

Advanced Education and Technology  
Business Plan 2008-11

*learn & imagine*



Alberta

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# Advanced Education and Technology

BUSINESS PLAN 2008-11



## ACCOUNTABILITY STATEMENT

The business plan for the three years commencing April 1, 2008 was prepared under my direction in accordance with the *Government Accountability Act* and the government's accounting policies. All of the government's policy decisions as of March 18, 2008 with material economic or fiscal implications of which I am aware have been considered in preparing the business plan.

The Ministry's priorities outlined in the business plan were developed in the context of the government's business and fiscal plans. I am committed to achieving the planned results laid out in this business plan.

*original signed by*

Doug Horner, *Minister of Advanced Education and Technology*  
April 4, 2008

## THE MINISTRY

The Ministry of Advanced Education and Technology consists of the following entities for budget purposes: Department of Advanced Education and Technology, the Access to the Future Fund, Alberta Research Council Inc., the Alberta Enterprise Corporation, and iCORE Inc.

The following councils, boards, and authorities provide policies, guidelines and advice to the Minister: the Alberta Council on Admissions and Transfer, the Alberta Apprenticeship and Industry Training Board, the Campus Alberta Quality Council, the Students Finance Board, the Access Advisory Council, and the Alberta Science and Research Authority and its associated institutes including: Alberta Life Sciences Institute; Alberta Agricultural Research Institute; Alberta Forestry Research Institute; Alberta Energy Research Institute; and Alberta Information and Communications Technology Institute.

The Minister also has responsibility for legislation pertaining to the Alberta Heritage Foundation for Medical Research and the Alberta Heritage Foundation for Science and Engineering Research (operating under the trade name Alberta Ingenuity).

The Ministry's 2008-11 business plan identifies how it plans to work over the next three years to enhance advanced learning opportunities and innovation for all Albertans.

Alberta's advanced learning system is composed of public board-governed institutions, the apprenticeship and industry training system, community consortia, private providers and community-based organizations. In collaboration with the advanced learning system, industry, communities, government agencies and non-governmental organizations, Advanced Education and Technology strives to create accessible, affordable and quality learning opportunities that are responsive to the ongoing learning needs of Albertans.

Alberta's innovation system, which includes government working collaboratively with industry and academia, strives to create, develop and implement innovation policies, practices and programs that are critical for Alberta if it is to sustain and enhance current levels of prosperity and a high quality of life over the longer term. The Ministry cooperates with key innovation support agencies to foster support for commercialization and innovation activities across the province.

Advanced Education and Technology supports the Government of Alberta's vision to build a vibrant and prosperous province where Albertans enjoy a superior quality of life and are confident about the future for themselves and their children. Advanced Education and Technology's vision describes its preferred view of the future, and its mission describes the Ministry's purpose and reason for existence.

## **VISION**

*Alberta prospers through innovation and lifelong learning.*

## **MISSION**

Advanced Education and Technology provides strategic leadership for the development of the next generation economy in Alberta through the provision of accessible, affordable and quality learning opportunities for all Albertans and support for a dynamic and integrated innovation system.

The Ministry's vision and mission reflect that skilled and highly qualified people are key elements in a successful economy. A highly skilled and qualified workforce and the innovative development and application of science and technology are essential for the creation, growth, and retention of globally competitive knowledge-intensive companies. Providing all Albertans with affordable access to high quality learning opportunities will ensure that Albertans possess the skills to succeed over their lifetimes. Only then can Alberta fulfill its hope of being a province where the generation of ideas is met by an environment that has the means to commercialize new products and services, creating a prosperous and sustainable future for all Albertans. Reflecting this, the Ministry has identified the following principles to be fundamental in the pursuit of its vision and mission.

## PRINCIPLES

<b>Accessibility</b>	Anyone who wants to pursue advanced learning in Alberta should be able to do so.
<b>Affordability</b>	Education must be affordable if it is to be an accessible lifelong pursuit for Albertans.
<b>Diversity</b>	Alberta's advanced learning and innovation system must respect a rich diversity of communities, cultures, traditions, learner aspirations and abilities.
<b>Collaboration and Alignment</b>	A resilient, responsive and adaptable learning system, as well as Alberta's ability to capture value through innovation, must be built on a strong foundation of partnerships, coalitions and networks so that efforts are aligned with desired outcomes.
<b>Global Excellence and Competitiveness</b>	Alberta's advanced learning system's research, technology, and knowledge transfer capacities and capabilities must be world class for Alberta to achieve excellence and be globally competitive. They must meet the needs of learners, enable Alberta to attract and retain highly qualified students and personnel, and foster company creation, growth and attraction.
<b>Sustainability</b>	Alberta's advanced learning system and innovation framework must focus on the sustainability of its investments to ensure the province's long-term success in a knowledge-based global economy.

## LINK TO THE GOVERNMENT OF ALBERTA STRATEGIC BUSINESS PLAN

Advanced Education and Technology ensures that its strategic priorities, goals, outcomes and strategies support the goals in the Government of Alberta three-Year Business Plan and the Government's priorities in the Strategic Business Plan. The following summarizes the linkages between the Ministry business plan and the Government of Alberta's goals and priorities.

### **Government of Alberta Goal 1: Alberta will have a prosperous economy**

#### **Ministry Support for Goal 1**

- Improve the capacity and capabilities of firms and institutions to engage in research and development activities in the strategic priority areas of energy, life sciences, information and communications technology, and nanotechnology.
- Support innovation and knowledge development within the advanced learning system, research organizations, and industry; by adopting strategies to develop, attract and retain highly skilled people and developing a framework to support the emergence of centres of excellence.
- Work with partners and stakeholders to accelerate technology commercialization and value-added innovation in Alberta.
- Encourage technology commercialization and increase the Canadian venture capital invested in Alberta, by such means as the establishment of the Alberta Enterprise Corporation.

### **Government of Alberta Goal 2: Albertans will be well prepared for lifelong learning**

#### **Ministry Support for Goal 2**

- Develop a provincial access framework and work with partners to align post-secondary capacity and supply with learner and labour market demand.

- Implement a funding mechanism that better aligns system outcomes, including quality, access, responsiveness, collaboration, and institutional mandates.
- Continue to implement elements of the Affordability Framework to assure inclusion of all learners and ensure that financial need is not a barrier to participation in the advanced learning system.
- Create responsive policies and programs to address the increasingly diverse needs of learners and encourage high rates of participation among all Albertans, including Aboriginal learners, rural Albertans, immigrants and those who are socio-economically disadvantaged.
- Encourage increased industry participation and investment in the apprenticeship and industry training system.
- Develop and implement initiatives to leverage the full potential of community-based adult learning programs.
- Continue to pursue the achievement of national and international standards of excellence, and active involvement in cross-ministry, inter-provincial and international collaboration that will lead to increased standards of performance.

### **Government of Alberta Priorities**

#### **Lead the following Government Priority**

- *Enhance value-added activity, increase innovation, and build a skilled workforce to improve the long-run sustainability of Alberta's economy.*

#### **Work with Health and Wellness on the following Government Priority**

- *Increase access to quality health care and improve the efficiency and effectiveness of health care service delivery*

## **SIGNIFICANT OPPORTUNITIES AND CHALLENGES**

The key to Alberta's future prosperity, economic growth, and healthy communities is a robust, diverse economy based on knowledge and research and driven by Albertans with a desire to learn and innovate throughout their lives. An affordable, accessible, and high quality advanced learning system and an innovative economy with thriving knowledge transfer and technology commercialization capabilities are vital to facilitating and securing economic success, social well-being, and a knowledgeable and healthy citizenry. These long-term objectives are central to the Ministry's 2008-11 business plan. The following opportunities and challenges are considered significant in that they could impact the Ministry's ability to implement strategies and achieve its business plan goals.

### **Responding to Economic Growth**

Alberta's economic strength over the past several years has introduced pressures on the advanced learning and innovation systems, particularly in delivering advanced learning and apprenticeship spaces, staffing post-secondary institutions, and funding capital infrastructure. The Ministry is faced with the challenge of managing the short-term impacts of current economic conditions in the province while taking a balanced approach to promoting long-term economic growth and continuing to build a world class advanced learning and innovation system. The short-term needs of the economy must be balanced with the long-term needs of learners and society.

In the short-term, aligning system capacity and supply with learner and labour market demand is a significant challenge, due in part to the ongoing strong growth in the provincial economy. As well, the learning and innovation systems face global competition in attracting, developing, and retaining highly skilled and qualified people who are essential to realizing the province's innovation capacity. There is a need to be flexible to respond to changes in the economy and address skilled labour shortages.

In the long-term, the current strength of the economy provides both challenges and opportunities. The strong economy may be drawing potential learners away from pursuing advanced learning opportunities, possibly leading to

lower educational attainment levels in the future. This trend could have long-term opportunity costs for learners and Alberta. Although Alberta has enjoyed strong economic growth over the past several years and this will likely continue for the near future, a shift in the labour market could lead to higher enrolments as Albertans return to learning to increase their skills. Alberta has the opportunity to prepare for this by building into the advanced learning system the flexibility to accommodate an influx of learners and to enhance the system's ability to allow learners to increase their educational attainment while they are working.

### **Fostering Economic Diversification**

A diverse, innovative, productive, and knowledge-based economy will form the basis for Alberta's future economic growth and prosperity. Alberta's economy remains largely based on non-renewable natural resources and price driven export revenue, which leaves the province vulnerable to global shifts in demand and commodity prices. In the short-term, current levels of investment and labour intensity in the energy sector will continue to impact other sectors of the economy.

The advanced learning and innovation systems are challenged to respond to the short-term needs of the labour market while stimulating long-term economic sustainability through research, innovation and commercialization, and the creation of an educated society. Sustaining traditional economic sectors while building Alberta's value-added and technology sectors will reduce dependency on any one sector of the economy and provide the foundation to sustain Alberta's economic growth and prosperity into the future. The learning and innovation system must play a key role in stimulating creative ideas, as well as maximizing the return from research investments by managing those investments effectively and focusing on strategic niches where Alberta can be a market leader.

As we strive to respond to economic growth and foster economic diversification, we must ensure that science and technological innovation continue to provide solutions to ongoing economic, health and environmental challenges. In this regard, Advanced Education and Technology has opportunities to improve the efficiency and effectiveness of public research and facilitate the translation of research into commercial realities, encourage enhanced business research and development, foster closer interactions with the universities, colleges, technical institutes, firms, government labs and society in general, and encourage the development of highly skilled and qualified people.

### **Adapting to Changes in the Knowledge Creation and Transfer Process**

The creation and transfer of knowledge is a critical part of the underlying foundation for any economy hoping to meet the challenges of global competitiveness. Alberta has recognized this and is moving away from research conducted in discrete disciplines and toward support of researchers and a research system that is more cross disciplinary and networked. The system also faces the challenge of becoming more responsive to a broader range of stakeholders – government, industry, research institutions, and academia – whose interests range from traditional basic research through to the application of research for commercialization purposes, thus enhancing wealth creation in Alberta and ensuring a more value-added economy and sustainable prosperity.

### **Ensuring Accessibility for all Learners**

The educational participation rate of Albertans is lower than the Canadian average. Ensuring high levels of access and participation requires that the advanced learning system be optimally configured to meet the needs of learners and society. This includes aligning system capacity and supply with the demands of the economy and learners, and long-term capital and program planning that is based on reliable information and evidence-based decision-making. Alberta's capacity to expand access also will rely on the ability of the advanced learning system to be more adaptive, flexible in delivery, responsive, and inclusive of learners currently under represented in the learning system, including Aboriginal Albertans and persons with disabilities.

Increasing the participation of Albertans in advanced learning introduces a number of complex and interrelated issues. These issues include raising aspirations and awareness of Albertans of the importance and value of learning

and ensuring the system responds to the increasingly diverse needs of learners. It is also important to ensure that disadvantaged learners have the foundational skills necessary to access the advanced learning system. Providing relevant information to learners and parents and effective collaboration with partners could ease learning transitions and provide opportunities to engage more Albertans in lifelong learning. Removing affordability barriers to learning will require ongoing implementation of strategies identified under the Affordability Framework, inclusive of ongoing enhancements to Student Financial Assistance programs. In addressing the financial need of learners it is important to meet rising living and learning costs, while allowing Alberta students to graduate without carrying unmanageable debt.

### **Strengthening Community Capacity**

Creating a learning and innovative society and a knowledgeable citizenry will rely on our ability to ensure that Albertans, wherever they live, have access to the full spectrum of learning opportunities, including quality literacy and foundational learning programs. Opportunities exist to increase Albertans' engagement in lifelong learning through strengthening the community-based adult learning system and improving its integration into the advanced learning system.

Other opportunities exist in new approaches, such as increased support for prior learning assessment and recognition and credential laddering, to enhance recognition of learners' abilities and skills and facilitate their transitions into learning, through the learning system, and out into the workplace and society. With large numbers of newcomers arriving into all areas of the province each year, Alberta's advanced learning system also must be able to meet the learning needs of immigrants to facilitate their transition and integration into the labour market and society.

## **STRATEGIC PRIORITIES 2008-11**

The Ministry provides strategic leadership to the advanced learning and innovation system. The strategic priorities described below support the Government's Pillars "Creating and Protecting our Opportunities" and "Building our Quality of Life." These strategic priorities are in addition to the Ministry's important ongoing core activities.

### **CREATING AND PROTECTING OUR OPPORTUNITIES**

#### **1. Technology Commercialization**

**Linkage: Goal 5**

A diverse, innovative, productive, and knowledge-based economy will form the basis for Alberta's future economic growth and prosperity. Diversification of Alberta's economy will require strategies to attract, develop, grow and retain successful and innovative knowledge-based companies.

A specific initiative for the Ministry will be to:

- Encourage technology commercialization and increase Canadian venture capital invested in Alberta, in part by establishing the Alberta Enterprise Corporation.

#### **2. Increase Post-Secondary Spaces**

**Linkage: Goals 1 and 2**

People are the key to Alberta's future prosperity. The achievement of adult learners depends upon their ability to access the advanced learning system and make effective transitions through the learning system, and out into the workplace and society.

A specific initiative for the Ministry will be to:

- Increase post-secondary spaces available to high demand areas like health and trades over the next two years.



- 3. An Affordable Learning System** Ensuring that Albertans have access to learning opportunities requires that those opportunities be affordable to learners and their families.
- Linkage: Goal 3**
- A specific initiative for the Ministry will be to:
- Reduce the interest rate on student loans from prime plus 2.5 percentage points to prime.
- 4. Research and Innovation** Alberta seeks to develop the capacity and capabilities within the province for outstanding research and innovation that can improve quality of life, foster new business opportunities, enhance economic growth in the province, and increase knowledge and skills in scientific fields in support of future discoveries.
- Linkage: Goal 1 and 4**
- A specific initiative for the Ministry will be to:
- Develop and implement a framework that defines the roles and mandates for publicly funded organizations that support world class research and innovation in Alberta.
- 5. Roles and Mandates Policy Framework** The government has endorsed a Roles and Mandates Policy Framework for Alberta's publicly funded advanced education system. Implementation of this Policy Framework now becomes a significant focus for the Ministry.
- Linkage: Goals 1, 2 and 3**
- Specific initiatives for the Ministry will include the following:
- Development of a provincial access framework and institutional access plans; and
  - Development of an outcomes focused resource allocation model.
- 6. Building and Educating Tomorrow's Workforce** Alberta's future prosperity will depend on a knowledgeable citizenry and a highly skilled workforce. This requires an advanced learning system that gives learners the opportunities and tools to succeed and excel.
- Linkage: Goals 1 and 2**
- A specific initiative for the Ministry will be to:
- Continue to co-lead the Government of Alberta's comprehensive labour strategy, *Building and Educating Tomorrow's Workforce*.

## **BUILDING OUR QUALITY OF LIFE**

- 7. Health Care Professionals** The department is committed to supporting Alberta Health and Wellness to ensure Alberta has the health care professionals needed to meet future demand.
- Linkage: Goals 1, 2 and 3**
- Specific initiatives for the Ministry will be to:
- Increase the number of physician graduates from 227 to 295 by 2012.
  - Increase the number of Registered Nurse graduates from 1,375 to 2,000 by 2012.
  - Increase the number of Licensed Practical Nurse graduates from 559 to 1,000 by 2012.

# CORE BUSINESSES, GOALS, STRATEGIES & PERFORMANCE MEASURES

Advanced Education and Technology has identified three core businesses that describe the ongoing key responsibilities of the Ministry. Under these core businesses are goals with specific outcomes that describe the end results the Ministry wants to achieve in fulfilling its mission. Advanced Education and Technology has identified strategies for 2008-11 that support the Ministry's outcomes and goals and the government's three-year business plan. Performance measures indicate the degree of success the Ministry has in achieving its outcomes and goals.

## Core Business One: Provide Strategic Leadership for Alberta's Advanced Learning and Research System

### GOAL ONE **1** Alberta's advanced learning and research capacity aligns with learner and labour market demand and serves the needs of a knowledge-intensive society

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**What it means** Advanced Education and Technology strives to provide the right learning and research opportunities for adult Albertans at the right time, in the right place. It does this through policy, programming, and funding support to post-secondary institutions, by funding the acquisition of research equipment to support research initiatives, and by working with other ministries and stakeholders to identify emergent needs in the economy and society. It also does this through the development of access plans, including regional considerations, to align learning opportunities with identified needs. The Ministry strives to serve the needs of Albertans by providing funding for the expansion and maintenance of post-secondary infrastructure.

The following have been identified as Goal 1 outcomes:

- Enrolment capacity in the advanced learning system responds to learner and labour market demand.
- Research capacity serves the needs of a knowledge-intensive society.

#### Strategies

- 1.1 Implement strategies to support the Roles and Mandates Policy Framework for Alberta's publicly funded advanced education system.
- 1.2 Develop a provincial access framework that identifies learner demand, occupational demand, and growth program areas.
- 1.3 Increase enrolment capacity in the post-secondary system to meet learner and labour market demand consistent with the provincial access framework and in alignment with government-wide priorities.
- 1.4 Expand access for Aboriginal Albertans by building partnerships and capacity with providers of Aboriginal adult learning opportunities, including working with Aboriginal colleges to facilitate recognition of programs and expanded transfer in the advanced learning system.
- 1.5 Enhance the infrastructure of Alberta's public post-secondary system to facilitate delivery of high quality advanced learning opportunities throughout the province.
- 1.6 Enhance learner access and entrance into the advanced learning system through the use of technology, innovation, and collaboration with post-secondary institutions.
- 1.7 Align capital planning to respond to the enrolment and research capacity needs of the advanced learning and research system.

- 1.8 Support Alberta Health and Wellness to increase access to quality health care and improve the efficiency and effectiveness of health care service delivery.
- 1.9 Work with partners and stakeholders to develop a collaborative, networked, and multidisciplinary research system that spurs innovation.
- 1.10 Review research capacity in Alberta's advanced learning and innovation system to allow enhanced alignment of research and innovation capacity with the needs of the system.

<b>Performance Measures</b>	<b>Last Actual (2006-07)</b>	<b>Target 2008-09</b>	<b>Target 2009-10</b>	<b>Target 2010-11</b>
1.a Public satisfaction that adult Albertans can access education or training	79%	79%	80%	81%
1.b Total sponsored research revenue attracted by Alberta universities (\$ million)	686.5	700.2	714.2	728.5
1.c Total sponsored applied research revenue attracted by Alberta technical institutes and colleges (\$ million)	5.8	5.8	5.8	5.8

## **Core Business Two: Foster a Culture of Learning that Develops Highly Skilled and Qualified People**

GOAL TWO

# 2

## **Albertans are able to participate fully in lifelong learning**

**What it means** Advanced Education and Technology seeks to provide increased access to high quality advanced learning opportunities for all adult Albertans. It does this through policy, programming and funding support to post-secondary institutions, by encouraging and enabling participation in learning by Aboriginal Albertans and other traditionally under-represented groups of learners, and by working with industry to facilitate the development of training and certification standards in the apprenticeship and industry training system. Ensuring that prior learning, skills, and experience are appropriately recognized and that credentials are transferable into, within, and out of Alberta is important to allow global movement of learners to take place. It is also important to allow Alberta learners to move easily through a broad array of learning opportunities and to foster a culture of lifelong learning.

The following have been identified as Goal 2 outcomes:

- A broad array of learning opportunities is available within local communities.
- Albertans participate in the advanced learning system.
- Alberta is recognized globally as a destination of choice for international students, faculty, and researchers.
- Credentials, prior learning, skills, and experience are valued and recognized.
- Graduates achieve positive learning outcomes.

## Strategies

- 2.1 Provide opportunities in local communities for Albertans including Aboriginal, immigrant, youth, and other under-represented groups to access programs that offer literacy, English as a Second Language, and lifelong learning.
- 2.2 Expand community capacity by providing opportunities to ensure community programs are addressing literacy, English as a Second Language, and other learning needs of adults.
- 2.3 Develop innovative approaches to increase participation of Aboriginal, immigrant, and other under-represented groups in learning opportunities.
- 2.4 Enhance parents' and learners' knowledge and awareness of Alberta's advanced learning system, planning tools, and financial support options through a collaborative raising-awareness program.
- 2.5 Develop innovative approaches to improve participation and achievement in apprenticeship and industry training in response to industry needs.
- 2.6 Encourage increased industry participation and investment in the apprenticeship and industry training system in collaboration with the Alberta Apprenticeship and Industry Training Board, employers, and other stakeholders.
- 2.7 Implement the international education action plan to facilitate the internationalization of Alberta's advanced learning system and enhance opportunities for Alberta students to engage in international education experiences.
- 2.8 Work with institutions, employers and professional associations to encourage the recognition of credentials, competencies, prior learning, and work experience of current and prospective Albertans.
- 2.9 Through the Campus Alberta Quality Council, work with other quality assurance agencies, post-secondary institutions, and other stakeholders to enhance the recognition of Alberta's degree programs and graduates.
- 2.10 Work with the Ministry of Employment and Immigration to implement the *Building and Educating Tomorrow's Workforce* strategy.

Performance Measures	Last Actual (year)	Target 2008-09	Target 2009-10	Target 2010-11
2.a Public agreement that programs, classes or courses are offered in locations (including online) that are easily accessible	77% (2006-07)	78%	78%	79%
2.b High school to post-secondary transition rate of students within six years of entering Grade 10	59.5% (2005-06)	61%	61%	62%
2.c Proportion of Albertans aged 18-34 participating in post-secondary education	17% (2007)	19%	20%	21%
2.d New apprentices registered (five year average)	15,879 (2006)	16,100	17,200	17,200
2.e Aboriginal learners participating at post-secondary institutions	7,674 (2006-07)	7,700	7,800	7,900

<b>Performance Measures</b>	<b>Last Actual (year)</b>	<b>Target 2008-09</b>	<b>Target 2009-10</b>	<b>Target 2010-11</b>
2.f Aboriginal learners participating in apprenticeship	1,262 (2006)	1,400	1,450	1,500
2.g Educational attainment of Albertans aged 25 to 64:				
• Proportion having completed post-secondary education	59% (2007)	60%	61%	62%
2.h Educational attainment of Aboriginal Albertans aged 25 to 64:				
• Proportion having completed post-secondary education	45% (2007)	45%	45%	46%
2.i International visa students registered at Alberta post-secondary institutions	9,196 (2005-06)	9,400	9,500	9,600
2.j Percentage of post-secondary graduates with prior learning who reported that they had received the transfer credit they expected	91% (2005-06)	n/a	90%+	n/a
2.k Employer satisfaction with the skills and quality of work of advanced education system graduates	88% (2007-08)	n/a	90%+	n/a
2.l Satisfaction of recent post-secondary graduates with the overall quality of their educational experience	90% (2005-06)	n/a	90%+	n/a
2.m Satisfaction of recent apprenticeship graduates with on-the-job training	93% (2006-07)	90%+	n/a	90%+
2.n Satisfaction of recent apprenticeship graduates with technical training	94% (2006-07)	90%+	n/a	90%+
2.o Employment rate of recent Alberta advanced education graduates:				
• Post-secondary certificate or diploma	97% (2005-06)	n/a	95%+	n/a
• University degree	97% (2005-06)	n/a	95%+	n/a
• Journey person	97% (2006-07)	95%+	n/a	95%+

**Note:**

n/a Data available every other year.

## Alberta has an affordable advanced learning system

**What it means** Advanced Education and Technology strives to ensure that learner needs are met by seeking ways to make the system more learner-centered, accessible, and affordable. It is important to encourage and enable participation in learning by all Albertans including those traditionally under-represented in the advanced learning system.

The following have been identified as Goal 3 outcomes:

- Financial need is not a barrier to participating in the advanced learning system.
- Excellence is rewarded through scholarships and awards.

### Strategies

- 3.1 Continue implementation of the Affordability Framework to ensure that financial need is not a barrier to participation in advanced learning opportunities.
- 3.2 Target scholarships, bursaries, and grants to increase participation by under-represented Albertans.
- 3.3 Work with the federal government and other provincial jurisdictions through pan-Canadian committees to improve and simplify student assistance programs to ensure appropriate financial supports to adult learners.
- 3.4 Enhance access to student financial assistance through simplified materials, technology, policies and support services.
- 3.5 Reduce the interest rate on student loans to prime.
- 3.6 Ensure scholarship programs reward the excellence of Alberta students.

Performance Measures	Last Actual (2005-06)	Target 2008-09	Target 2009-10	Target 2010-11
3.a Proportion of recent graduates who agree that the program they graduated from was worth the financial cost	83%	n/a	85%	n/a
3.b Ratio of total debt at graduation to income two years after graduation	37%	n/a	35%	n/a
3.c Scholarship dollars per full-time student studying in Alberta	\$295	\$330	\$395	\$400

### Note:

n/a Data available every other year.

## Core Business Three: Support Research and its Application and Commercialization to Grow a More Diverse Alberta Economy

GOAL FOUR

# 4

## Alberta's research capacity supports enhanced excellence in research and innovation in strategic areas

**What it means** A critical building block supporting innovation is strong research capacity and capability at Alberta universities, other research agencies, colleges and technical institutes. The Government of Alberta's commitment to scientific excellence will nurture, support, and celebrate creativity, discovery, and outstanding research across its diversity. The focus on Alberta's priority areas – energy, life sciences, information and communications technology, and nanotechnology – will ensure that critical mass and capacity is achieved. Investments in these priorities are guided by strategies developed by the Life Sciences, Energy, Information and Communications Technology, Agriculture, and Forestry Research Institutes. Through infrastructure programs and targeted program funding, Alberta's investments attract research funding from a range of sources, resulting in unique partnerships focused on building and sustaining the research capacity of Alberta's innovation system. This goal reflects the vital importance of developing, attracting, and retaining high quality people who possess the scientific, technical, and entrepreneurial skills needed in an innovative, knowledge-based, and research-intensive economy.

The following has been identified as a Goal 4 outcome:

- Focused areas of research excellence where Alberta has a competitive advantage.

### Strategies

- 4.1 Promote advanced energy technology and innovation in six core areas: bitumen upgrading, clean carbon/coal, improved recovery, renewable energy, CO2 management, and water management.
- 4.2 Implement the Life Sciences Strategy by focusing on innovations in agriculture, forestry, food, water, health, and the environment.
- 4.3 Support the implementation of the Alberta Nanotechnology Strategy and the creation of nanoAlberta as the key organization to drive Alberta's nanotechnology agenda.
- 4.4 Implement the Information and Communications Technology Strategy and support an environment that fosters research and industry development in strategic areas: focusing on core competencies that support integrated resource management; enhancing research capacity in information and communications technology; and creating a sustainable infrastructure.
- 4.5 Develop expertise in applied research and product development in our colleges and technical institutes that addresses local company needs.
- 4.6 Promote science and technology awareness within Alberta, including encouraging youth to enter careers in science and technology.
- 4.7 Develop, attract, and retain highly qualified scientific personnel at Alberta's research institutions and organizations.
- 4.8 Develop a framework to support the emergence of centres of excellence and ensure alignment of efforts and investments with provincial research priorities and capacity.
- 4.9 Develop and implement a framework that defines the roles and mandates for publicly funded organizations that support world class research and innovation in Alberta.

Performance Measures	Last Actual (2006-07)	Target 2008-09	Target 2009-10	Target 2010-11
4.a iCORE Awards (Totals include "new")				
• New Research Chairs, Industry Chairs and Professors	3	6	6	6
• Total Active Research Chairs, Industry Chairs and Professors	26	30	30	30
• New Graduate Student Scholarships	77	120	120	120
• Total Active Graduate Student Scholarships	268	300	300	300
4.b Number of graduate students studying in Alberta	18,605	18,850	19,100	19,350

Performance Measure Under Development:

"Proportion of graduate students in the priority areas of energy, life sciences, nanotechnology, and information and communications technology." This measure is for the outcome "Focused areas of research excellence where Alberta has a competitive advantage."

GOAL FIVE

# 5

## Value is captured from research and innovation

**What it means** Innovation, excellence, and competitiveness are the cornerstones of a vibrant economy and foundations for prosperity and the maximization of the human, social, and economic potential of Alberta. Strategic investments in research and development will result in innovative ideas, products and processes that, when commercialized successfully for the global marketplace, have the potential to yield significant economic and social benefits for the province. This goal reflects the commitment to help Alberta become a place of choice for commercialization in the priority areas of energy, life sciences, information and communications technology, and nanotechnology. This requires Alberta to be a progressive province that encourages company formation and growth, offers a supportive and competitive tax, fiscal, and regulatory environment, and effectively utilizes industry-university interfaces and other support services. In such an environment, ideas are more likely to be developed and brought to market in Alberta, supporting applied research and development, strengthening the commercialization system, and encouraging innovation. The following have been identified as Goal 5 outcomes:

- An innovative province.
- A diversified economy through growth of knowledge-based sectors.

**Strategies**

- 5.1 Encourage technology commercialization and increase Canadian venture capital invested in Alberta, in part by establishing the Alberta Enterprise Corporation.
- 5.2. In alignment with government priorities, collaborate with various partners to accelerate innovation and commercialization in Alberta by enhancing the technology and business development environment for entrepreneurs.



- 5.3 Work with post-secondary institutions, research foundations, industry associations, communities, and other areas of government to enhance the competitiveness of Alberta's business environment with respect to encouraging technology commercialization and adoption.
- 5.4 Develop partnerships between communities, industry, and institutions for technology creation and transfer.
- 5.5 Develop, attract, and retain skilled and highly qualified entrepreneurs.
- 5.6 Increase business investments in key strategic sectors which lead to greater technology commercialization in Alberta.
- 5.7 Collaborate with partners to foster business opportunities, attract corporate investments, and encourage seed and venture funding.
- 5.8 Promote growth in Alberta's locally managed venture capital industry through the Alberta Enterprise Corporation.
- 5.9 Increase implementation of innovative initiatives to enhance Government of Alberta service delivery and facilitate the application of new knowledge.

<b>Performance Measures</b>	<b>Last Actual (year)</b>	<b>Target 2008-09</b>	<b>Target 2009-10</b>	<b>Target 2010-11</b>
5.a Percentage of Government of Alberta expense used to support innovation	2.67% (2005-06)	Increase above prior year <sup>1</sup>		
5.b Alberta business expenditures on research and development (\$ million)	903 (2004)	905	926	1,000
5.c Number of Albertans employed by companies in priority areas	127,800 (2006)	130,000	136,000	140,000
5.d Albertans employed by companies in priority areas as a percentage of Albertans employed in all companies	6.8% (2006)	7.2%	7.3%	7.4%
5.e Percentage of Canadian venture capital invested in Alberta	1.3% (2006)	2.0%	3.3%	3.4%

**Note:**

1 The long-term target for measure 5.a is to increase up to 5%, as affordable, by 2015.

# ORGANIZATIONAL STRUCTURE SUPPORTING OUR BUSINESS PLAN

Advanced Education and Technology is organized into the following program divisions and strategic corporate support areas.

## PROGRAM DIVISIONS

### Adult Learning

The Adult Learning Division works with adult learners and the public and private post-secondary institutions to support learners, provide learning opportunities and enhance the advanced learning system. Specifically, the Division funds advanced learning providers; provides student financial assistance to Albertans; coordinates and approves programs of study at public institutions; licenses and approves programs offered by private providers; and funds, supports and provides community adult learning opportunities. The Division also coordinates and supports activities of the Access Advisory Council, the Alberta Council on Admissions and Transfer, the Campus Alberta Quality Council, and the Students Finance Board.

### Apprenticeship and Industry Training

The Apprenticeship and Industry Training Division works with industry, employer and employee organizations, technical training providers, government and ministry divisions to support the development, maintenance, and delivery of designated trade and occupation programs. Specifically, the Division provides planning, coordination, and policy support to the Alberta Apprenticeship and Industry Training Board and its network of industry committees; facilitates industry's development of training and certification standards; counsels apprentices and employers; provides funding for approved programs; promotes participation and certifies individuals in designated trades and occupations; and monitors the workplace for compliance with the *Apprenticeship and Industry Training Act* and regulations.

### Research

The Research Division works with the Alberta Science and Research Authority and the Life Sciences, Energy, Information and Communications Technology, Agriculture, and Forestry Research Institutes to coordinate, support and promote research, development and innovation in the strategic priority sectors of energy, life sciences (e.g., agriculture, forestry, health, water), information and communications technology, and nanotechnology. The University Research and Strategic Investments Branch is responsible for the pre- and post-award management of research capacity/equipment grant programs and the Innovation and Service Excellence Program, and facilitates alignment with the research institutes' initiatives and other research partners where appropriate to build capacity and research excellence.

### Technology Commercialization

The Technology Commercialization Division supports the creation and establishment of new technology companies in key emerging industries by focusing on four areas of activity: technology development services; business development services; access to capital; and international partnerships and investment attraction. The Division also provides the department with information management and technology services.

## STRATEGIC CORPORATE SUPPORT AREAS

### Policy and Planning

The Policy and Planning Division ensures the Ministry and its activities and programs are well planned and accountable for performance. The Division supports the Ministry through strategic corporate planning, policy development, and associated legislative and regulatory issues. The Division also coordinates department-wide planning processes and provides legislative and Freedom of Information and Protection of Privacy (FOIP) services.

## **Communications**

The Communications area provides timely, strategic communications support and advice to the Minister and the department on key issues, policies, and initiatives. The Communications area works closely with other provincial departments and other levels of government, media, stakeholders, educational and research institutions, and others to inform Albertans about the importance of advanced learning and innovation.

## **Finance and Administration**

The Finance and Administration area provides strategic advice and services to the Ministry in areas such as financial planning, reporting, and operations. The objective of the Finance and Administration area is to ensure the effectiveness and efficiency of financial management, accountability, and administration functions within the Ministry.

## **Human Resources**

The Human Resources area provides consultation and support, and advises the department on all activities related to the management of its human resources such as: policy and planning; staffing; performance management; job classification and organization design; employee relations; staff development; occupational health and safety; wellness; and pay and benefits.

# **ADVISORY BOARDS, COUNCILS AND AUTHORITIES**

## **Access Advisory Council**

The Access Advisory Council provides strategic advice and recommendations to the Minister of Advanced Education and Technology regarding the objectives, operation and reporting of the Access to the Future Fund. The Council consists of nine public members, including a chair, who are appointed by the Minister.

## **Alberta Apprenticeship and Industry Training Board**

The Alberta Apprenticeship and Industry Training Board works with industry to establish the standards and requirements for training and certification in programs under the *Apprenticeship and Industry Training Act*. The Board makes recommendations to the Minister of Advanced Education and Technology about the needs of Alberta's labour market for skilled and trained workers and the designation of trades and occupations. The Board establishes or recognizes trade and occupation-specific industry committees and appoints members to these committees, and promotes participation in careers, training, and certification in trades and occupations. The Board consists of 13 members, appointed by the Lieutenant Governor in Council, who are knowledgeable about training in trades and occupations and the needs of the Alberta labour market.

## **Alberta Council on Admissions and Transfer**

The Alberta Council on Admissions and Transfer is a 16 member council, with representation from the public, student body, the universities, public colleges and technical institutes, private colleges and the Ministry of Education. As an independent body, which reports annually to the Minister of Advanced Education and Technology, it is responsible for developing policies, guidelines and procedures designed to facilitate transfer agreements among post-secondary institutions.

## **Campus Alberta Quality Council**

The Campus Alberta Quality Council is an 11-member Council that provides advice to the Minister of Advanced Education and Technology with respect to the quality of all proposed degree programs at public and private Alberta institutions and non-resident institutions. It is also responsible for monitoring the programs once approved to ensure that the Council's conditions and quality standards continue to be met.

### **Students Finance Board**

The Students Finance Board is an 11 member board appointed by the Minister of Advanced Education and Technology. The Board provides advice to the Minister on matters pertaining to financial assistance for post-secondary students. The Minister may also request the Board make inquiries, conduct research and collect information, and report the results to the Minister.

### **Alberta Science and Research Authority and Research Institutes**

Alberta Science and Research Authority is a provincial corporation composed of members of Alberta's academic, business and research communities, appointed by government. The Authority's mission is to provide sound, independent advice to the Government of Alberta on directions and priorities for science, research, technology and innovation in support of achieving the Government's strategic plan and outcomes. In order to fulfill this mission, the Authority functions as the senior science and research advisory body to the Government of Alberta. *The Alberta Science and Research Authority Act* also established the following research institutes, which are unincorporated boards composed of representatives from industry, academia, and government:

**Alberta Life Sciences Institute** provides leadership and strategic direction on life sciences research and innovation strategies and opportunities to support the expansion of the province's bio-economy.

**Alberta Agricultural Research Institute** provides leadership and strategic direction for coordinated investment for agricultural research and development in the province.

**Alberta Forestry Research Institute** provides leadership and strategic direction to foster and champion forest management and utilization research and development as a key driver for economic diversification and growth of Alberta's forestry sector.

**Alberta Energy Research Institute** provides leadership and strategic direction to position Alberta for the future in energy development and invests in research and technology to enhance sustainable development of the province's energy resources.

**Alberta Information and Communications Technology Institute** provides leadership and strategic direction on coordinating investments in Information and Communication Technology (ICT) related research and commercialization to advance the sustainable growth of the ICT sector in Alberta.

## **ENTITIES AND FUNDS**

### **Access to the Future Fund**

The Access to the Future Fund supports innovation and excellence within the advanced learning system in order to enhance and expand accessible, affordable and high quality learning opportunities. The Fund receives income from an endowment held within the Alberta Heritage Savings Trust Fund. Established in 2005, the endowment is targeted to reach \$3 billion at full implementation.

### **Alberta Research Council Inc.**

Alberta Research Council Inc. is a not-for-profit corporation owned by the Government of Alberta through the Ministry of Advanced Education and Technology. The council delivers innovative science and technology solutions to meet the priorities of industry and government in Alberta and beyond. The council accelerates the development and commercialization of products, processes and services in the energy, life sciences, agriculture, environment, forestry and manufacturing sectors.

## **iCORE Inc.**

iCORE Inc. is a not-for-profit corporation owned by the Government of Alberta through the Ministry of Advanced Education and Technology that is part of the strategy to develop the innovation-based economy of the province by attracting world class information and communications technology researchers and graduate students to Alberta. iCORE Inc. invests in people – the highest calibre research scientists capable of working on fundamental and applied problems in informatics. Access to research expertise and high quality students provides Alberta's traditional and emerging industry sectors with the knowledge and human resources needed to compete in the global economy.

## **Alberta Heritage Foundation for Medical Research**

The Alberta Heritage Foundation for Medical Research is an independent body at arms-length from, but accountable to, the government, reporting to the Minister of Advanced Education and Technology. The Foundation supports biomedical and health research at Alberta universities, affiliated institutions, and other medical and technology-related institutions. The foundation currently provides funding for over 600 researchers and researchers-in-training at three universities.

## **Alberta Ingenuity (Alberta Heritage Foundation for Science and Engineering Research)**

Alberta Ingenuity is an independent body at arms-length from, but accountable to, the government, reporting to the Minister of Advanced Education and Technology. Alberta Ingenuity is the trade name of the Alberta Heritage Foundation for Science and Engineering Research. It supports a balanced, long-term program of science and engineering research based in Alberta to nurture the discovery of new knowledge and encourage its application to benefit Albertans.

## **Alberta Enterprise Corporation**

The Alberta Enterprise Corporation is being established as a not-for-profit corporation owned by the Government of Alberta through the Ministry of Advanced Education and Technology, as part of a strategy to promote growth in Alberta's locally managed venture capital industry. The Corporation will co-invest in a number of early-stage venture capital funds and coordinate activities to promote venture capital industry development in priority areas.

## **EXPENSE BY CORE BUSINESS**

(thousands of dollars)

	Comparable					
	2006-07 Actual	2007-08 Budget	2007-08 Forecast	2008-09 Estimates	2009-10 Target	2010-11 Target
Advanced Learning and Research System	2,149,271	2,624,735	2,791,998	2,939,133	2,727,605	2,658,623
Develop Highly Skilled and Qualified People	160,183	248,734	223,146	253,822	248,252	249,389
Research Application and Commercialization	197,190	234,628	234,534	234,791	213,259	254,705
<b>MINISTRY EXPENSE</b>	<b>2,506,644</b>	<b>3,108,097</b>	<b>3,249,678</b>	<b>3,427,746</b>	<b>3,189,116</b>	<b>3,162,717</b>

# MINISTRY STATEMENT OF OPERATIONS

(thousands of dollars)

	Comparable					
	2006-07 Actual	2007-08 Budget	2007-08 Forecast	2008-09 Estimates	2009-10 Target	2010-11 Target
<b>REVENUE</b>						
Internal Government Transfers	168,438	176,001	176,204	186,723	188,329	189,322
Transfers from Government of Canada	232,184	383,306	378,793	512,017	515,369	536,361
Investment Income	10,328	10,650	10,650	13,550	17,630	19,593
Premiums, Fees and Licences	6,744	8,160	7,760	9,160	10,160	10,160
Other Revenue	44,162	45,061	51,435	55,234	55,234	55,234
<b>MINISTRY REVENUE</b>	<b>461,856</b>	<b>623,178</b>	<b>624,842</b>	<b>776,684</b>	<b>786,722</b>	<b>810,670</b>
<b>EXPENSE</b>						
<b>Program</b>						
Support for Adult Learning	1,703,240	1,803,808	1,826,998	2,048,153	2,252,704	2,390,033
Support to Post-Secondary Learners	119,813	189,332	164,841	194,417	189,113	189,393
Post-Secondary Infrastructure	395,441	759,296	900,396	834,557	417,374	209,880
Apprenticeship Delivery	24,560	30,999	31,946	33,115	32,719	33,358
Alberta Centennial Education Savings Plan	7,723	19,500	17,100	17,500	17,500	17,500
Research and Innovation Capacity	101,130	132,502	120,502	91,241	68,775	68,932
Technology Commercialization	12,873	12,962	18,462	42,746	43,102	83,200
Policy and Planning	5,069	6,168	6,391	4,907	5,042	5,174
Ministry Support Services	18,651	20,535	21,380	21,458	21,712	22,234
Access to the Future Fund	42,503	52,729	55,346	47,633	48,608	49,573
Alberta Research Council Inc.	64,235	68,803	73,833	80,708	81,727	82,672
iCORE Inc.	10,865	11,458	12,478	11,306	10,735	10,763
Valuation Adjustments	541	5	5	5	5	5
<b>MINISTRY EXPENSE</b>	<b>2,506,644</b>	<b>3,108,097</b>	<b>3,249,678</b>	<b>3,427,746</b>	<b>3,189,116</b>	<b>3,162,717</b>
Gain (Loss) on Disposal and Write Down of Capital Assets	(14)	-	-	-	-	-
<b>NET OPERATING RESULT</b>	<b>(2,044,802)</b>	<b>(2,484,919)</b>	<b>(2,624,836)</b>	<b>(2,651,062)</b>	<b>(2,402,394)</b>	<b>(2,352,047)</b>

# CONSOLIDATED NET OPERATING RESULT

(thousands of dollars)

	Comparable					
	2006-07 Actual	2007-08 Budget	2007-08 Forecast	2008-09 Estimates	2009-10 Target	2010-11 Target
Ministry Revenue	461,856	623,178	624,842	776,684	786,722	810,670
<i>Inter-ministry consolidation adjustments</i>	(170,362)	(178,001)	(178,204)	(188,723)	(190,329)	(191,322)
<b>Consolidated Revenue</b>	<b>291,494</b>	<b>445,177</b>	<b>446,638</b>	<b>587,961</b>	<b>596,393</b>	<b>619,348</b>
Ministry Expense	2,506,644	3,108,097	3,249,678	3,427,746	3,189,116	3,162,717
<i>Inter-ministry consolidation adjustments</i>	(1,924)	(2,000)	(2,726)	(2,800)	(2,800)	(2,800)
<b>Consolidated Expense</b>	<b>2,504,720</b>	<b>3,106,097</b>	<b>3,246,952</b>	<b>3,424,946</b>	<b>3,186,316</b>	<b>3,159,917</b>
Gain (Loss) on Disposal and Write Down of Capital Assets	(14)	-	-	-	-	-
<b>CONSOLIDATED NET OPERATING RESULT</b>	<b>(2,213,240)</b>	<b>(2,660,920)</b>	<b>(2,800,314)</b>	<b>(2,836,985)</b>	<b>(2,589,923)</b>	<b>(2,540,569)</b>