** to ensure all milestones are complete
- **Re-sequencing and re-balancing initiatives** and roadmap as needed

3: AAE will need to continue to create conviction for the final strategy roll-out

Communications and engagement should continue to be treated as a core workstream

Key activities for final strategy reveal and roll out

Prepare

Map stakeholders on an ongoing basis and establish ways to engage them

Define guiding principles for communications plans on what motivates people to take action and own parts of transformation

---

Design

Develop a communications plan (what is communicated, how to communicate, who communicates it, which channels to use and how frequently)

Create a change story and **plan to scale it**

Deliver

Share the change story using the network-based approach and deliver other communications across the entire system

Track and measure **system engagement measurement** to improve ongoing communications

What does this mean for AB2030?

- These **activities have been conducted throughout the effort** to seek input to the strategy
- These **activities will need to be repeated when AAE is ready to roll out the final strategy**

Alberta

4: To drive change, AAE needs to help system leaders understand how they need to change by addressing the key mindset & behavior shifts

Key activities

Prepare

Identify the set of senior leaders targeted in creating new behaviors, **assess their effectiveness** at doing this today

Understand current state of leadership teams effectiveness and how team effectiveness is hampering change / help drive the transformation

Design

Connect leadership behaviors to the overall vision for the system and **work with senior leaders across the system to commit to action**

Design the journey to affect behavior change and create a sense of **ownership for the new ways of working, commitment to drive the change** and **become role models** of the new behaviors

Deliver

Launch the journey and embed new behaviors in moments of influence and through symbolic actions

Implement tactical changes to engagement with senior leaders (e.g., Presidents, Boards) through cadence, meetings, ways of working

Measure adoption and impact of new ways of working and celebrate progress

What does this mean for AAE?

- These activities are vital to help Alberta's post-secondary stakeholders see opportunities beyond those that impact their own stakeholder groups
- The set of senior leaders may include presidents, board chairs, and influential faculty, students, and industry leads
- AAE will need to consider different engagement models with senior leaders (e.g., convene implementation group, regular meetings) to reinforce behavior changes and facilitate modeling of behaviors

Alberta

5&6: Implementation infrastructure will be critical to lock in changes and track toward successful implementation

Implementation infrastructure will

- **Ensure consistent delivery against objectives** by setting standards, providing governance, enforcing accountability, and setting the pace of the transformation
- **Provide quality assurance, content support and thought partnership** to leads of transformation and initiatives owners
- **Develop and maintain best practices**, pursue **ongoing improvement** of initiative management and build **capability** (focusing on sustainability from day 1)
- **Serve as 'single source of truth'** to create transparency on the status of the transformation and enable fact-based decision-making by leaders
- **Focus on both performance and health** of the system

What does this mean for AB2030?

- Implementation owners for AB2030 can range from AAE to institution presidents and boards, but **AAE will need to be accountable for the progress against the strategy**
- To do so, AAE will need to develop an **implementation infrastructure that has the capability and authority** to execute against the responsibilities outlined
- **AAE will need to determine**:
  - **What type of entity or team will be established to support implementation** (e.g., a department strategy and implementation group)?
  - What is the entity's or team's **roles and responsibilities**?
  - How will the entity or team **engage with other stakeholders** involved in implementation?

5&6: AAE can create a strategy implementation group to drive implementation of AB2030 and leverage input from the Advisory Council to advance progress

Detail to follow

AAE Ministry

Maintain responsibilities such as:

- Set strategic direction for the system and sectors
- Develop policy and legislative frameworks (incl. tuition fees)
- Set system- and sector- level performance measures
- Allocate funding to institutions
- Review and approve programs

AAE Strategy Implementation Group (SIG)

Potential responsibilities:

- **Manage delivery of AB2030**
  - Set and track progress against operational KPIs and milestones for initiatives
  - Hold initiative owners accountable for implementation
- **Drive two groups of initiatives**:
  - Flagship initiatives
  - Initiatives that lack a natural lead
- **Support initiative leads**
  - Coordinate appropriate sponsor, experts and team to lead initiatives
  - Support initiative owners with debottlenecking and building capacity
- **Manage stakeholder relationships**
  - Serve as the key link between external stakeholders and AAE regarding the strategy and initiatives
  - Ensure effective communication and collaboration between initiative leads to effectively implement the strategy

Advisory Council

Potential responsibilities:

- Provide advice to Minister and SIG on how to advance strategic priorities
- Provide input to ensure the system has an evergreen strategy
- Offer perspective on the how the implementation of strategic initiatives is progressing and provide thought leadership on how to unblock challenges

Alberta

5&6: Flagship initiative leads under AAE SIG coordination

Goal	Initiative	Initiative lead under AAE SIG coordination
Access and Student Experience	Double non-repayable needs based aid and innovate financial aid offerings	AAE Department
Access and Student Experience	Transform the transfer system so that no student repeats equivalent coursework due to transferability challenges	AAE SIG to convene Transfer Network
Access and Student Experience	Establish a centre of excellence for online teaching and learning to build capacity to provide students a world-class online learning experience	AAE SIG to lead and bring in experts as needed
Skills for Jobs	Become the first province in Canada to offer access to work-integrated learning for 100% of students	AAE SIG to convene WIL Working Group
Innovation and Commercialization	Align provincial contributions for post-secondary research to economic diversification priorities	AAE SIG and JEI to convene internal team
Innovation and Commercialization	Establish and fund a central entity to build and provide first-rate commercialization and entrepreneurship capabilities system-wide	AAE SIG and JEI to convene group (potentially sub-committee of RWG)
Financial Sustainability	Sponsor a shared service centre for academic (e.g., enrolment) and non-academic areas (e.g., HR, finance)	AAE SIG to lead and bring in experts as needed
Financial Sustainability	Implement a clear, transparent funding allocation model	AAE Department; bring in experts as needed
Financial Sustainability	Implement a performance-based funding model	AAE Department; bring in experts as needed
Financial Sustainability	Deconsolidate institution financials to provide institutions with greater financial flexibility to grow own-source revenues	AAE Department
Financial Sustainability	Increase tuition flexibility and needs-based student aid	AAE Department

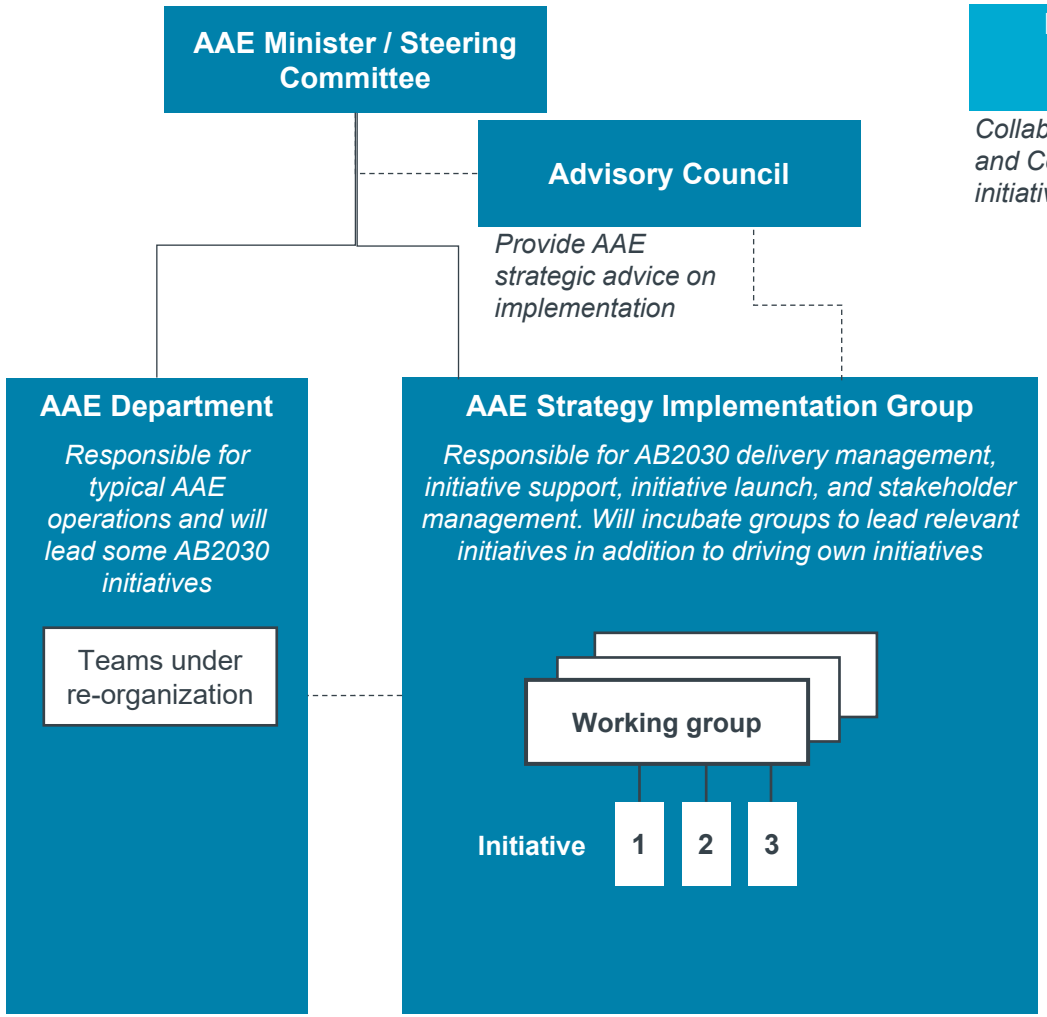
5&6: Additional initiative leads

Goal	Initiative	Initiative lead
Access and Student Experience	Expand dual credit and RAP opportunities, in collaboration with AE, PSIs, and FNCs, to support pathway development	AAE Department
Access and Student Experience	Empower student decision-making by streamlining and simplifying the post-secondary application process	AAE Department; AB PS Application Society
Access and Student Experience	Ensure key AAE websites are available in multiple Indigenous languages	AAE Department
Access and Student Experience	Provide grants to institutions to expand access to transition programs for every Indigenous student	AAE Department
Access and Student Experience	Continue to equip institutions with resources to support students' mental well being through the Mental Health Grant	AAE Department
Access and Student Experience	Modernize the existing provincial framework to address sexual and gender-based violence in Alberta's campus communities	AAE SIG to incubate Sexual Violence Prevention Committee
Access and Student Experience	Expand provincial strategy for prior learning assessment recognition (PLAR) with clear quality assurance standards to guide a nd enhance practice	AAE SIG to incubate PLAR articulation committee
Access and Student Experience	Consolidate to a single online program management platform for the entire system thus optimizing online course delivery and quality	AAE SIG; Lead and bring in experts as needed
Access and Student Experience	Expand access to digital infrastructure for online learning in rural and remote communities by collaborating with Ministries	AAE SIG to incubate AAE and Service Alberta internal team
Skills for Jobs	Build, fund, and establish policy for apprenticeships in a wider range of occupations, in particular emerging high -tech trades	AAE Department
Skills for Jobs	Convene industry-led councils to assess workforce needs, advise on qualifications, and design or endorse programs across AB PSI	AAE Department
Skills for Jobs	Promote an agile program development process	AAE Department
Skills for Jobs	Provide quality data predictions of labour market needs	AAE Department
Skills for Jobs	Support institutions to become the go to provider of employer paid upskilling programs (e.g., convene partnerships, provide m atching grant)	AAE Department
Innovation and Commercialization	Establish Alberta Innovation Researcher Fellowships	AAE SIG; JEI to incubate internal team
Innovation and Commercialization	Support institutions to adapt faculty P&T policies to incentivize faculty to pursue entrepreneurial activity	AAE Department; Boards
Innovation and Commercialization	Establish and administer Premier's Award for Research Innovation and Commercialization	AAE Department; JEI
Innovation and Commercialization	Align, redistribute, and/or grow provincial contributions to incentivize research collaborations and commercialization	AAE SIG; JEI to incubate internal team
Innovation and Commercialization	Support institutions to streamline IP processes	AAE SIG; JEI to incubate group (e.g., RWG sub-committee)
Innovation and Commercialization	Convene institutions, industry, and investors together to advance cutting-edge research collaborations	AAE SIG; JEI to incubate group (e.g., RWG sub-committee)
Innovation and Commercialization	Showcase Alberta's world-class IP and infrastructure assets through the development of an online, publicly accessible, integrated repository	AAE SIG; JEI to incubate group (e.g., RWG sub-committee)
Financial Sustainability	Streamline procurement	AAE SIG to incubate Procurement Working Group
Financial Sustainability	Streamline surplus request & approval process	AAE Department
Financial Sustainability	Update self-generated revenue review process to streamline review of commercial enterprise	AAE Department
Governance	Reinforce and strengthen mandates to provide clear accountabilities for system- and institution-level outcomes in teaching, research, and collaboration	AAE Department
Governance	Establish a system-level, independent advisory council to the Ministry on strategic priorities and the implementation of system-wide initiatives	AAE Department
Governance	Revise institutional board appointment and composition to enable institutions to appoint a majority of the board, use a skill set matrix to inform appointments, and lengthen board tenure to minimize turnover	AAE Department

5&6: There are distinct differences between a traditional PMO and a Strategy Implementation Group

	Traditional PMO	Strategy Implementation Group
Mandate of office	Tracking	Driving results-oriented action
What is asked	What have you been working on?	Have your weekly deliverables been met?
Value add	Process control, reporting up the chain of command	Challenging conversations; Rapid problem solving; owning initiatives without immediate sponsors
Directional focus	Backwards	Forwards
Steering committee cadence	Monthly	Weekly
Planning	Central master project plan	Large number of detailed initiative plans
Critical question	Are we on track?	What needs to happen to get us to our full potential?
Who benefits most	Management, PMO	Initiative Owners

5&6: Potential implementation ecosystem for AB2030



Ministry of Jobs, Economy, and Innovation

Collaborate on all Innovation and Commercialization initiatives

Service Alberta

Collaborate on Initiative 1.4.3 (Expand access to digital infrastructure for online learning in rural and remote communities by collaborating with Ministries to pursue federal funding and exploring industry partnerships)

Alberta Post-secondary Application System Society

Collaborate on Initiative 1.1.2 (Empower student decision making by streamlining and simplifying the post secondary application process)