

## **GFC Academic Planning Committee (APC)**

Approved Motion

The following Motion and attendant Final (Recommended) Document were approved by the GFC Academic Planning Committee (APC) at the meeting of Wednesday, February 28, 2011:

Agenda Title: **University of Alberta's Comprehensive Institutional Plan (CIP)**

**Motion:** THAT the GFC Academic Planning Committee recommend to the Board of Governors the 2011 University of Alberta Comprehensive Institutional Plan (CIP), as provided by the President's Executive Committee and as set forth in Attachment 1, as amended, with the exception of information pertinent to Ancillary Services' budgets which is not within the purview of GFC APC to consider and/or recommend, to take effect upon final approval.

Final Recommended Document: [Item 4](#)



**OUTLINE OF ISSUE**

Agenda Title: **University of Alberta's Comprehensive Institutional Plan (CIP)**

**Motion:** THAT the GFC Academic Planning Committee recommend to the Board of Governors the *2011 University of Alberta Comprehensive Institutional Plan (CIP)*, as provided by the President's Executive Committee and as set forth in Attachment 1, as amended, with the exception of information pertinent to Ancillary Services' budgets which is not within the purview of GFC APC to consider and/or recommend, to take effect upon final approval.

**Item**

Action Requested	<input type="checkbox"/> Approval <input checked="" type="checkbox"/> Recommendation <input type="checkbox"/> Discussion/Advice <input type="checkbox"/> Information
Proposed by	Provost and Vice-President (Academic) Carl Amrhein; Vice-President (Finance and Administration) Phyllis Clark; Vice-President (Facilities and Operations) Don Hickey; and Vice-President (Research) Lorne Babiuk
Presenters	Provost and Vice-President (Academic) Carl Amrhein; Vice-President (Finance and Administration) Phyllis Clark; Vice-President (Facilities and Operations) Don Hickey; and Vice-President (Research) Lorne Babiuk
Subject	2011 University of Alberta's Comprehensive Institutional Plan (CIP) including the Academic Overview; Capital Plan; Operating, Capital, and Consolidated Budgets; and Performance Tracking

**Details**

Responsibility	Provost and Vice-President (Academic), Vice-President (Research), Vice-President (Finance and Administration), and Vice-President (Facilities and Operations)
The Purpose of the Proposal is (please be specific)	<p>Under new guidelines from Advanced Education and Technology (AET), the University of Alberta has prepared one Comprehensive Institutional Plan (CIP) that incorporates elements of the University's access plan, research plan, capital plan, and budgets into one comprehensive document. The CIP replaces previous documents reviewed or approved by various governance committees including the Access Plan, University Plan, Capital Plan, and Budget. The CIP is for approval by the Board of Governors and is then filed with the appropriate Ministries of the Provincial Government.</p> <p>The CIP is written in support of the University's vision and mission as outlined in <i>Dare to Discover</i> and its Academic Plan, <i>Dare to Deliver</i>. The CIP outlines the University's academic and research priorities as articulated in Chapter 5, <u>Academic Chapter</u>, which in turn drives the University's capital and resource allocation priorities as found in Chapters 6, 7, and 8 of the CIP.</p>
The Impact of the Proposal is	To enable the University to move toward fulfilling its vision and mission and to authorize the Administration to allocate resources as outlined in the institutional budgets.
Replaces/Revises (eg, policies, resolutions)	The CIP replaces the University Plan, the Capital Plan, and the University Budget (document). The Institutional Access Plan (IAP) and the Institutional Research Plan (IRP) are now incorporated into the CIP.
Timeline/Implementation Date	The CIP before members is for the fiscal year 2011-2012.
Estimated Cost	See attached documentation for detail.
Sources of Funding	See attached documentation for detail.
Notes	New guidelines for the CIP were released in the Fall of 2010. Because



	<p>this is the first year of the new document, and because the renewal of the University’s Academic Plan (2011–2015) is happening concurrently, the consultation path and the governance path for the documents are similarly taking place concurrently—this year will be a transition year for planning documents at the University. Next year, with the benefit of a full planning cycle, timing and alignment with the governance committees will be in order.</p>
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**Alignment/Compliance**

<p>Alignment with Guiding Documents</p>	<p><i>Dare to Discover</i> and <i>Dare to Deliver</i></p>
<p>Compliance with Legislation, Policy and/or Procedure Relevant to the Proposal (please <u>quote</u> legislation and include identifying section numbers)</p>	<ol style="list-style-type: none"> <li>1. <b>Post-Secondary Learning Act (PSLA)</b> Section 26(1) states: <p>“Subject to the authority of the board, a general faculties council is responsible for the academic affairs of the university and, without restricting the generality of the foregoing has the authority to [...] (o) make recommendations to the board with respect to affiliation with other institutions, academic planning, campus planning, a building program, the budget [...] and any other matters considered by the general faculties council to be of interest to the university[.] [...]”</p> </li> <li>2. <b>Post-Secondary Learning Act (PSLA)</b> Section 78 states: <p><b>“Business plans</b></p> <p><b>78(1)</b> Each year a board must prepare and approve a business plan that includes (a) the budget, and (b) any other information required by the Minister.</p> <p><b>(2)</b> The business plan approved under subsection (1) must be submitted to the Minister on or before the date specified by the Minister.</p> <p>[...]</p> <p><b>Access plan</b></p> <p><b>78.1</b> Each year a board must prepare an access plan in accordance with the regulations and submit it to the Minister on or before the date specified by the Minister.”</p> </li> <li>3. <b>Post-Secondary Learning Act (PSLA)</b> Section 80 states: “The board must submit to the Minister any reports or other information required by the Minister.”</li> <li>4. <b>Board Finance and Property Committee (BFPC) Terms of Reference, Section 3.c.</b> states that the Committee shall “[...] review and recommend to the Board the annual and other budgets and major issues of policy related to budgets[.] [...]”</li> </ol>



	<p>5. <b>Board Learning and Discovery Committee (BLDC) Terms of Reference/Mandate of the Committee (Section 3):</b> “Except as provided in paragraph 4 hereof and in the Board’s General Committee Terms of Reference, the Committee shall, in accordance with the Committee’s responsibilities with powers granted under the Post-Secondary Learning Act, monitor, evaluate, advise and make decisions on behalf of the Board with respect to matters concerning the teaching and research affairs of the University, including proposals coming from the administration and from General Faculties Council (the “GFC”), and shall consider future educational expectations and challenges to be faced by the University. The Committee shall also include any other matter delegated to the Committee by the Board.</p> <p>Without limiting the generality of the foregoing the Committee shall: [...]</p> <p>f. undertake studies and review academic matters that pertain to the quality of the educational experience at the University;</p> <p>g. monitor educational and research trends, community expectations and demands; [...]</p> <p>i. ensure that the academic teaching and research activities at the University are administered and undertaken in a manner consistent with the vision and mission of the University;</p> <p>j. consider future educational expectations and challenges to be faced by the University[.] [...]”</p> <p>6. <b>GFC Academic Planning Committee Terms of Reference/3. Mandate of the Committee:</b> “The Academic Planning Committee (APC) is GFC's senior committee dealing with academic, financial and planning issues. [...]</p> <p>APC is responsible for making recommendations to GFC and/or to the Board of Governors concerning policy matters and action matters with respect to the following:</p> <p><b>1. Planning and Priorities:</b> To recommend to GFC and/or the Board of Governors on planning and priorities with respect to the University’s longer term academic, financial, and facilities development.</p> <p>[...]</p> <p><b>4. Budget Matters [...]</b></p> <p>b. To recommend to the Board of Governors on the annual budget, excluding budgets for ancillary units.”</p>
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**Routing (Include meeting dates)**

<p>Consultative Route (parties who have seen the proposal and in what capacity)</p>	<p>Executive Planning Committee – for review on January 26, 2011; GFC Academic Planning Committee – for review on February 9, 2011; Board Finance and Property Committee – for review on February 11, 2011</p>
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Approval Route (Governance) (including meeting dates)	GFC Academic Planning Committee – for recommendation on February 28, 2011; Joint Meeting of the Board Finance and Property Committee and the Board Learning and Discovery Meeting – for recommendation on March 1, 2011; Board of Governors – for final approval on March 18, 2011
Final Approver	Board of Governors

Attachments:

1. 2011 University of Alberta Comprehensive Institutional Plan (CIP) (pages 1 – 182)

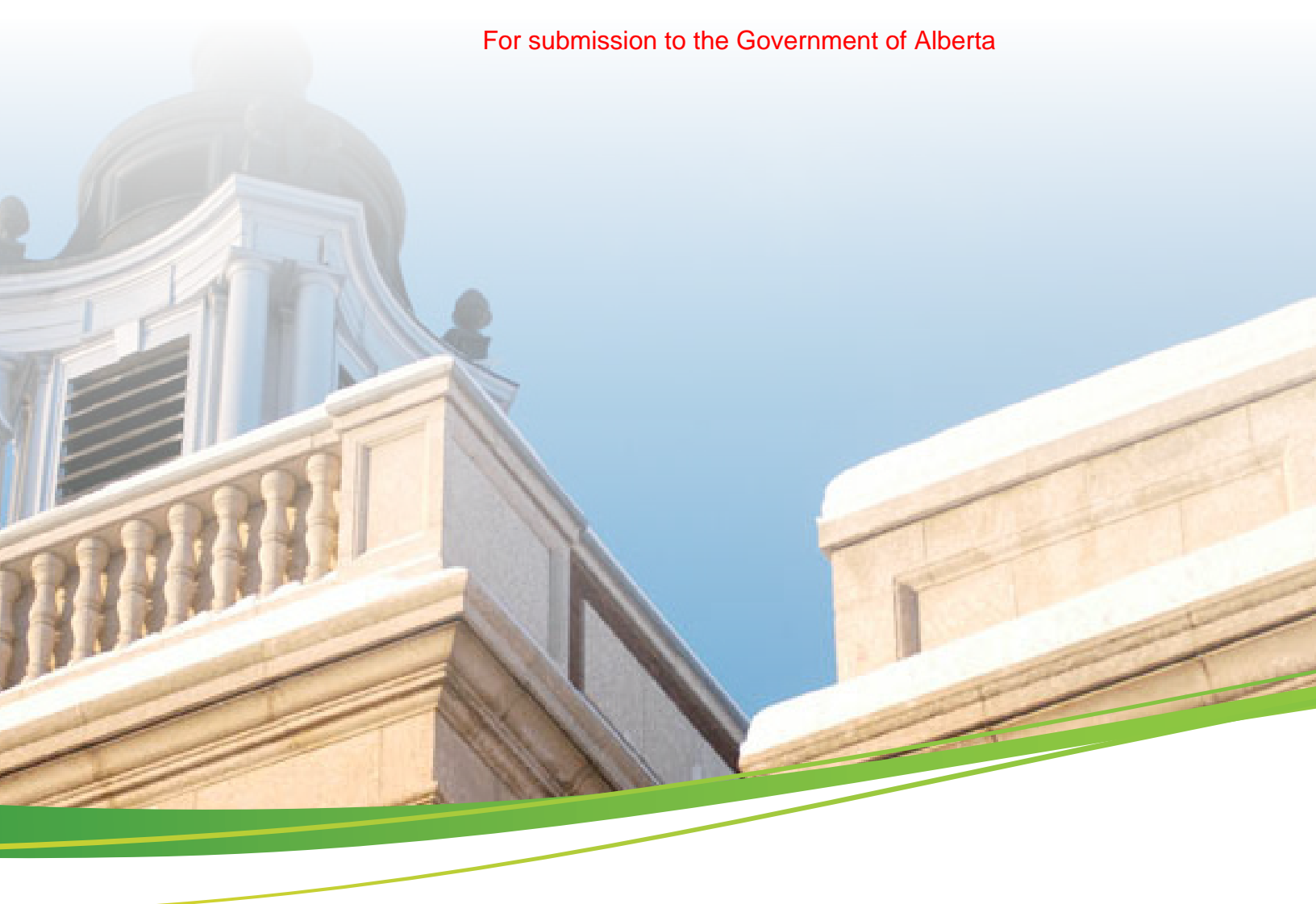
Prepared by: The preparation of the CIP was facilitated by the Office of Resource Planning with major contributions from the Office of the President, each Vice-President's portfolio, and University Governance.

UNIVERSITY OF ALBERTA

2011

# COMPREHENSIVE INSTITUTIONAL PLAN

For submission to the Government of Alberta



For recommendation to the Board of Governors  
March 18, 2011

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# 1. Executive Summary

With a strong foundation of excellence in education from kindergarten through post-secondary and a long-standing commitment to building a better and stronger society for Albertans, the province of Alberta is a place where talent and innovation flourish.

Alberta's universities are well-positioned to meet the needs and challenges of the future, particularly because:

- Despite financial setbacks of the recent recession, Alberta is in a favourable economic situation compared to other regions in Canada and the world, and with the resumption of activity and growth in Alberta's energy sector, the long-term economic well-being of the province is assured.
- Alberta's strong commitment to education from kindergarten to grade 12 feeds into and enhances the learning and discovery environment of our universities.
- Major investments in post-secondary education made in the last decade have enabled the creation of cutting-edge new research and teaching infrastructure, as well as the renewal and renovation of existing spaces.
- Several key long-term investments in the province's research and innovation system have resulted in the establishment of centres of research excellence that are generating discoveries and innovations—and attracting the world's best to Alberta.

In the context of these factors and of the broad international environment in which we function, the University of Alberta submits this Comprehensive Institutional Plan. This document—which includes the University's academic and research plans and performance measures, Capital Plan, and 2011-2012 Institutional Budget—outlines the University's short-term and long-term plans, goals, and resource needs and implications.

The province's mandate for the University of Alberta requires, on the one hand, careful stewardship of existing resources in the day-to-day delivery of our core learning and research mission, and on the other, strategic and visionary long-term planning to sustain and enhance the University's capacity to produce highly-skilled graduates, advance knowledge, and conduct research to the benefit of Alberta, Canada and the world.

Our short-term operational and long-term strategic plans and goals are inextricably linked. Just as a state-of-the-art laboratory languishes in the absence of basic supplies such as Petri dishes, so will the potential of the University of Alberta's recent growth, in both talent and infrastructure, falter in the absence of basic operational funding needed to keep the lights on. And, just as too-limited a focus on ordering Petri dishes can lead to a laboratory out of step with leading-edge experimentation, so a lack of forward, strategic vision will lead to a university out of step with society's needs.

As the University of Alberta continues to change and move forward, we shepherd resources with care. In partnership with government and by seizing opportunities, we have, in recent years, expanded undergraduate and graduate programming, boosted research capacity by attracting international funding into the province, purchased essential equipment, and recruited exceptional talent to our campuses. In the future, we will continue to seek opportunities for strategic, visionary growth and to think boldly about what we strive to accomplish and believe is possible in the service of the public good.

## **1.1. Setting the Stage**

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Knowledge, creativity, innovation and entrepreneurialism are the new global currency and education a foundational attribute of every prosperous society. Alberta's future competitiveness, productivity and economic diversity depend on the development of innovative leaders and visionaries across disciplines—talented, highly educated, skilled individuals who can compete with the best in the world to advance the province as a global economic and social leader, as an energetic and entrepreneurial society, and as a thriving and creative culture.

The Government of Alberta takes pride in fostering made-in-Alberta initiatives and solutions that address the province's current and future challenges. The University of Alberta is one such initiative. Founded at the birth of the province on the principle that a modern university would “uplift the whole people” of Alberta, the University of Alberta has played an instrumental role in educating Albertans and providing research that has underpinned the expansion of many of the province's key industrial, financial, and cultural sectors. University of Alberta alumni have founded or led Alberta powerhouses such as PCL Construction, Stantec, the Katz Group, the Citadel Theatre, Venture Publishing and BioWare. They have served as our Premier, Chief Justice of the Supreme Court of Canada, and Prime Minister and have held positions throughout the three various orders of government.

The University of Alberta is itself a major economic engine that not only helps build the industries and businesses of the province but also acts as a major corporate citizen. It is Alberta's fourth largest employer, employing approximately 14,500 people. The spending power of U of A students and employees together is estimated at \$5.2 billion annually, with approximately \$4.5 billion of that spending occurring in Alberta, mainly in the greater Edmonton area. This represents more than 92,000 jobs in Alberta as the multiplier effect ripples through the economy.

Today, the University of Alberta is the only university in the province that is firmly established as one of Canada's top five universities and consistently ranked among the world's top 100 universities. We have an international profile of excellence across the

sciences, health sciences, engineering, humanities, and creative arts. We aspire to be ranked among the world's top public universities.

As the province's flagship university, the University of Alberta has a broad responsibility and mandate in building toward this future. We must provide comprehensive and diverse educational choices that prepare Albertans for citizenship in the world of the future. We must create enriched and dynamic learning experiences that reflect the changing demands of students and the new technologies increasingly integral to society. We must ensure that the discoveries we make and the knowledge we disseminate are of value to society—in social policy, in competitiveness and industry, in scientific and technological innovation, in creative change and in quality of life.

In the future, Alberta will need to count on a growing cadre of undergraduate and graduate students to lead us through the complexities of the next generation economy and society in all fields—government, business, industry, technology, health care, education, social services, the arts and more. Investment in talent today is vital—indeed essential—to ensuring economic, social and cultural prosperity tomorrow.

Why is investment so critical? Currently, 77 percent of all University of Alberta graduates stay, find employment and create businesses in Alberta, a fact that highlights the long-term benefits to Alberta of public investment in post-secondary education. And yet, in spite of these benefits and of having one of the best K-12 education systems in the world, Alberta trails OECD peers both in terms of the numbers of 18-24 year-olds participating in post-secondary education and in the completion rate of bachelor degrees.

If this trend continues, the negative implications will be amplified by the anticipated drop in Alberta's youth demographic. The result will be skilled labour shortages that could threaten Alberta's long-term economic stability. Part of the answer, in addition to recruiting and retaining more of Alberta's talented youth, will lie in attracting more international students and ensuring that underserved Albertan populations, such as Aboriginal, low-income and immigrant communities, have better access to post-secondary education.

Currently, Alberta also lags behind other regions and nations in international student recruitment. In 2008, Alberta had 6,900 international students at our universities. British Columbia, by comparison, had almost three times that number at 18,500, and in 2009, Australia had more than 200,000.

To help meet the needs of Alberta's students and the labour market, Advanced Education and Technology encourages post-secondary collaboration through Campus Alberta. As the flagship institution within Campus Alberta, the University of Alberta has, through several initiatives, leveraged government investment in our institution to the benefit of others within the system. We have played a leadership role in creating

and facilitating collaboration with our partner institutions to create innovative programming; to share resources on planning and project management; to increase administrative and system efficiencies; and to leverage economies of scale. Our international partnerships have benefits that extend beyond the boundaries of our own research environment enhancing Alberta's full research and innovation system. Investment in the University of Alberta is, in many ways, investment in Campus Alberta as a whole.

Investments from successive federal governments over the last two decades have resulted in research funding councils, foundations, and programs that are the cornerstones to enhancing Canada's competitiveness, productivity and prosperity. However, in spite of the widespread positive impact of investments in university research, there are changes underway in key programs at the Tri-Councils and CFI that are creating challenges for research institutions. These could potentially have a significant impact on the University of Alberta's competitiveness in the future.

These changes come at a moment in history when all regions and institutions in the world are in a fierce competition for top talent. Canada, Alberta and the University of Alberta face competition from both traditional competitors and new, emerging economic powerhouses:

- On January 25, 2011, American President Barack Obama reiterated his policy that by 2020 the United States will produce eight million more post-secondary graduates, and have the highest share of post-secondary graduates in the world.
- India is seeking to establish itself as a knowledge superpower, and will create 40 million new university places over the next ten years.
- China is establishing itself as an innovation nation, and just one of its many goals is to recruit 2,000 world-class researchers, teachers and professionals over the next five to ten years.

Aware of the changing global landscape of the worldwide post-secondary education environment, the University of Alberta continues to focus efforts on connecting to international communities and expanding our international reach and influence. We are creating innovative research agreements—such as the Alberta Helmholtz Initiative—that are multi-levelled, involving researchers, graduate students and undergraduates; international foundations, industry and government; and multi-disciplinary connections.

In partnership with Alberta's four Innovation Corporations, our province is well-positioned to continue growing as a world renowned research leader with a funding system that is the envy of many other regions in Canada and the world. Momentum achieved in the last several decades in science, engineering and health research has been significant. However, Alberta's reputation as a destination of choice for researchers is

being threatened by the lengthy transition from the Alberta Heritage Fund for Medical Research, Alberta Ingenuity, iCORE and Alberta Research Council to Alberta Innovates. We look to the new research corporations to create programs that will keep Alberta's universities, and Alberta itself, highly competitive in the global market for talent.

To increase Alberta's competitiveness within Canada and across the world, the province must renew its commitment to translate the wealth generated by Alberta's natural resources into strong investment into the building blocks of the next generation economy. Alberta's brand as a forward-thinking region with a unique combination of advantages has been and can be again a powerful tool for recruiting international faculty, undergraduate and graduate students and post-doctoral fellows to the province to study and work. In the current climate of fiscal uncertainty, Alberta cannot afford to lose the advantage it gained in the early 2000s.

The recruitment of graduate students is especially critical to Alberta's future competitiveness. Graduate students are society's idea generators, feeding into and developing new talent clusters that work at the leading-edge of discovery and innovation. Yet, in graduate student enrolment per thousand of population, Alberta only averages 2.5. In comparison, the U.S. averages 7.3 per thousand.

Our challenge now is two-fold: to increase the number of graduate students and to provide the additional professors required to supervise, train and nurture their own scientific and intellectual potential for leadership. The optimal professor to graduate student ratio is 1:4 to ensure quality graduate education and promote research discoveries with the potential to diversify Alberta's future economy.

As we advance in the league of world-class universities, the University of Alberta must continue to attract and retain scientific and intellectual leaders and to build global research networks, with the capacity to convert knowledge into innovations, products, policies and analysis that will secure Alberta's future prosperity. To achieve these goals, the U of A must strive for excellence and be funded at levels comparable to world-class institutions to the east and west.

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## **1.2. Academic Overview: Access and Research**

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The academic chapter of this document includes both access and programming plans, as well as initiatives for scholarship, research and creative activities. These reflect the priorities of our proposed Academic Plan (*Dare to Deliver 2011-2015*) and other strategic documents within the institution, including *Dare to Discover*, previous Institutional Access Plans, and the inaugural Institutional Research Plan (2010). Together, the interwoven parts of our academic enterprise inform the human, capital, and financial resources required to fulfill our mandate.

As the province's flagship comprehensive academic research institution, the University of Alberta offers undergraduate and graduate programs, a full range of post doctoral fellowships, certificate and outreach programs, an important array of co-curricular activities, and a variety of professional development and continuing education opportunities. We are also committed to and responsible for advancing curiosity-driven and applied research, scholarship, and creative activities across the academy. We are acknowledged leaders within Alberta's research and innovation system, both provincially and internationally, with a broad and diversified research portfolio of excellence and impact in areas of science, humanities, social sciences and fine arts as well as the health sciences, engineering, business, education, agriculture, and physical education and recreation.

To become a destination of choice for students and faculty from Alberta, Canada, and around the world, the University must continue to evolve by creating integrated and innovative curricular programs, enriched co-curricular opportunities, and internationally-recognized research and scholarship networks. We continually strive to create an undergraduate experience that capitalizes on our research excellence. We want our students to have life-changing experiences at the University of Alberta that will instil in them an understanding of knowledge and creative activities as essential to the human experience and to creating a better world. Our ambitious plans are outlined under broad themes—quality, learning environment, student experience and engagement, innovative programming, and connections and collaborations.

Our institutional research objectives are directed at maintaining a broad and diversified research portfolio; creating outstanding professional schools; and providing a physical infrastructure and world-class information and knowledge resources that underpin both the teaching and research enterprise. We intend to nurture, sustain, and develop emerging and existing areas of impact, both strategically and opportunistically. In strategic partnership with the province and our international consortia, we are advancing the internationalization objectives of Alberta in three areas - water, infectious diseases, and energy and the environment.

As a core principle, consistent with other globally leading institutions and with our provincial mandate, the University of Alberta is committed to maintaining a balanced academy both within our academic programs and within our research, scholarship, and creative activities. As with earlier versions of our Institutional Access Plans, and consistent with *Dare to Discover* and *Dare to Deliver*, we have identified the following additional key principles to guide our academic and research planning, including:

- We aim for critical target ratios that are not only comparable to peer universities in North America and throughout the world, but also reflect an enriched undergraduate and graduate experience, and an enhanced teaching and research

environment: 1:3 graduate student-to-undergraduate student; 1:4 professor-to-graduate student; and 1:16 professor-to-general student population.

- We need to continue to differentially increase the number of graduate students to achieve our target ratio and to advance Alberta’s innovation environment.
- We continue to move towards an international undergraduate enrolment target of 15 percent, and an international graduate enrolment target of 30 percent of the graduate student body.
- We will increase access and engagement of underrepresented groups, particularly Aboriginal and rural students, and expand our research and internship opportunities in rural Alberta and with underrepresented populations.
- We aim to have all unfunded student spaces fully funded, through historical provincial funding sources, or entrepreneurial mechanisms such as cost recovery models.
- In order to fund new programs during the projected economic climate, we will carefully reallocate resources from existing programs, or we will examine alternate, entrepreneurial ways to fund programs.
- We will maintain high program quality in order to attract and retain students, ensuring that our undergraduate learning experience fully capitalizes on, and benefits from, the research and scholarship activities that underpin our national and international profile.
- We will globalize our research activities by leveraging and extending our existing international consortia to deliver joint graduate programs with top calibre partner institutions, as well as attract more international undergraduate students, post-doctoral fellows, and international research investment into Alberta.
- We continue to place priority on student experience, engagement, retention and completion rates, with an emphasis on both curricular and co-curricular activities.

### **1.3. Capital Plan**

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The Capital Plan provides a framework for the capital investments and expenditures required to fulfill the future goals, priorities and needs of the University of Alberta as laid out in academic and institutional plans. It outlines current space, program and renewal needs for expected measured needs in the short term, as well as forecasts these needs over the next ten years. Through the Capital Plan, the University outlines requests to the Province, as its primary funding partner, for contributions to the cost of priority projects.

Over the past ten years, the University has received significant and continued funding that has enabled major growth and assisted in making positive gains in deferred maintenance. Among many other capital projects, we have repurposed Athabasca Hall, Pembina Hall, and Triffo Hall (South Lab), opened the Li Ka Shing Centre for Health Research Innovation and Katz Group Centre for Pharmacy and Health Research, and are nearing the completion of the Centennial Centre for Interdisciplinary Science and the Edmonton Clinic Health Academy.. The current facility inventory of the University of Alberta totals 1.5 million square metres of gross floor area. The estimated liability of deferred maintenance on our facilities (supported and unsupported), which specifically identifies condition related deficiencies recommended for remediation within five years, totals \$987 million (\$807 million for supported facilities<sup>1</sup> and \$180 million for unsupported facilities<sup>2</sup>) as of December 31, 2009.

There are seven key areas of focus within the Capital Plan in response to the changing economic forecast:

- Priority preservation projects, including maintenance and functional renewal.
- Pre-design funding for emerging capital projects and studies.
- New space to align with our overall access and research plans.
- Academic support facilities.
- Student residences, workforce housing, and support infrastructure.
- Key master and sector plans.
- Land asset review.

In the short term, the University of Alberta's Capital Plan seeks to draw a balance between the current provincial fiscal environment and emerging issues to which the University of Alberta must respond as part of its mission and vision. Repurposing and renewal needs remain significant and critical to our ability to maintain the vitality and vibrancy of our institution. However, by coupling renewal and backfill projects, the University continues to reduce funding requirements and provide sustainable solutions to our operational and academic needs.

In addition, given the current marketplace, envelope funding for planning and preliminary engineering of critical projects will position the University and Government to act quickly and enter the construction market as funds become available. The University is also better able to refine project scope and budget and positioned to strategically identify the most appropriate implementation mechanism, including P3 options.

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<sup>1</sup> Supported Facilities – facilities for which the University receives Provincial operational base funding and which qualify for deferred maintenance supported grant funds.

<sup>2</sup> Unsupported Facilities – facilities for which the University does not receive Provincial operational funding and which are not currently supported with the Infrastructure Maintenance Program grant.



The University of Alberta remains committed to seeking opportunities to partner with other organizations and leverage provincial funding, to maintain the momentum of the University's initiatives in support of its vision, and of Government's priorities for post-secondary education.

The ultimate goal is to have buildings that work and make sense now and in the future. While past capital funding has provided formal learning and research space, increased student demand for innovative programs that attract a variety of types of learners, including those that are part time, continues to result in an increasing strain on existing academic support space such as fitness facilities, formal and informal collaboration/social space, libraries, collection and storage, housing, and daycares. These facilities are critical to the attraction and retention of students, faculty, and staff and provide an environment that promotes and aids in achieving a successful academic experience.

## **1.4. Finance and Budget**

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In light of current finances, the provincial government has indicated it will need to make strategic decisions regarding its level of investment in the post-secondary sector. In last year's budget, the University took steps to minimize the effects of a zero percent increase on its base operating grant through initiatives to enhance program revenues, slow the rate of expenditures and achieve administrative efficiencies. In the absence of any significant improvement in the provincial economy, the 2011-12 fiscal year will remain a budgetary challenge for our institution.

Indeed, securing ongoing funding from the government in support of the University's mandate of teaching and research continues to be our major budget risk. The cumulative effect of consecutive zero percent increases to the operating grant has already resulted in substantial budget reductions and reallocations. Without adequate investment going forward, the ability of the institution to provide a high quality educational experience and fulfill its research mission is at risk.

### ***Consolidated Budget***

Prepared under the Canadian Generally Accepted Accounting Principles (GAAP), the University of Alberta's 2011-12 consolidated budget reflects the entire enterprise of unrestricted and restricted funds. This includes general operations, research activities, capital projects, and ancillary operations. For 2011-12, the excess of revenue over expense is budgeted at \$1.9 million. This does not include an estimated \$3.3 million provision for the University's share of the Universities Academic Pension Plan (UAPP) unfunded pension liability expense.

Consolidated revenue for 2011-12 is budgeted at \$1,659 million. This includes \$1,072 million in unrestricted funding primarily for the purpose of general operating, and \$587 million in restricted funding for sponsored research, special projects, and capital funding.

Total consolidated expense is budgeted at \$1,657 million for 2011-12. Salaries and benefits account for almost 60 percent of the total to maintain faculty and support staff engaged in teaching, research and ancillary operations across the campus.

### ***Operating Budget***

The operating budget represents the day to day operations associated with teaching, administrative support, and facility operations and maintenance for classrooms and buildings. Despite significant financial constraints, the University continues to strive for a balanced approach in maintaining the quality of the teaching environment, maximizing its utilization of resources and continually striving for administrative efficiencies. In the 2011-12 year, the University is projecting an operating budget deficit of \$4.9 million.

Budgeted operating revenue for 2011-12 is \$902 million, compared to \$871.5 million in the previous year. Key highlights from the 2011-12 operating budget revenue are:

- Zero percent increase on the base Campus Alberta Grant.
- Budgeted lights-on funding for CCIS and ECHA at \$12 million.
- 0.35 percent increase to the credit tuition fees.
- Implementation of new market modifier tuition as approved in 2010.
- Modest recovery in investment income.
- Continuation of the Common Student Space, Sustainability, and Services (CoSSS) fee.
- Accounting adjustment to Sales of Services and Products.

The operating budget is primarily funded by the provincial government through the base Campus Alberta Grant. The cumulative effect of a second consecutive year of a zero percent increase places tremendous budgetary pressure on the University. In effect, the absence of an increase represents a significant reduction in purchasing power due to inherent increases in fixed costs and inflationary pressures.

With limited revenue growth, and rising teaching and related costs such as library acquisitions, classroom space and information technology, the University continues to carefully manage expenditures. With last year's implementation of a five percent institutional budget reduction and a voluntary retirement program, the University has limited capacity for additional expenditure reductions without beginning to impact the quality of the educational experience.

Key highlights from the 2011-12 operating budget expenditures are:

- The full effect of previously negotiated salary settlements and continuing roll-in of adjusted EPE funding.
- Relatively stable utility expenditures.
- Modest growth in scholarships.
- All other expenditures stable.
- Approximately 77 percent of the operating budget expenditures support salary and benefits for faculty and staff in providing a top quality learning environment.

### ***Budget Implications***

In order to reach our forecast operating budget, we must receive \$12 million in lights-on government funding. As the expenditures for the lights-on operations of the Centennial Centre for Interdisciplinary Science and the Edmonton Clinic Health Academy have been factored into the budget, any shortfall in this funding will fall directly to the bottom line and increase the deficit.

The Alberta economy is recovering. Alberta's future depends on talented, highly educated leaders in key sectors of energy, agriculture, education, ICT and health, in addition to the vital areas of the arts and humanities. Now is the time to invest in highly skilled and talented people to position Alberta for greater economic competitiveness, productivity and growth.

Table: Consolidated Budget (GAAP), next page...

**Consolidated Budget (GAAP), 2011-12 (\$ '000)**

	<b>2010-11 Approved Budget</b>	<b>2010-11 Estimated Actuals</b>	<b>2011-12 Recommended Budget</b>
<b>Revenue:</b>			
Provincial Government	725,533	745,603	752,660
Federal and Other Government	191,152	183,431	180,292
Credit Course Tuition and Related Fees <sup>a</sup>	242,648	250,222	246,916
Grants and Donations	99,503	98,816	102,116
Investment Income (Cash Management)	16,903	25,087	24,827
Endowment Income	29,977	30,887	33,159
Sales of Services and Products <sup>a</sup>	205,132	194,171	214,394
<b>sub-total</b>	<b>1,510,848</b>	<b>1,528,217</b>	<b>1,554,365</b>
Amortization of Deferred Capital Contribution	84,689	83,812	104,925
<b>Total Revenue</b>	<b>1,595,536</b>	<b>1,612,029</b>	<b>1,659,290</b>
<b>Expense:</b>			
Salaries	774,582	797,401	807,061
Employee Benefits	157,399	150,681	160,406
Materials, Supplies And Services	308,298	296,960	311,252
Utilities	48,521	43,696	48,795
Maintenance	59,481	74,672	69,682
Interest	10,694	13,759	14,123
Scholarships and Bursaries	81,612	86,536	87,948
Amortization of Capital Assets	138,395	135,424	158,123
<b>Total Expense</b>	<b>1,578,982</b>	<b>1,599,129</b>	<b>1,657,390</b>
<b>Excess(Deficiency) of Revenue Over Expense</b>	<b>16,554</b>	<b>12,899</b>	<b>1,900</b>
Investment in Capital Assets	10,596	(7,664)	(26,161)
<b>Increase(decrease) for the Year in Assets</b>	<b>27,150</b>	<b>5,235</b>	<b>(24,261)</b>
Unrestricted Net Assets(Deficiency), Begin Year	(107,517)	(60,554)	(60,646)
Universities Academic Pension Plan	(22,000)	(5,327)	(3,276)
<b>Unrestricted Net Assets, End of Year</b>	<b>(102,367)</b>	<b>(60,646)</b>	<b>(88,183)</b>

(a) 2010-11 Approved Budget includes a restatement of non-credit fees from sales of services and products to tuition and other related fees.

**General Operating Budget, 2011-12 (\$'000)**

	<b>2010-11 Approved Budget</b>	<b>2010-11 Estimated Actuals</b>	<b>2011-12 Recommended Budget</b>
<b>Revenues:</b>			
Campus Alberta Grant	565,647	565,647	577,647
Other Provincial Grant Funding	9,566	9,525	3,866
Tuition and Related Fees	230,336	237,527	234,470
Common Student, Sustainability & Service Fee (CoSSS)	10,587	10,952	10,676
Investment Income	13,583	23,632	22,751
Sales of Services and Products	41,818	43,428	52,651
<b>Total Revenues</b>	<b>871,537</b>	<b>890,711</b>	<b>902,061</b>
<b>Expenditures:</b>			
Salaries	555,690	564,043	575,729
Employee Benefits	124,473	116,968	127,383
Utilities	41,315	37,140	42,162
Materials, Supplies & Services	93,896	88,799	95,392
Maintenance	16,237	21,949	22,973
Scholarships and Awards	27,331	27,931	27,621
Capital Acquisitions	35,218	35,584	32,676
Transfers and Other, Net	(7,867)	(12,787)	(17,024)
<b>Total Expenditure</b>	<b>886,294</b>	<b>879,626</b>	<b>906,912</b>
<b>Operating Surplus (Deficit)</b>	<b>(14,757)</b>	<b>11,085</b>	<b>(4,851)</b>

## 1.5. Resource and Risk Implications

The University of Alberta must not lose the momentum created by previous years of government funding and strategic investments in students, staff, programs and infrastructure. Guided by the goal and priorities of *Dare to Discover* and cognizant of the national and global context in which we function, the University has identified a series of resource requests consistent with our role as the province's flagship University. Immediate and long-term investment is necessary to preserve recent gains, and develop the talent, knowledge and innovations that will contribute to Alberta's competitiveness, productivity and economic diversity for generations to come.

Absolutely fundamental to maintaining our momentum is a return to base operating grant increases in the range of two to four percent annually. Other immediate resource implications include:

- Lights-on funding of \$12 million.

- Transition funding associated with the AHFMR program. Currently the Ministry has a proposal for \$118 million for the PSE sector to cover the costs for transition of the AHFMR program. While we support this proposal, we recognize that it will result in a decrease in health research capacity in the system; in order to replace the research capacity associated with the AHFMR transition at the University of Alberta, we require \$22 million in base dollars.
- It is essential to maintain the funding of the current AARPs at \$104 million until the new provincial AARP proposal has been developed and approved.

The University's long-term strategic investments are associated with our ability, and as yet untapped potential, to undertake leading research within a highly competitive international context. Key to our planning is achieving the right mix of faculty, undergraduate and graduate students, post-doctoral fellows and international students. Creating international partnership and international learning experiences will also be critical.

- To achieve targeted professor to student ratios of 1:4 will require the funding of 500 "knowledge generation units" (comprising faculty and non-faculty salaries and benefits, advanced technical support, financial support for graduate students, material and supplies, and utilities and maintenance) at \$600,000, with corresponding funding for 2000 graduate students at \$35,000 for a total investment of \$370 million.
- To increase the U of A's population of post-doctoral fellows, the University has targeted 40 new positions for a total of \$1.8 million.
- To enrich the student experience and attract top students, new scholarship and bursary envelopes of \$3 million for international opportunities are needed as well as \$3.2 million for the development of undergraduate research internships.
- To aid in the recruitment of international students, \$5 million for targeted scholarships are required.
- To establish global consortia and partnerships in the areas of water, infectious disease, and energy and the environment, the University requires \$3 million per year.

In today's environment, an institution's web presence is essential in supporting its recruitment, outreach, and communications strategy, particularly within an international context. The University has calculated costs of \$3.5 million in developing a new web presence for the institution.

Excellence in translational and discovery-driven research scholarship and creative activity can only be achieved through targeted research funding, the availability of matching funds and the funding of core research facilities. The University of Alberta's research funding priorities include:

- CERC matching funds of \$22 million.
- Matching funds for Tri-Council, Genome Canada and other federal research programs of \$500,000 per year.
- Matching dollar requirements of \$2 to \$4 million per year to fully leverage the CFI Leaders Opportunity funding.
- Support for core research infrastructure such as the University of Alberta Centre for Nanofabrication and similar facilities, at an estimated \$25 million.

After people, the second most important element in attracting the best and the brightest students, faculty and staff is infrastructure. The capital resource requirements acknowledged in the capital chapter include:

- Envelope funding for pre-design services of \$4 million per year over the next five years for a total of \$20 million.
- Continued IMP funding of \$22.2 million per year, with an additional one-time only envelope funding of \$35-40 million per year to address a portion of the University's deferred maintenance program.
- Over the next ten years funding of our highest preservation and new/expansion priority projects, approximately totalling \$520 million and \$1,200 million respectively.
- Over the next ten years funding for additional priority projects, totalling approximately \$658 million.
- Base infrastructure at South Campus in advance of further development is becoming critical to ensure the Campus and the area around it can be developed with sustainability at the forefront. Additional study is required to determine budget and how best to deliver the infrastructure through traditional or an alternate financing models.

## **1.6. Tracking Our Performance**

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The University of Alberta has identified a series of performance indicators as starting points for monitoring progress toward expected outcomes and goals. These indicators were chosen and developed on the basis of input from key University of Alberta partners as well as the planning efforts that produced the University's Academic Plan, *Dare to Deliver* and vision and mission statement, *Dare to Discover*.

The indicators, under the cornerstones of *Dare to Discover* and *Dare to Deliver*, include:

### ***Talented People***

- Application, admission and registration yield rates.
- Student ratios (undergraduate:graduate; student:faculty; graduate student:faculty).

- Postdoctoral fellows.
- Student mix (international student proportion; rural and aboriginal proportion).

### ***Learning, Discovery and Citizenship***

- Student experience (innovative learning; student satisfaction).
- Select faculty and staff honours.
- Research citations.
- Undergraduate and graduate completion rates.

### ***Connecting Communities***

- Graduate employment.
- Engaging alumni and community partnerships.
- Commercialization efforts (new licences and options executed).

### ***Transformative Organization and Support***

- Scholarships and bursary funding.
- Formal and informal learning spaces.
- Tri-Council funding.

In addition to reporting on goals outlined in this Comprehensive Institutional Plan, the University has published other detailed accountability reports and makes available a large amount of annual statistical data. This information includes: the Dare to Discover Report Card, Annual Reports to Advanced Education and Technology, the National Survey on Student Engagement (NSSE) Report, and the Canadian Undergraduate Survey Consortia results. Information can be found at:

<http://www.president.ualberta.ca/daretodiscover.cfm>

and <http://www.uofaweb.ualberta.ca/uastatistics/>



## **2. Accountability Statement**

This Comprehensive Institutional Plan was prepared under the Board's direction in accordance with legislation and associated ministerial guidelines, and in consideration of all policy decisions and material, economic, or fiscal implications of which the Board is aware.

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**Brian Heidecker**

Chair, University of Alberta Board of Governors

### 3. Institutional Context

This chapter outlines the context the University will operate in during 2011-12 as it pursues its vision. The chapter outlines:

- Environmental Scan.
- The University of Alberta Mandate as approved by the Minister.
- Dare to Discover: *A Vision for a Great University* (values and mission).

#### 3.1. Environmental Scan

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Alberta's future success depends on the province's ability to embrace the next generation economy, the backbone of which is people, ideas and innovation. When talent, entrepreneurship and capital converge with discoveries and technology, Alberta's economy will be diversified, innovations and new enterprises will blossom, productivity will increase and the province's competitive position will be optimized both at home in Canada and on the world stage. The convergence of these essential elements will also serve to enhance quality of life and strengthen the fabric of Alberta's civil society.

##### 3.1.1. *The Alberta Environment*

Talent, knowledge, innovation and entrepreneurship are the new global currency. Alberta's ability to compete globally against both traditional economic competitors and emerging economies hinges on our ability to develop, attract and retain world-class talent. *Shaping Alberta's Future*, the 2010 discussion paper issued by the Premier's Council on Economic Strategy, emphasizes that we need talented individuals to choose Alberta—from among any of a number of global possibilities – to drive innovation and prosperity. Building Alberta's reputation as a region where learning, discovery, creativity and entrepreneurship is stimulated and strongly supported is critical to recruiting and retaining the talent we need.

Seventy-seven percent of all University of Alberta graduates stay, find employment and create businesses in Alberta. The rippling economic impacts of the University of Alberta itself are immeasurable. On average, each continuing faculty member teaches 125 undergraduate and graduate students, supervises four graduate students, and brings in an average \$250,000 in research funding per year. The productive lives of nearly 9,000 graduates per year, and the research many of them have been part of, constitute the true outcomes of university activity. The impact of a graduate accumulates for decades, providing advanced expertise and leadership for all aspects of a knowledge-based economy and society, with new enterprises, innovations in existing enterprises, innovative public policy and expanded international engagement and investment. The result for Alberta is an enriched standard of living and quality of life for all residents.

Clearly, the long-term investments into post-secondary education are indisputable. However, in order to remain competitive and not lose ground, we must address head on risks to competitiveness and productivity. Four of our largest challenges are linked directly to human capital:

1. Low levels of participation in post-secondary education among 18-24 year olds.
2. Low completion rate of bachelor degrees.
3. An aging population leading to a decline of skilled labour in the workforce.
4. Low numbers of international students being attracted to Alberta.

How Alberta addresses these challenges will ultimately determine the province's success in building the "next generation economy."

According to OECD data, Alberta's fifteen year-olds consistently score among the best in the world in math, science and reading, yet Alberta has one of the highest high school drop-out rates and one of the lowest post-secondary participation rates in Canada. In 2009, Statistics Canada reported only 14 percent of Albertans between the ages of 20-24 attend university, down two percent from 2008. In comparison, British Columbia's participation rate is 23 percent and Saskatchewan's is 20 percent. Further, among the 15 comparator jurisdictions used in *Shaping Alberta's Future*, Alberta ranks 11<sup>th</sup> in completion rate of bachelor degrees. These various risk factors are compounded by forecasted declines in the traditional post-secondary population over the next decade.

Even more alarming are the numbers of Masters and PhDs enrolled in Alberta. In 2009, the University of Alberta and the University of Calgary together did not have as many graduate students as the University of Toronto. In graduate student enrolment per thousand of population, Alberta's enrolment stands at 2.5 per thousand compared to the Canadian average of 3.2 and the U.S. average of 7.3.

The recruitment of international students is also important to addressing the risks to Alberta's development of human capital needed for the future. International students with Alberta degrees are much more likely to find employment and stay in the province after completing their studies. Yet, even with the potential long-term benefits of attracting international talent to this province, Alberta lags behind other regions and nations in international student recruitment. In 2008, Alberta had 6,900 international students at our universities. British Columbia, by comparison, had almost three times that number at 18,500, and in 2009, Australia had more than 200,000. The University of Alberta has strategies in place to increase international student enrolment to 15 percent of the student population, a ratio that would position us as one of the top two universities in Canada.

In order to address the challenges related to human capital and the fundamental role it plays in the creation of the ‘next generation economy’, the Government of Alberta has developed Campus Alberta and the Alberta Innovates Framework. Campus Alberta, specifically through the Roles and Mandates Framework, recognizes the distinct roles that specific post-secondary institutions have, and further facilitates the advancement of each component and the relationship between the institutions. The Alberta Innovates Framework is the province’s new reformulation of its research and innovation system. The goal is to leverage investment more efficiently and support research and innovation that furthers the economic and social wellbeing of Albertans in the areas of bio-industries, health sciences, energy and environment, and technology commercialization.

### **3.1.2. *Implications for the University of Alberta***

As the Province’s flagship university, the University of Alberta is strategically positioned to be a key partner with the Province in achieving its goal of developing the “next generation economy.” However, the fiscal environment facing the University of Alberta is challenging. Minimal grant increases, coupled with inflationary pressures, create operational and maintenance pressures for the institution. Even in this uncertain climate, it is critical that we do not lose the momentum we have gained over the past five years.

To address the challenge of low participation rates in post-secondary education in Alberta, a key priority of the University of Alberta is recruiting and retaining more of Alberta’s talented youth, while also ensuring that underserved Albertan populations, such as Aboriginal, low income and immigrant communities, have better access to and success within the post-secondary system.

In addition, Alberta must also focus attention on growing its graduate student enrolment. Graduate education drives research breakthroughs, creates innovation, attracts capital and partnerships and builds vibrant clusters, and is foundational to building the next generation economy. The challenge to growing graduate enrolment is two-fold: increase the number of graduate students to globally competitive levels, and ensure the additional professors are hired to supervise, train and engage these young global leaders. World-class research universities, on average, have a professor-student ratio of one professor to four graduate students.

Since its inception, the University of Alberta has been a defining and leading partner in Campus Alberta. The University of Alberta has, through several initiatives, leveraged government investment in our institution to the benefit of others within the system. We have played a leadership role in creating and facilitating collaboration with partnering institutions, worked together to create opportunities for students in rural and remote areas, shared resources and best practices to create administrative and system-wide efficiencies, and leverage economies of scale. Further, within Campus

Alberta, we have a special responsibility and ability through our international research partnerships to deliver talented human capacity to Alberta's entire innovation environment. Indeed, investment in the University of Alberta is an investment in Campus Alberta as a whole.

As Alberta's largest and most comprehensive academic research institution, the University of Alberta also plays a leadership role in creating national and international research and partnership opportunities for the province. The University of Alberta is a strong supporter of the Alberta Innovates system; however, the transition to Alberta Innovates, complicated by current economic conditions, has presented many challenges and has introduced a level of uncertainty to the research enterprise. Broadly, there is concern that the investment in the full spectrum of research that supports innovation in all disciplines, including the designated priority areas, will become less prominent.

Furthermore, questions remain about whether the research corporations will have the funding required to sustain the momentum achieved over the last decades in science, engineering, and health. Specifically, it is unclear how each corporation will execute its responsibility for the research capacity items identified in the *Alberta Research Planning Framework* document. The former AHFMR, iCORE, and Alberta Ingenuity developed visionary programs and initiatives that accelerated Alberta's national and international standing as a jurisdiction for research and innovation. We look to the new research corporations for analogous programs that will keep Alberta's universities, and Alberta itself, competitive with other provinces and nations in attracting and retaining research leaders.

### **3.1.3. *The Canadian Environment***

Over the last two decades, successive federal governments have developed and invested in research funding councils, foundations, and programs that are the cornerstones to enhancing Canada's economic, social and cultural prosperity. Investments in the Tri-Councils, the Canada Research Chairs, the creation and continued support for the Canada Foundation for Innovation, the Knowledge Infrastructure Program, and the Canada Excellence Research Chairs, Vanier Scholarships and Banting Post-Doctoral Fellowships have built a solid foundation for Canadian research.

These investments are key tools needed to advance Canadian competitiveness and secure Canadian prosperity—two areas where indicators show Canada is falling behind. As Mark Carney, governor of the Bank of Canada recently noted, the link between education, research and productivity is clear: “For Canada to generate productivity gains in a world market that's embracing technological change, provincial education systems must continue to boost literacy and numeracy rates among students. There's no longer such a thing as an unskilled job. The workers of today and tomorrow need to

know how to learn, so that they can continuously improve their skills after they leave school.”

How do they gain these skills? Learning in a research-rich environment is crucial, especially within the knowledge economy where high-level, complex skills will be in demand.

Undergraduate and graduate students benefit from the ability to access the multiplicity of research expertise offered by academic leaders working in research-intensive institutions such as the University of Alberta. Support for infrastructure and curiosity-driven research programs creates a strong teaching and learning environment for the next generation of innovators. Access to the best facilities positively impacts the quality of research, which in turn attracts more and better students. Students benefit from access to leading-edge equipment and exposure to novel techniques that make them competitive for academic scholarships, fellowships, and awards. Excellence in training also makes students highly sought after by industry.

Federal support for university research and development and innovation has remained strong. However, in spite of the widespread positive impact of investments in university research, there are some changes that have created challenges for research institutions, including requirements for matching funds for Tri-Council funding and significantly lower award budgets in the CFI granting cycle than in previous national competitions.

#### **3.1.4. *Implications for the University of Alberta***

These changes in the federal funding programs have implications for the alignment of federal and provincial support for Canada’s research, scholarship and creative activities. The inclusion of matching dollars consistently makes the University of Alberta’s researchers’ funding applications more competitive nationally. If researchers turn to the province for matching money, which in the current fiscal climate may not be available, Alberta researchers may thus be less competitive for the large programs; indeed they may even be excluded from them. In addition, without a provincial mechanism for matching dollar support, the province undercuts both there may be an impact on the University’s institutional commitment to research excellence across the disciplines, and which threatens our shared objective to increase Alberta’s universities’ success in winning Tri-Council funding.

The limited federal envelope for the next major CFI competition also has significant implications for our research environment, and, by extension, for the research and innovation infrastructure that the University of Alberta provides to the whole Alberta research and innovation system. Due to current restrictions, only existing CFI projects are eligible for more funding, with the result that no federal funds for research infrastructure will be available until well after 2017. This presents a considerable

challenge for the University of Alberta and the province in establishing facilities for new innovative work over the next decade.

Post-secondary institutions are the foundation for advancing research and innovation in society. Society's need for basic research will not diminish: publicly-funded research, like that conducted at the University of Alberta, pushes the boundaries of knowledge which, in turn, seeds technological, social and cultural innovations. Canada's investment in higher education R&D is the highest among G-7 countries and has seen excellent returns. According to Jorge Niosi in his essay "Connecting the Dots between University Research and Industrial Innovation:" "...in Canada an econometric study has estimated that the \$5 billion invested in university research in 1993 increased the gross domestic product by over \$15 billion annually." (IRPP Choices, vol. 14, no. 14 [Oct 2008])

In order to effectively diversify its economy and secure future prosperity, the province of Alberta must make it a priority to pursue sustained investments in leading-edge, transformative fields of research and in platform technologies that will redefine and ensure success in the next generation economy. Nanotechnology, neuroscience and quantum computing are but a few areas in which leading-edge research will help us tap into previously inaccessible or unimagined uses for our vast resource wealth. The key to competing in existing and emerging areas of excellence is a skilled and talented population.

### **3.1.5. *The Global Context***

Around the world, countries and regions are looking to education and research conducted by universities as the foundation of innovation and competitiveness. In addition to investing in talent, there is also a strong recognition that governments must invest in research and development domestically, and forge strong collaborative international partnerships to remain competitive. Competition in this global arena is coming from both traditional and new, emerging economic powerhouses.

On January 25, 2010, in his State of the Union address, American President Barack Obama reiterated his policy that by 2020, the United States will produce eight million more post-secondary graduates, and have the highest share of post-secondary graduates in the world.

In Germany, the national research budget is approximately 55.7 billion euros, two-thirds of which is provided by industry, one third by government and four percent by foreign investment. The German federal government has adopted a strategy for the internationalization of science and research which includes initiatives for internationalizing the training of young researchers, supporting the mobility of researchers, and enhancing the possibilities for international research collaborations.

With its reputation for world-class higher education and research, it is noteworthy that Germany receives the third-largest number of international students.

India is also aggressively pursuing research and development as a priority area. In 2006 and 2007, the Indian government created ten premier science and research institutes dedicated to research and teaching in the basic sciences with an aim to become science universities of the highest calibre devoted to both teaching and research. In addition, India has also entered into an agreement with the United Kingdom to establish fourteen world-class, research intensive “innovation universities” in partnership with elite universities such as Oxford and Cambridge.

China is another emerging academic powerhouse. In the last 20 years, it has increased the number of doctoral degrees in engineering and natural science from 2,500 per year to over 20,000. They are now only slightly behind the US which produces 22,500 per year. In 2006, China tripled its spending on higher education to 1.5 percent of its GDP and provided strategic funding to 35 universities with a goal of moving those institutions into the “world-class” university category. As investments in education grew, China’s share of global high-technology exports increased from 7.5 percent to 20 percent.

Smaller nations, such as Korea and Israel, are also investing strategically and reaping great benefit. In 1999, the Korean government introduced “Brain Korea 21”, a project intended to build a sustainable economy by making significant investments in educating an internationally competitive workforce. The second phase of the project, started in 2010, targets the support of 20,000 graduate students annually and the establishment of ten globally competitive research-intensive universities.

Israel ranks first in the world on public expenditure on education and has the highest rate of R&D investment in the world - four times that of Alberta. As a result, Israel has more companies listed on the NASDAQ stock exchange than any other country in the world except the US, as well as the highest percentage of engineers in the work force and the highest ratio of university degrees.

### **3.1.6. *Implications for the University of Alberta***

Competition within this global context is fierce. Currently, international students and faculty members are studying and teaching in universities throughout Alberta, but as mentioned above, we need to recruit and retain more of them.

At the U of A in 2008-09, international students accounted for 18.7 percent of all master’s degrees and 29.5 percent of all doctoral students. Sixty percent of Alberta’s international students have stated that they will look for work in the province after completing their studies. The strong pattern of students participating in graduate studies and the retention rate of these students will help to stimulate the creation of a knowledge-driven economy in Alberta.



Through their long-standing and powerful global networks, these individuals create informal and formal connections that cross borders. Human capital is mobile: people live and work in foreign countries, transferring knowledge between countries and developing new ideas, innovations and solutions in the process. If Alberta effectively leverages these people connections to create knowledge transfer, it will increase competitiveness, secure economic prosperity and advance Alberta's position in the global economy.

In order to compete, the province of Alberta should do more to leverage the international connections available through its universities, especially those of the comprehensive research institutions. The University of Alberta will continue to work with the province to establish multi-levelled research partnerships, involving academic, government and industry partners.

Due to significant investments from government in recent years, the University of Alberta has made critical gains in the internationalization of our research and teaching activities. For example:

- The University of Alberta has partnered with Germany's largest scientific organization, the Helmholtz Association of German Research Centres, to form the Helmholtz Alberta Initiative. The Government of Alberta committed \$25 million to the project while the Helmholtz Association committed €25 million over a five-year time frame.
- The Li Ka Shing Foundation recently gave the University of Alberta \$28 million, the largest cash donation in the University's history. Along with funding of \$52.5 million from the Government of Alberta, this established the Li Ka Shing Institute for Virology.
- Through targeted efforts, the University of Alberta has signed agreements with the Indian Institute of Technology, Bombay, the Indian Institute of Science, Bangalore, as well as with industry leaders, Tata Consultancy Services.
- The overall aim of these kinds of partnerships is to establish the University of Alberta as a leading global institution in order to facilitate research and teaching that with international impact and influence. Alberta needs and deserves the benefits that a globally recognized institution brings to its citizenry, who move internationally, and its industries, which engage globally. Alberta's ability to capitalize on strategic opportunities, find effective solutions to issues of provincial interest and provide leadership in areas of international importance is directly linked to its flagship university's ability to attract the world's best, to partner with global innovators and to compete at the highest levels on the international stage.

A global university is not only a competitor on the international stage; more importantly, it is a contributor to and leader in the global community. International

organizations such as the World Economic Forum and the United Nations continue to remind us that many of the most critical risks and challenges we face—such as climate change, resource scarcity, food security, disease and armed conflict—cannot be defined by national borders or solved by one country alone. These require collective, international efforts across economic, political, academic, and business sectors to find solutions quickly and efficiently. Alberta and the University of Alberta are in a position to make a leadership contribution—especially in strategic areas such as energy, water, food security, and health. Now is the time to invest in the talent, knowledge, innovation and partnerships that will make Alberta a global leader.

### **3.2. University of Alberta Mandate**

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*As approved by the Minister of Advanced Education and Technology, July, 2009*

Created by the *University Act, 1906* of the Legislative Assembly of the Province of Alberta, the University of Alberta is a board-governed, publicly-funded university that operates as a Comprehensive, Academic and Research Institution under the authority of Alberta's *Post-Secondary Learning Act*. Its fundamental mandate is to offer a broad range of outstanding learning and research programs to prepare citizens and leaders who will make a difference. The University plays a leading role in Campus Alberta through collaboration with other Alberta institutions, responding to vital community relationships at every level and giving a national and international voice to Alberta innovation. Its activities enhance student opportunities and build Alberta's capacity for long-term, knowledge-driven sustainable development at the global forefront.

The University provides instructional excellence through both on-campus and distance delivery in a vibrant and supportive learning and research environment. Its residential, multi-campus setting includes many research and field facilities. The University community discovers, disseminates, and applies new knowledge through the following interrelated core activities.

In a dynamic and integrated learning and research environment, the University of Alberta offers graduate and undergraduate students the opportunity to earn internationally respected credentials, including bachelor's, master's and doctoral degrees, and university certificates and diplomas. It also offers French-language programs leading to university degrees, certificates and diplomas as well as college certificates and diplomas. A number of its programs are unique within Alberta. Post-doctoral fellows come to the University to refine their teaching, mentoring and research skills.

The University of Alberta is a balanced academy, with strong arts and sciences programs featuring the Faculties of Agricultural Life and Environmental Sciences, Arts, Augustana, Extension, Native Studies, Physical Education and Recreation, Science and Campus Saint-Jean. These faculties are foundational to and interlinked with the University's

network of strong professional faculties, including Business, Education, Engineering, Graduate Studies and Research, Law, Medicine and Dentistry, Nursing, Pharmacy and Pharmaceutical Sciences, Public Health, and Rehabilitation Medicine. In addition, all of our faculties are involved in professional development and continuing education.

The University establishes and maintains an environment of inquiry-based learning anchored in strong academic programming and an array of co-curricular student life opportunities. Academic support, social/community enrichment, health and wellness, and career and life development are cornerstones of the University of Alberta student experience. The intellectual and creative diversity of the campus, including its international and multicultural population and exchange programs, makes for an engaging student experience. Fine arts displays, stage performances, museum collections, athletic and recreational opportunities combine with residence life to present multi-dimensional possibilities. Experiential learning opportunities based in the community augment on-campus activities with real-life applications.

Transfer and collaborative degree completion agreements with partner institutions broaden student opportunities and provide rural, northern and Aboriginal communities with access to University of Alberta credentials. Similar innovative arrangements centred at the University deliver information and knowledge resources to post-secondary and government communities through both inter-library and online access.

The University's research and creative activities produce a dual impact through the preparation of highly qualified graduates and a continuous flow of innovation. The University attracts scholars of international reputation: undergraduate and graduate students, post-doctoral fellows, staff and faculty. Collectively, they foster, conduct and disseminate research and creative activity, both pure and applied, within and across all the major program areas at an internationally-recognized level of excellence.

University faculties, centres and institutes combine resources and talents for collaborative advantage through research partnerships with other academic institutions, business, governments and public agencies. The University actively transfers new knowledge and creative works to Alberta, Canada and the world for community benefit, including commercial development of intellectual property when appropriate and feasible.

In every aspect of its mandate, the University of Alberta is a partner in social, cultural, and economic development, fostering and establishing the provincial, national and international connections and understandings that support leading global enterprise and citizenship for Albertans. University administrators, faculty, staff and students contribute regularly to public debate and to government and corporate examination of issues. Start-up companies and new technologies licensed to existing companies lead Alberta in new directions and employ graduates. The University continually moves out into its communities through its graduates, its creative and research advances, and its ongoing opportunities for experiential and life-long learning.

### **3.3. Vision, Mission, Values and Cornerstones**

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Adopted in 2006, *Dare to Discover* is our blueprint for greatness as we enter our second century. Using our values, vision, mission and cornerstones as a framework, it guides us as we grow. These values are drawn from the principles on which the University of Alberta was founded in 1908 and reflect a dynamic, modern institution of higher learning, leading change nationally and internationally.

#### **3.3.1. *Dare to Discover: A Vision for a Great University***

*Quaecumque vera*—whatsoever things are true

“The people demand that knowledge shall not be the concern of scholars alone. The uplifting of the whole people shall be its final goal.”

—Henry Marshall Tory, September, 1908

#### ***Values***

To achieve our vision of a great university, we rely on shared, deeply-held values that are a bedrock for our behaviour and guide our actions. These values are drawn from the principles on which the University of Alberta was founded in 1908 and reflect a dynamic, modern institution of higher learning, leading change nationally and internationally.

#### ***We value***

1. Excellence in teaching that promotes learning, outstanding research and creative activity that fuel discovery and advance knowledge, and enlightened service that builds citizenship.
2. The centrality of our students and our responsibility to provide an intellectually superior educational environment.
3. Integrity, fairness, and principles of ethical conduct built on the foundation of academic freedom, open inquiry, and the pursuit of truth.
4. A diverse, yet inclusive, dynamic collegial community that welcomes change and seizes opportunity with passion and creativity.
5. Pride in our history and traditions, including contributions from Aboriginal people and other groups, that enriches and distinguishes the University.

#### **3.3.2. *Vision***

To inspire the human spirit through outstanding achievements in learning, discovery, and citizenship in a creative community, building one of the world’s great universities for the public good.

### **3.3.3. *Mission***

Within a vibrant and supportive learning environment, the University of Alberta discovers, disseminates, and applies new knowledge through teaching and learning, research and creative activity, community involvement, and partnerships. The University of Alberta gives a national and international voice to innovation in our province, taking a lead role in placing Canada at the global forefront.

We have anchored our vision on four cornerstones: Talented People; Learning, Discovery, and Citizenship; Connecting Communities; and Transformative Organization and Support.

Further detail is at Dare to Discover: <http://www.president.ualberta.ca/daretodiscover.cfm>

## 4. CIP Plan Development

The University operates within a four-year integrated planning and budgeting framework. The framework was developed based on the principles of long-term planning, openness and transparency, comprehensive consultation, accountability through performance tracking, and academic priorities (teaching and research) as the drivers of resource allocation decisions.

The University's Board of Governors approves the University's vision document, *Dare to Discover*; the academic community, through General Faculties Council, approves the current academic plan. The proposed academic plan is moving through the governance process and will be ready for the start of the University's next planning cycle 2011-12 to 2014-15. The University prepared its Comprehensive Institutional Plan (CIP) based on these two guiding documents.

The CIP is a board-approved document and is developed based on guidelines provided by Advanced Education and Technology. The document contains six primary chapters, including the institutional context and environmental scan; the academic chapter, which outlines teaching and research issues and priorities; a chapter on capital priorities; the budget chapter; a chapter on resource implications; and a chapter on performance tracking. Consistent with our planning framework principles, the CIP is drafted based upon the issues and priorities as articulated in the academic chapter of this document (Chapter 5).

Each chapter has a lead writer; each chapter was drafted by individuals with expertise in the relevant area. As part of the drafting process, the lead writer consulted with key constituent groups regarding the tone and content of the chapter. The University prides itself in its collegial governance system and actively sought feedback and points of view from individuals and constituent groups on each chapter.

The University's Office of Resource Planning assumed overall responsibility for guiding the process of preparing the CIP and leading it through the review and governance approval process. Once all the chapters are consolidated and the final CIP prepared, the entire document is taken through several rounds of briefings and consultations. Based upon the University's collegial governance structure, the review process involved the President's Executive Committee, General Faculties Council (Academic Planning Committee), the Board Finance and Property Committee, the Board Learning and Discovery Committee, and the full Board of Governors. The review process involved detailed briefings of the CIP to these committees, along with motions recommending approval from the Academic Planning Committee to the Board Finance and Property Committee (BFPC) and the Board Learning and Discovery Committee (BLDC) and a joint motion from BFPC and BLDC to the Board of Governors recommending approval. The Board of Governors was the University's final approving body of the CIP. Upon approval by the Board of Governors, the document is submitted under the signature of the chair to the minister of Advanced Education and Technology.

## 5. Academic Overview: Access and Research

Our academic enterprise is defined by our institutional mandate as Alberta's largest comprehensive academic research institution. As a comprehensive academic and research institution, we decided to include, in the inaugural CIP (2011), an academic chapter that includes both access and programming plans, as well as initiatives for scholarship, research and creative activity. These reflect the priorities outlined in our university vision, *Dare to Discover*, proposed Academic Plan (*Dare to Deliver 2011-2015*) and by other strategic documents within the institution. This chapter also builds on the goals, strategies and progress of previous Institutional Access Plans, and includes information from our recently submitted inaugural Institutional Research Plan (2010). Together, the interwoven parts of our academic enterprise inform the human, capital, and financial resources required to fulfill our mandate.

In this chapter you will find key principles that frame our academic enterprise, followed by two sections of access and programming and scholarship, research and creative activity goals, strategies and measures. These two halves of the academic enterprise are highly intertwined and present both distinct and integrated resource implications, including capital requirements. At the end of this chapter we have outlined a series of important capital projects that segue to the next chapter, the Capital Plan.

### 5.1. Introduction

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The vision for the University of Alberta, the flagship post-secondary institution in Alberta, and one of the leading medical-doctoral universities in Canada, is to be established as one of the great public universities in the world. This vision is reaffirmed in the proposed new Academic Plan, *Dare to Deliver 2011-2015*, that will guide the institution over the next four years. As a comprehensive academic research institution under the Provincial *Roles and Mandates Policy Framework*, we offer undergraduate and graduate programs, a full range of post doctoral fellowships, certificate and outreach programs, an important array of co-curricular activities, and a variety of professional development and continuing education opportunities. We also offer French-language programs leading to university degrees, certificates and diplomas, and intend to begin offering French-language college certificates and diplomas in the near future. We intend to continue to offer this range of programs and opportunities in a dynamic, relevant, responsive and innovative fashion, relying on the increased flexibility that the Campus Alberta grant offers in combination with our entrepreneurial spirit.

The other defining component of our academic enterprise is our commitment to and responsibility for advancing curiosity-driven and applied research, scholarship, and creative activities across the academy. This unique responsibility requires us to be

leaders for Alberta's research and innovation system, both provincially and internationally. Our institutional research objectives are directed at maintaining a broad and diversified research portfolio with acknowledged excellence and impact in areas of science, humanities, social sciences and fine arts; creating outstanding professional schools; building an undergraduate experience that capitalizes on our research excellence; and providing a physical infrastructure and world-class information and knowledge resources that underpin both the teaching and research enterprise. We intend to nurture, sustain, and develop emerging and existing areas of impact in all disciplines, both strategically and opportunistically.

The University of Alberta is a balanced academy in teaching and learning, as well as in research, scholarship, and creative activities. Strong arts and sciences programs, research, and creative activity occur within the Faculties of Agricultural Life and Environmental Sciences (ALES), Arts, Augustana, Extension, Native Studies (NS), Physical Education and Recreation (PER), Science and Campus Saint-Jean (CSJ). These faculties are foundational to and interlinked with the University's network of strong professional faculties: Business, Education, Engineering, Graduate Studies and Research, Law, Medicine and Dentistry (FOMD), Nursing, Pharmacy and Pharmaceutical Sciences, Public Health and Rehabilitation Medicine. All of our faculties are involved in professional development and continuing education. Over half of our undergraduate students pursue baccalaureate degrees in arts and sciences and contribute to the knowledge-based economy through a variety of disciplines. In addition, many of our professional programs require pre-professional year(s) in arts and/or sciences, and the others require substantial humanities and/or science coursework in the early years of their degree programs. **As a core principle, consistent with other globally leading institutions and with our provincial mandate, the University of Alberta is committed to maintaining this balanced academy both within our academic programs and within our research, scholarship, and creative activities.**

As with earlier versions of our Institutional Access Plans, and consistent with *Dare to Discover* and *Dare to Deliver*, we have identified the following additional key principles to guide our academic and research planning, including:

- There are critical target ratios that not only reflect ratios in top universities in North America and throughout the world, but also reflect an enriched undergraduate and graduate experience, and an enhanced teaching and research environment: 1:3 graduate student: undergraduate student; 1:4 professor: graduate student; and 1:16 professor to overall student number.
- In order to achieve the ratios listed above, we need to continue to differentially increase the number of graduate students. Within Campus Alberta, we have a special responsibility and ability through our international research consortia to



deliver this kind of human capacity to Alberta's innovation environment. This increase in graduate students will result in an increase in research innovation and a concomitant increase in the knowledge economy.

- We aim to progress towards an international undergraduate enrolment target of 15 percent, and to sustain our international graduate enrolment target of 30 percent of the graduate student body.
- There will be provision for increased access and engagement of underrepresented groups, particularly Aboriginal and rural students. We will expand our research and internship opportunities in rural Alberta and with underrepresented populations.
- We aim to have all unfunded student spaces fully funded. Funding sources include historical provincial dollars, or entrepreneurial mechanisms such as cost recovery models.
- In order to fund new programs during the projected economic climate, we will carefully reallocate resources from existing programs, or we will examine alternate, entrepreneurial ways to fund programs.
- We will ensure high program quality in order to attract and retain students. This includes ensuring that our undergraduate learning experience fully capitalizes on, and benefits from, the research and scholarship activities that have earned us our national and international profiles.
- We will globalize our research activities by leveraging and extending our existing international consortia. We will use these consortia as a platform for delivering shared credential graduate programs with top calibre partner institutions, as well as for attracting more international undergraduate students, post-doctoral fellows, and international research investment into Alberta.
- We place high priority on positive student experience and engagement, retention and completion rates. This focus will result in an emphasis on both curricular and co-curricular activities.

## **5.2. Key Academic and Research Infrastructure**

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Our innovative access, degree and credential programs, research, and scholarship activities and initiatives depend on a superb and competitive infrastructure. In particular, advanced computing infrastructure and our library, collections, museums, and other unique holdings are critically important for attracting and retaining talented people, and allowing them to pursue their studies and research questions in ways that would not be possible otherwise.

We depend heavily on our information technology infrastructure for our academic programming, and have identified a number of strategies related to enhancing the digital learning environment and online presence of our institution in the following Access section (Access Goal 8). The research environment also depends extensively on advanced computing infrastructure. Provincial investment in WestGrid has enabled the acquisition, maintenance, and support of computing infrastructure for academic research and for research-industry partnerships. The creation of Cybera was also a visionary investment to ensure world-class cyber-infrastructure leadership for the province and its effective use by Alberta's business, industry, and academic sectors.

At the University of Alberta, we are also distinguished by having a library that is the second largest in Canada and the 11th best research library in North America, putting us in the same rank cohort as Cornell, the University of Texas (Austin), and University of Wisconsin, among others.<sup>3</sup> rs.4[1] Our library's evolution to this status places it among a handful of institutions worldwide that have evolved to serve as a "library of record" – a physical and digital series of holding and collections of sufficient quality, magnitude, and diversity that extends beyond its institutional mandate to that of a provincial, national, and international role. Inter-institutional agreements bring the University Libraries' in excess of 10 million items (books, journals, maps, digital collections, etc.) and the Museums and Collections Services' in excess of 17 million objects (art, artifacts, specimens, virtual exhibits etc.) to the academic and research enterprise of post-secondary institutions in Alberta, Canada and beyond. The University of Alberta Libraries' NEOS Consortium, for example, provides service to sixteen (16) federal and provincial government libraries, seven (7) local health services libraries, eleven (11) provincial university/college libraries, and through the First Nations Information Connection, to six (6) First Nations Colleges. Our library also serves the academic and research needs of the provincial post-secondary sector by way of the Lois Hole Campus Alberta Digital Library, as well as making freely available a vast array of resources through various digitization initiatives. These are significant partnerships that deliver intellectual resources to Campus Alberta, and to Alberta as a whole.

We must ensure in the future that we continue to build and evolve our IT infrastructure and libraries, collections, museums, and other unique holdings in order that we maintain the momentum that has gathered over the past decade. This will require resources, which are highlighted in Chapter 8.

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<sup>3</sup> Source: Association of Research Libraries Membership Criterion Index, available to member institutions only. Contact the Vice-President (Research) office for further information.

### **5.3. Part A. Access and Programming**

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We have seen an evolution in our access planning over the past three years. In the inaugural Institutional Access Plan (IAP) (2008), our focus was on the development of new and innovative programming. Our second IAP was written in the context of the looming world financial crisis, and thus with the signal of limited resources, our IAP (2009) shifted from a primary emphasis on new programming, to a focus on enhancing student experience and engagement, with an end goal of improving student retention and completion rates. The latest version of our access plan is written in the context of continued development in the planning documents required by the Ministry. This new development has resulted in a move to a single, comprehensive framework, of which the access plan forms part of our academic chapter. The evolution of our access plan in this latest instalment contains exciting entrepreneurial models for innovative programming in tight fiscal times, a continued emphasis on student engagement and experience, and a continued emphasis on quality – of people, programs, and the learning environment.

Our access plan sits in the context of our vision for the University of Alberta (*Dare to Discover*) and our academic plan (*Dare to Deliver 2011-2015*). Alignment with these internal documents is critical for advancement of our institution. Using information collected from our faculties and academic administrative groups, we have proposed an institutional access plan that operationalizes our activities to advance the following five themes:

#### **Theme I—Quality**

Quality – of people, programs, and experiences – defines all of the world’s leading universities.

#### **Theme II—Learning Environment**

The learning environment is framed by quality teaching provided in ways, both physical and virtual, designed to maximize learning, with appropriate and relevant use of learning technologies.

#### **Theme III—Student Experience and Engagement**

We aim to improve student retention and completion rates by creating an outstanding student experience through engaging all students in intellectual and creative activities in the classroom, studio, lab or field near and far and by committing to providing more and better co-curricular opportunities for students.

#### **Theme IV—Innovative Programming**

Like all leading universities, we will continue to develop innovative and relevant programs for undergraduate and graduate students; laddering opportunities for all types of students to degree programs; and continuing education programs.

#### **Theme V—Connections and Collaborations**

The University of Alberta is uniquely positioned to offer innovative and in some cases interdisciplinary programming through interfaculty connections, Campus Alberta collaborations, and with national and international consortia.

## 5.4. Access Plan

Please see Table 5.1 for total FLE enrolment projections at the University of Alberta to 2013-14. We have done a careful analysis of our enrolment data over the past decade in order to determine an institutional benchmark. This analysis has included an examination of base enrolments per degree program; ACCESS and EPE funded incremental enrolment over time, including those FLEs rolled into base enrolment once targets had been achieved; and the modified rate of increase in incremental FLEs from 2009-10 to 2013-14 due to the devolution of the EPE program. This analysis demonstrated that, for the most part, we consistently met EPE targets in those programs funded through the EPE program, and that on occasion we did not meet some base funded targets. In determining overall benchmarks for future enrolment, these trends combine to produce a prediction of stable enrolment from 2009-10 to 2013-14.

Table 5.1 Total FLE Enrolment Projections for University of Alberta to 2013-14

2009-10	2010-11	2011-12	2012-13	2013-14
32,780	—————▶			32,780

In addition to stable enrolment out to 2013-14, we anticipate, as outlined in this chapter, that there may be some reallocation of FLEs, in particular from undergraduate to graduate programs, within our overall enrolment number. These changes will be done in conjunction with Ministry approval. We do not contemplate reallocation of FLEs between faculties. Finally, the Health Workforce Action Plan (HWAP) program targets (e.g., nursing, medicine) will remain in place to 2013-14.

There is an important point to make relative to the mix of students at our institution over time. Using 2004-05 as the base year, we have been differentially increasing the numbers of graduate students and medical students, while maintaining our undergraduate population. That is, between 2004-05 and 2009-10, we increased graduate student enrolment by 34 percent (from 4900 to 6559 FLEs) and medical student enrolment by 37 percent (from 505 to 689 FLEs). We have identified and implemented these strategies through our previous Institutional Access Plans, and intend to continue the differential increase of graduate students identified in this document until institutional target ratios are achieved. There are financial, human, and capital resource implications associated with our projected mix of students that can be found in Chapter 8.

### 5.4.1. **Access and Programming Themes**

#### **Theme I: Quality**

*“Certain characteristics define every major university. Chief among these is the quality of its people—faculty, staff, students, and alumni. Attracting and engaging talented, committed people is the hallmark of a great university and certainly the foundation of the University of Alberta’s ongoing successes. This is clearly evident in the professoriate, research and support staff across the academy, and also true of the undergraduates, graduate students, and post-doctoral fellows that surge onto campus each year, the lifeblood of the University. We will continue to celebrate and find inspiration in the quality and dedication of all members of the academy.” (University of Alberta Academic Plan, 2011-2015)*

Since this section of the chapter relates to access and programming, we will focus on the quality of our undergraduate and graduate students, and on the quality of our programs. Top quality professors and administrators help to renew and design high quality, innovative programs that serve to entice, excite, attract and retain quality students. We aim to provide high quality student experiences that are life altering, resulting in graduates who will make good on the promise of the University of Alberta, i.e., the uplifting of the whole people.

**Measures: application to registration yield; location of student application; retention and completion rates of undergraduate and graduate students**

#### **Access Goal 1: Attract and retain outstanding students.**

##### **A. Undergraduate**

##### **Access Strategy 1.1—Recruit exceptional undergraduate students locally, nationally, and internationally**

- Evaluate and improve institutional recruitment activities and admission processes.
- Implement focussed recruitment nationally in Vancouver, Calgary, and Toronto.
- Improve the web strategy for recruitment.
- Progress towards an international undergraduate enrolment target of 15 percent of undergraduate students (targeted countries for undergraduate recruitment include: China, India, U.S., Malaysia, and the Middle East).
- Explore additional recruitment strategies for international students including foundation programs, agents, and articulation programs.
- Explore options to develop a university-wide preparation year program for international students who are unable to achieve immediate entry to university.

- Develop effective recruitment techniques targeted to diverse communities of Aboriginal learners.
- Increase the recruitment and enrolment of rural students through planned recruitment visits to rural Alberta, “Rural Discovery Days” on campus, and scheduling early admission and registration workshops throughout the province.

**Access Strategy 1.2—Retain exceptional undergraduate students and increase completion rates**

- Please see Theme III: Student Experience and Engagement, for in-depth information.
- Ensure the development of housing on campus that includes appealing and relevant programming elements (e.g., cohort learning) for undergraduate students.
- Develop programs and partnerships with other institutions that allow for program delivery close to where students live throughout the province.

**Access Strategy 1.3—Expand further our integration of teaching and research, to offer Alberta’s learners a unique educational experience that fully leverages our status as a research intensive university and is commensurate with our investment in and value placed on leading edge scholarship and teaching and learning.**

- Re-allocate internal resources to administer and coordinate research opportunities for students across faculties and within the community, in collaboration with existing mechanisms, and with external partners.
- Seek additional resources to increase the number of undergraduate research internships available to a wider variety of undergraduate student.
- Explore increased undergraduate internship opportunities in rural Alberta.
- Explore creating, in conjunction with the Students’ Union, an annual undergraduate research symposium.
- Expand the participation of disciplines that are participating in NSERC-MITACS (Mathematics of Information Technology and Complex Systems) internship programs, which are an important mechanism for creating a pipeline of international graduate applicants and undergraduates into our institution.
- Develop certificate programs in areas of recognized research excellence.
- Enhance the structured undergraduate research opportunities throughout the academy (e.g., self selected learning opportunities such as directed studies and attendance at conferences; research opportunities as part of courses).

- Continue to involve undergraduate students in research projects as research assistants and ensure mechanisms are in place to assist students in finding those opportunities.
- Encourage the use of current faculty research in curricular and co-curricular activities.

## **B. Graduate**

### **Access Strategy 1.4—Differentially recruit and increase graduate enrolment**

- Develop and maintain effective recruitment strategies for graduate students for all University of Alberta graduate programs. Recruitment activities should be local, national and international.
- Recruit our best undergraduate students to graduate programs by ensuring enhanced undergraduate research and creative opportunities across the academy.
- Identify current master's students who should move to doctoral programs, either after completion of their master's program or through fast-track options.
- Recognize, implement, and connect the roles of departments and the Faculty of Graduate Studies and Research in the graduate student recruitment and admissions process.
- Through alignment with the Institutional Research Plan (IRP), enhance graduate research opportunities across the academy and in areas identified as existing or emerging areas of strength that will distinguish the University nationally and internationally.
- Use the federal Vanier Scholarship program to recruit top international graduate students.
- Engage alumni and current students in activities that support international recruitment.
- Please see strategy 16.4 for further information on graduate recruitment through international training programs.

### **Access Strategy 1.5—Improve retention and completion rates of graduate students**

- Restructure the internal scholarship funds available and redeploy resources for most effective use.
- Ensure that funding, support and recognition mechanisms are appropriate for all research, critical and creative inquiry.
- Establish innovative scholarship networks within and between faculties, particularly in areas of disciplinary strength.

- Increase the graduate student scholarship pool through advancement and fund development.
- Ensure appropriate orientations for graduate students and graduate student supervisors.
- Ensure new graduate supervisors receive appropriate mentoring.
- Ensure appropriate counselling and ombudsperson support for graduate students.
- Ensure development of housing on campus that is appealing to graduate students and supportive of their requirements.
- Provide professional development opportunities related to teaching for graduate students.

***Access Goal 2: Provide foundational support structures for our students in order to create a nurturing environment that allows for positive student experience and engagement.***

**Access Strategy 2.1—Reorganize student services to maximize support for students on campus**

- Create physical and virtual welcome centres for students.
- Continue to provide meaningful student orientations.
- Ensure adequate counselling for mental health and academic success.
- Create a seamless academic advising infrastructure across the University to support students.
- Provide specialized services for students that need accommodations for learning through the Specialized Support and Disability Services unit on campus.
- Present campus wide services based on students’ “needs and wants” rather than by administrative unit through consideration of development of a student web portal.
- Improve faculty-student connectivity and facilitate high quality student access to instructors through the Birds of a Feather program, which aims to promote increased interactions and connections between undergraduate students and faculty members.
- Foster relationships between and among all campuses for improved coordination and connectivity (social, campus recreation, cultural).
- Review support programs for international students, especially those designed to assist them in their cultural and linguistic transitions in coming to the University of Alberta.



**Access Strategy 2.2—Create policies and procedures that enhance opportunity for student success**

- Ongoing communication and implementation of our newly approved Helping Individuals at Risk Policy.
- Implement behavioural residence and community standards that include a restorative justice model.
- Advertise and ensure access to University ombudspeople.
- Ensure that administrative policies and procedures for academic programs do not present unnecessary barriers to student success and experience. The Provost and Vice-President (Academic) has formed the Academic Policy and Process Review Task Force to operationalize this strategy.
- **Access Strategy 2.3—Financial Support**
- Through the Student Resources Task Force, identify all sources of financial assistance on campus, and remove barriers, if any, to accessing that assistance.
- Ensure financial support that is currently available for undergraduate and graduate students is being used effectively and for maximum benefit.
- Use endowments to increase financial support for undergraduate and graduate students.
- Work towards a financial infrastructure that strives to offer every interested and qualified individual an opportunity to complete a degree at the University of Alberta.

***Access Goal 3—Provide foundational support structures for Aboriginal students in order to create a supportive and nurturing environment that allows for positive student experience and engagement***

**Access Strategy 3.1—Provide appropriate student support for Aboriginal students**

In addition to goals listed in access strategies 2.1 and 2.2:

- Expand and develop effective and accessible academic support services that meet the unique needs of Aboriginal applicants and students, including the Transition Year Program (TYP) for Aboriginal students.
- Ensure appropriate development of initiatives for Aboriginal students on campus through the Council for Aboriginal Initiatives.
- Raise the profile of existing programs (e.g., the Aboriginal Teaching Education Program) and develop new academic programs that are attractive and relevant for prospective Aboriginal students.

- Support social, housing and child care needs of Aboriginal learners through provision of on-campus housing and the construction of the Aboriginal Gathering Place.

***Access Goal 4—Recognize and celebrate the accomplishments of our students***

**Access Strategy 4.1—Formal recognition events**

- Celebrate accomplishments in learning and leadership through the Celebration of Teaching and Learning.
- Celebrate accomplishments in learning and discovery through the Research and Innovation Celebration.
- Create regular opportunities to highlight and recognize student achievement.
- Ensure we maintain the high standard we have set for meaningful convocation ceremonies, including special convocation recognition for Aboriginal Students.
- Support the Students' Union and Graduate Students' Association in their annual awards events.

***Access Goal 5—Implement a system of quality assurance processes and mechanisms to ensure the programs offered by the University of Alberta are of the highest quality***

**Access Strategy 5.1—Continue to enhance our Unit Review processes**

- Unit reviews are part of the quality assurance process on our campus. We will complete an internal review of our current process, and adjust and implement the new guidelines for reviews beginning in 2011-2012. Unit reviews to be conducted in 2011-12 include: Faculty of Education; School of Public Health; Registrar's Office; and Libraries.
- For a five year cycle of reviews, please see Appendix 5.2.

**Access Strategy 5.2—Ensure accreditation reviews, where required, are done on a timely basis**

- Accreditation reviews scheduled for 2011-12 include: Engineering, Nursing, School of Public Health.
- Ongoing curriculum development process in order to meet accreditation standards to become the first free standing School of Public Health in Canada.

**Access Strategy 5.3—Curricular Reviews**

Program content and relevancy is continually updated on our campus, typically by internal members of a community. Some specific examples of curricular review initiatives identified by units for review in 2011-12 include:

- Nutrition and Food Science program in the Faculty of Agricultural, Life and Environmental Sciences.
- Amalgamation of language programs in East Asian Studies and introduction of a new Korean studies concentration in the Faculty of Arts.
- Undergraduate program review and redesign in the Faculty of Education to include Indigenous/Aboriginal education, global citizenship, and digital literacies.
- Curriculum renewal in Nursing.
- Bachelor of Arts in Recreation, Sport and Tourism degree program in the Faculty of Physical Education and Recreation.
- Current curricular and program review at Campus Saint Jean.
- Program revision to undergraduate Honours and Specialization programs in Biological Sciences.
- Revision to program requirements for the BSc general program in the Faculty of Science.

#### **Access Strategy 5.4— Participation in Campus Alberta Quality Council Audit Pilot Project**

- We will be one of the first two participants in the CAQC Audit Pilot Project, designed to assess quality assurance mechanisms at each Comprehensive Academic Research Institution in Alberta. The Unit/program reviews that will be examined in the Audit Pilot Project will be selected by the CAQC project team in February, 2011. A review team will be on campus in the fall, 2011.

#### **Access Strategy 5.5—Attributes and Competencies**

Many units will articulate a set of skills, attitudes and values that are or will be incorporated into graduate and undergraduate programs and supporting units. These identified skills, attitudes and values will be developed through targeted learning opportunities in both credit and non-credit spheres. Specific examples include:

- Implementation of changes from competency-based review of Agriculture, Environmental and Conservation Sciences and Forestry programs.

### **Theme II: Learning Environment**

The rapid evolution in the knowledge and skills required of university graduates has resulted in increasing demands for innovation in teaching and learning. As a result, there has been amplified discussion on our campus related to the learning environment. At one time the learning environment was thought to comprise only the physical space and quality of instruction. Now the construct of the Learning Environment is recognized to be much broader, encompassing learner-centred

innovative activities and practices developed and instigated by highly qualified and trained instructors who assess and evaluate activities in formal and informal learning spaces. Any discussion of the Learning Environment also considers the development of policies that encourage optimal teaching and learning, the professional development of instructors, and the enhanced integration of research and research opportunities into the undergraduate experience. Further, advances in information and communications technology continue to transform our world, in particular the digital learning environment, at an astonishing pace. The University of Alberta's IT infrastructure will need to be enhanced to meet the demands of the shift to mobile computing now underway. We must position our institution, and in particular our learning environment, to support the mobile, connected IT campus of the not-so-distant future, or else we run the risk of being regarded as increasingly irrelevant to the needs of our students, staff, and faculty.

**Measures:** number of centrally scheduled classrooms equipped with IT infrastructure; IT policy suite in place; level of IT security awareness across campus; implementation and integration of Moodle (a learning management system), Google Mail, and Elluminate; number of funded undergraduate research internship opportunities; number of learning space on campus

***Access Goal 6—Ensuring a high level of teaching quality, with the end goal of helping students learn***

**Access Strategy 6.1— Encourage and provide professional development for all instructors on campus**

- Provide professional development opportunities for instructors on campus through the Centre for Teaching and Learning.
- Encourage informal and formal mentoring programs for the development of teaching.
- Implement the Certificate in Teaching and Learning in Higher Education.
- Encourage the adoption of leading-edge information technology resources.

**Access Strategy 6.2—Recognize the value of teaching on campus**

- Recognize professors and instructors for excellence in the classroom through the Celebration of Teaching and Learning.
- Highlight and recognize the importance of teaching and learning in the annual Faculty Evaluation Process.
- Highlight accomplishments in teaching and learning through the annual Festival of Teaching.
- Nominate the best teachers on campus for prestigious national and international awards.

**Access Strategy 6.3—Examine assessment and grading practices**

- Review our university-wide principles and practices on assessment and grading.
- Informed by academy-wide discussion and participation, renew University-wide policies and implement new procedures, as necessary, on assessment and grading.

***Access Goal 7—Ensure the development and maintenance of quality formal and informal learning spaces***

**Access Strategy 7.1—Learning Spaces Subcommittee**

- Under the direction of the Facilities Development Committee, initiate a Learning Spaces Subcommittee comprised of members from all constituency groups on campus in an effort to ensure that the process for the development of formal and informal learning spaces is effective and meeting the needs of learners and instructors on campus.
- Once approved, implement the recommendations from the Learning Spaces Subcommittee.
- Continue the practice of design charrettes, an intensive, hands-on workshop that brings people from different disciplines and backgrounds together to explore design options for a particular area or site, in the development of new and redesign of older formal and informal learning spaces.
- Develop learning spaces that maximize interaction (student to student, student to instructor, undergraduate to graduate student) and flexibility as learning needs evolve with time.
- Ensure the continued development of individual study space.

**Access Strategy 7.2—Ensure quality space generally on campus**

- Continue to consult with students on new and repurposed student space (e.g., CCIS, ECHA, PAW).
- Transform existing library space to support new learning and group program study needs.
- Utilize space to minimize disruption and costs incurred on renewal and repurposing projects.
- Develop a capital plan for student housing that focuses on deferred maintenance (keeping older housing facilities on-line and affordable) and expansion to meet the needs of our students.

**Access Goal 8—Enhancing the digital environment and online presence of our institution**

**Access Strategy 8.1—Ensure quality IT support for our teaching and learning environments**

- Maintain evergreening funds for all instructional based IT (e.g., hardware, software and classroom technologies).
- Audit teaching and learning spaces to determine level of IT modernization required.
- Develop and implement a suite of IT policies on campus related to use, management, and security.
- Increase awareness of students and staff of IT security policies.
- Ensure all centrally controlled classrooms are equipped with IT infrastructure.

**Access Strategy 8.2—Create a comprehensive, unified and integrated online experience for University of Alberta students**

- Implement Moodle as the University’s single centrally supported learning management system.
- Adopt the Google Apps Education Edition as the University’s single uniform email and calendaring platform; integrate this with Moodle.
- Support interactive distance delivery of material through Elluminate.
- Enable access to all instructional IT services via single sign-on technology.

**Access Strategy 8.3—Campus of the future: Mobility computing**

- Invest in mobility computing infrastructure.
- Upgrade the campus wireless infrastructure.
- Develop innovative mobile applications for a variety of mobile devices, building on the success of the uAlberta iPhone application that was released in summer, 2010.
- Ensure the University of Alberta’s web presence is mobile friendly.

**Access Strategy 8.4—Improve web presence overall**

- Ensure the uniformity of the look and feel of our web presence.
- Redesign the Office of the Registrar homepage.
- Utilize multiple mediums (social networking, Twitter, etc).

**Access Strategy 8.5—Incorporate discipline-specific advanced technologies into learning and training**

- In the newly created Health Sciences Education and Research Commons (HSERC) in the Edmonton Clinic Health Academy, use simulated learning environments to provide team-based educational experiences to shape the health professional of the future.

**Theme III: Student Experience and Engagement**

The University of Alberta student experience encompasses opportunities for academic engagement and social/community involvement and promotes health and wellness alongside career and life development. We value the sense of engagement that characterizes opportunities for the involvement of students with professors, other students, alumni, and the broader community, both inside and outside the classroom. The outcomes of engagement are many, but most readily identifiable are the pursuit of truth, involvement in communities both near and far, a sense of belonging and affiliation with the University, as well as self-formation and personal development. Our aspiration for all students is that their university experience will have more value than 120 credits. Some students are primarily interested in attaining an academic credential. However, fully engaged students choose to go beyond the requirements of their particular academic programs. Engaged students seize opportunities to contribute to their campus, their communities and the world in countless ways. A challenge is that the University of Alberta houses only about 13 percent of its student population on our campuses, and thus students may be prone to develop their connections in the off-campus components of their lives.

The student experience begins with the initial contact that stimulates learner inquiry. It continues through the application process, curricular (which describes the classroom and academic programming experience, including the management of these records) and co-curricular (which includes the supporting services, activities, and campus facilities that encourage and help facilitate student success) experiences, graduation and alumni life. During the time our students are present (physical or by distance) on our campuses, the University supports the development of the whole student and dedicates resources to both academic and student life development. Currently, the University of Alberta is reviewing many processes and procedures to remove potential barriers to student success in both curricular and co-curricular lives. We are revisiting these rules, with active student participation, to improve student retention/graduation rates. In particular, we are trying to establish “lifelines” for our students to build connectivity to support students for success, seen as increased retention and graduation rates.

**Measures: application to registration yield; retention and completion rates; student satisfaction**

***Access Goal 9—Improved admissions and registration processes for all students***

**Access Strategy 9.1—Prioritize and implement recommendations received from admissions and student awards process reviews.**

Specific recommendations include:

- Simplify admissions requirements for students.
- Streamline internal transfer admission practices.
- Use consistent terminology for admissions and registration across Faculties.
- Review course load requirements for student award renewals.

**Access Strategy 9.2—Develop and implement a strategic plan for recruitment to the University**

- Ensure improvement in communication between faculty-specific and central recruiting strategies and initiatives.
- Streamline international recruitment activities among University Alberta International (UAI), the Registrar’s Office, and Faculty offices.
- Finalize University of Alberta wordmark and shield; ensure use in all recruitment activities.
- See further strategies under Access Goal 1.

***Access Goal 10—Support programs and initiatives to help increase retention and completion rates***

**Access Strategy 10.1—Develop and support programs and initiatives for students at risk**

- Enhance early identification of students at academic risk and support these students early in their programs.
- Review and expand Fresh Start Programs to assist students in transition and improve academic success.
- Review support programs for international students, especially those designed to assist them in their cultural and linguistic transitions in coming to the University of Alberta.

**Access Strategy 10.2—Continue to support Student Services and the Writing Centres**

Faculties are engaged in a significant number of initiatives related to services for students. (See Access Goal 2 for more information on student services.) Some examples of specific initiatives include:

- Reallocation of resources to base fund the Writing Centre at Augustana.



- Aboriginal Student Services Office at Augustana.
- Employment Centre in Engineering for use by undergraduates, graduates and alumni.
- Introduction of new Associate Dean, Learner Advocacy and Wellness in the Faculty of Medicine and Dentistry.
- Establishment of Student Services Coordinator in the School of Public Health.
- Mentoring opportunities enhanced by merging of alumni associations in the School of Public Health.
- Development of a Math Readiness program and a Math and Statistics Help Centre in Science.
- Faculty of Science Student-At-Risk initiative for advising and support services.

**Access Goal 11— Provide enhanced experiential learning opportunities**

**Access Strategy 11.1—Increase the number of community service learning opportunities**

Some specific examples include:

- Reallocation of resources to base fund the community service learning initiative at Augustana.
- Continued student involvement in DiscoverE outreach workshops through Engineering.
- Governance and Partnership Capstone Course community service learning component in Native Studies.
- Increase opportunities for students in Rehabilitation Medicine to work directly with clients/public and different populations in rural and urban centres.
- Increase community service learning opportunities at Campus Saint-Jean.

**Access Strategy 11.2—Academic cohorts in residence**

- Continue the development of academic cohorts in residence (faculty-based groupings) with home faculty participation in programming.

**Access Strategy 11.3—Outreach activity in communities**

- Increase the number of outreach activities in communities within Edmonton, Alberta, and further afield.
- Develop opportunities for faculty and students to engage in outreach to Aboriginal communities.
- Encourage development of research opportunities in rural communities.

- Develop University programming intended to encourage University graduates to seek employment in rural communities, especially from professional programs.

**Access Strategy 11.4— Increase the number and breadth of practicum experiences across faculties**

**Examples include:**

- Development of more rural clinical placements for undergraduates in Nursing.
- Integrated Community Clerkship program in the MD program.
- Expanding the Rural Experiential Learning Initiative in the Faculty of ALES.
- Initiating a work experience pilot project in the Faculty of Arts.
- Continued emphasis on cooperative education programs in Engineering.
- Historical research opportunities through fieldwork in archives across Canada in Native Studies.
- Facilitating practicum placements in the North for education students, through the partnership between the Faculty of Education, Alberta Education, Alberta Scholarship Programs, and the Northern Alberta Development Council.
- Hiring of practicum coordinator to enhance practicum experience in School of Public Health.
- Capstone design course and student design competitions in Engineering.
- Pathology Assisting collaboration with Alberta Health Services and the Faculty of Medicine and Dentistry.
- Earth and Atmospheric Sciences, with support of ConocoPhillips, will accommodate more students in field school at lower cost to the students.
- Increase placement capacity in Calgary and rural Alberta (Integrated Community Living, Primary Health Networks) for Rehabilitation Medicine.

***Access Goal 12— Enhanced extra and co-curricular learning opportunities (i.e., supporting services, activities, and campus facilities that encourage and help facilitate student success)***

**Access Strategy 12.1—Provision of social/community activities and events that contribute to social development and community engagement in order to enhance the quality of the student experience and assist in the development of engaged citizenship.**

- Student groups
- Learning communities
- Community service learning
- Diversity programming
- Participation in institutional governance
- Foster student participation in volunteering abroad programs

**Access Strategy 12.2—Provision of health and wellness activities which contribute significantly to student success**

- Fitness and athletics
- Health services
- Counselling services
- Recreational activities
- Diversity support services
- Sustainability
- Spirituality services

**Access Strategy 12.3—Provision of career/life development resources available to students to further develop their career and life skills. These resources play an important role in the effective transitioning of students out of the institution**

- Career services
- Alumni activities
- Internships
- Mentorship
- Lifelong learning activities

***Access Goal 13—Continue to create international opportunities for students***

**Access Strategy 13.1—Enhance collaboration between central and faculty units to inform, advise, and support faculties in providing increased international opportunities for students**

- Develop faculty led programs for education abroad.
- Expand international internship opportunities including collaboration with current co-op and internship programs.
- Develop academic programs where study abroad is an integrated requirement for degree. This could include models of joint or dual degrees.

**Access Strategy 13.2—Increase international education opportunities and enhance global education learning**

All faculties of the University of Alberta are engaged in the development of international experiential opportunities for students. Some specific examples include:

- Student exchange opportunities with IIT-Bombay, IIT-Kharagpur and the Faculty of ALES.
- Expansion of the Cortona program in Arts with addition of a spring semester.

- Internship opportunities for Arts students in East Asia.
- Development of the Centre for Global Citizenship Education and Research, including community service learning in the Faculty of Education.
- International student exchanges with NALSAR Law University in Hyderabad.
- Expanded international experience programs in Public Health with institutions in Japan, Egypt, Italy, and France.
- Possible study abroad requirement for Earth and Atmospheric Sciences program. EAS is working to establish partnerships with institutions in Europe to increase student exchanges.
- Increasing share of international students coming from programs like Emerging Leaders of the Americas.

***Access Goal 14—Provide foundational support structures for students in order to create a nurturing environment that allows for positive student experience and engagement***

**Access Strategy—** see points under **Strategy 2.1**

***Access Goal 15—Create a safe and secure environment on campus that is supportive of a positive student experience***

**Access Strategy 15.1—Develop safety and security features on and off campus**

- Continued development and maintenance of the University’s Integrated Emergency Master Plan including the University’s Public Health Response and Crisis Communications Plans to deal with the emergency and public health issues that may arise throughout the year.
- Collaboration with the City of Edmonton and AHS in the organization and holding of emergency preparedness tabletop exercises.
- Continued development of the emergency notification system on campus.
- Within the University’s Enterprise Risk Management Framework, annual updating of the University’s institutional risks.
- Continued development of resource materials and web-based health and safety information relating to both curricular and non-curricular activities.
- Implementation of new risk management policy for students involved in international study.

**Theme IV: Innovative Programming**

The devolution of the EPE program in the budget announcement of February, 2010 has resulted in a careful examination of enrolment in all of our programs. We have

predicted enrolment and access opportunities based on current funding, as well as modifications to previous expectations for EPE funded programs, out to 2013-14. With the announcement of expected zero percent increase in the 2011-12 budget, and uncertainty in the 2012-13 and 2013-14 provincial budget cycles, it is unlikely that these targets will change (unless there is an unanticipated decrease in budget).

Entrepreneurial activity (e.g., cost-recovery, partnered programs with shared revenue) may generate revenue that allows us to increase enrolment, and thus access, in some programs (both new programs, if approved, and in existing programs).

While financial resources for new programming are limited, Faculties and Departments are focussed on innovative methods by which programming at the University of Alberta can continue to evolve to meet student and employment demands. Curricular and program review and renewal have become an increasing focus with particular emphasis on possibilities for reallocation of existing resources, including FLEs, from current programs to those of greater demand or with new relevancy.

In addition to the above, we are actively exploring the methods by which programming can provide current and prospective students with opportunities to ladder from one level of post-secondary study to another, and to ladder from post-secondary study to additional professional development. These laddering opportunities take a number of different forms, including certificates, summer institutes, bridging programs, and college level programming, designed to meet the needs of different kinds of learners.

All of the above information applies to both undergraduate and graduate programming options. As we have stated in previous IAPs, we continue to focus on differentially increasing graduate student enrolment. Thus, we have a particular focus on innovative programming at the graduate level.

Please see Appendix 5.3 for a list of program initiatives at the University of Alberta, included recently approved programs to be implemented and new programs being contemplated.

**Measures:** number of new programs approved by the Minister; application, admission and registration yield rates; student satisfaction

***Access Goal 16—Continued development of additional innovative programming to meet the needs of learners and the community***

***Access Strategy 16.1—Reallocation of existing FLEs to new programs***

We will propose a number of additional innovative programs that would be funded with existing resources through the reallocation of existing FLEs. This model was recently used to ensure that the new Natural Resources, Energy and Environment major in the Bachelor of Commerce program and the Master of Arts program in Native Studies proceeded. These reallocations allow for the Ministry to point to new

programming in a priority area, the University to produce new programming in tight financial times, and most importantly, for students to access new, innovative and highly relevant programs.

#### **Access Strategy 16.2—Cost recovery models**

Based on market demand, we will develop additional innovative programs using a cost recovery model. Examples of new programs that have the potential to be funded with a cost recovery model include:

- New post-professional Doctor of Pharmacy program
- Master of Financial Management program
- Free-standing credit certificate programs

#### **Access Strategy 16.3—Development of innovative and varied programming opportunities, and methods of delivery at the graduate level**

- Develop and implement policies and procedures for shared credential programming with other institutions.
- A variety of graduate offerings have been proposed by the academy, including:
- Developing and implementing Fast track programs that allow students to move to a more advanced degree before completion of a lower level degree. Examples include moving from a master's program to a PhD program before the master's program is completed.
- Developing and implementing new/revised course-based master's programs. A number of Faculties have proposed new course based programs (some of which may be cost recovery), particularly with international partners for international students.
- Developing and implementing blended delivery programs, that allow for increased student flexibility. Specific examples include:
  - the Distance Master's of Education program with Northern Lights School District
  - New Master's of Athletics Coaching that is proposed in partnership with Canadian Athletics Coaching Centre and the International Athletics Federation. This program will have an elite international student target audience and will be delivered in flexible mode with 'early exit points' (certificates, diploma)
  - New Master's of Ice Hockey Coaching in partnership with Hockey Canada with an elite international student target audience delivered in flexible mode with 'early exit points' (certificates, diploma)

**Access Strategy 16.4—Intentionally pursue innovative international training programs**

- Increase international graduate enrolment through international research consortia and partnerships, priority partner institutions, and sponsored student agreements.
- Develop shared credential programming with international institutions to attract international graduate students, leveraging our international profile and consortia.

**Access Strategy 16.5—Reallocation of existing FLEs to graduate programs**

We propose increasing enrolment in graduate programs in tight fiscal times by reallocating enrolment from the following undergraduate programs:

- Reallocating FLEs from the undergraduate programs in Physical Education and Recreation to the graduate program in that Faculty.
- Reallocating FLEs from the BSc Nursing program to the MA in Nursing and PhD in Nursing programs.
- Relaunching of master's degree in healthcare administration by reallocating existing FLEs in the School of Public Health.
- Increasing proportion of doctoral students in Occupational Therapy, Physical Therapy, and Speech Language Pathology through reallocation of master's (thesis-based) FLEs.

**Access Goal 17—Increase access to current high demand programs**

**Access Strategy 17.1—Reallocation of existing FLEs to high-demand programs**

We will be able to meet the student demand in specific high demand programs by reallocating FLEs from programs that are redundant, no longer relevant, or in lower demand. Proposed examples include:

- Expanding BSc in Animal Health program by reallocating FLEs from the BSc Agriculture program, resulting in decreased enrolment in the BSc Agriculture program.
- Following establishment of the Executive Master of Engineering (MEng) program, enrolments in existing course-based MEng programs will be reduced in areas where the Executive MEng now exists. MEng enrolment decreases will be offset with enrolment increases in MSc and PhD programs.

***Access Goal 18—Ensure appropriateness and relevancy through course and program reform***

**Access Strategy 18.1—Implement more cornerstone courses**

- Create cross discipline interest based learning experiences for first and second year students to enhance establishment of class cohort based learner communities.

**Access Strategy 18.2—Explore alternative models of program delivery including distance education, alternate delivery and blended models**

Specific examples from faculties include:

- Distance education nutrition courses for professional upgrading.
- Increased alternate delivery courses and programs in the Faculty of ALES.
- Delivery of the MBA in Natural Resources and Energy in Fort McMurray and Calgary.
- Proposed two new Online MLIS programs delivered with no residency requirement.

**Access Strategy 18.3—Increase interdisciplinary collaborative program development**

- Create and implement a policy framework for the development of interdisciplinary programs.
- Develop interdisciplinary collaborative programs. Specific examples from faculties include:
  - Increased collaboration across departments, development of cross-disciplinary core graduate courses in the Faculty of Arts.
  - Develop Interdisciplinary graduate studentships in the Faculty of Medicine and Dentistry.
  - Develop theme-based (e.g., Sustainability, Northern Studies, International Studies) and skill-specific (e.g., Certificate of Teaching and Learning in Higher Education) certificates that enable students to pursue multiple interests and interdisciplinary learning.

***Access Goal 19—Provision of valuable laddering opportunities from high school to post-secondary study, undergraduate to graduate study, and post-secondary study to professional experience***

**Access Strategy 19.1—Certificates**

- Support the development of embedded certificate programs across disciplines that add value to existing degrees and allow students to tailor degree programs to



meet learning goals (e.g., Sustainability, Global Citizenship, Northern Studies and International Studies).

- Support the development of freestanding certificate programs that provide enhanced study for graduates of degree programs and valuable connections to professional communities (e.g., Aboriginal Governance and Partnership).
- In order to increase laddering opportunities, use the concept of summer/winter institutes as a model of delivery for certificate programs.

### **Access Strategy 19.2—College Level Programming**

- Establish the first college level programming at Campus Saint-Jean. The first proposed program will be a two-year diploma program in techniques d'administration d'affaires. Potential future programs for the Collège include diploma programs in Tourism Management and Personal Care Aid.

### **Access Strategy 19.3—Bridging Programs**

A number of Faculties are actively exploring methods by which students can be transitioned successfully into the University. Specific examples include:

- Bridging program for new international students to Augustana and Science.
- Career and Technology studies bridging program in Augustana Faculty.
- Career and Technology studies bridging program in the Faculty of Education in partnership with Alberta Education.
- Partner with licensing bodies and national organizations to develop upgrading programs for internationally trained clinicians in Rehabilitation Medicine.
- Investigate BSc in Occupational Sciences program to target potential applicants to MSc entry-level programs in Rehabilitation Medicine.
- Post-secondary preparation programming at Campus Saint-Jean.

## ***Access Goal 20—To continue to offer a range of lifelong learning opportunities through continuing and professional education programs***

### **Access Strategy 20.1—Continue to offer a full range of continuing and professional education**

Some examples include:

- Continue to offer a variety of continuing education opportunities through our Faculty of Extension.
- Continue to offer professional education in Medicine and Dentistry and the Faculty of Pharmacy and Pharmaceutical Sciences so that individuals can maintain their licences to practice.

- Continue to develop free standing certificate programs in Rehabilitation Medicine that allow practitioners to maintain currency in the field.
- Provide French language training and immersion programs through Faculté Saint-Jean.

**Access Strategy 20.2—Determine the level of non-credit activity on campus**

- Develop a registration system, compatible with the credit registration system, to capture non-credit enrolment in the Faculty of Extension in the first instance, with the opportunity to make this system campus-wide in the future.

**Theme V: Connections and Collaborations**

The University of Alberta has developed many connections and collaborations across all portfolios. From an academic programming perspective, partnerships are formed internally among faculties on our campuses and externally across a range of sectors, including Campus Alberta, other Canadian universities, and well-ranked international universities and research institutions. Our goals are threefold: to offer students innovative and relevant globalized educational opportunities, to engage students in the study of both established and emerging knowledge in a learning environment of active, internationally-recognized research, and to leverage talent, expertise and financial resources.

Collaborative programming—across the institution, throughout Campus Alberta, nationally and internationally—creates exciting opportunities for students. We are examining collaborative programming options for both new and currently existing programs as part of program renewal at our institution. Cost analyses of partnerships will be an important consideration in moving forward with these options.

**Measures:** number of new collaborative partnerships in a year

***Access Goal 21—To increase interdisciplinary collaborative program and initiative development in order to offer students innovative and relevant educational opportunities*****Access Strategy 21.1—To encourage interaction between faculties for the creation of programs and initiatives which transcend traditional disciplinary boundaries in order to provide exciting opportunities for students**

Specific examples of interdisciplinary programs and initiatives in development are:

- The newly approved BA in Environmental Studies between ALES and Arts.
- New joint graduate program in Resource, Energy and Environmental Economics among the Faculties of ALES, Arts and Business.
- Newly approved Natural Resource Energy and Environment Major and minor and the new Economics/Business certificate programs, collaboration between Arts and Business.

- Possible new MA in Public Economics, collaboration among Arts, ALES and Business.
- Possible new MA in Medical Humanities, collaboration between Arts and FoMD.
- Reciprocal minors between Arts and Business.
- Collaboration between Augustana and Native Studies to add courses with Aboriginal content to Augustana programs.
- BSc in Ophthalmic Sciences between Science and Medicine and Dentistry.
- BSc in Biomedical Sciences between Science and Medicine and Dentistry.
- Interfaculty graduate studentships, joint supervision among Arts, ALES, Business, Nursing, Pharmacy, Rehabilitation Medicine, Public Health, Physical Education and Recreation and Medicine and Dentistry.
- Collaboration between Native Studies and Physical Education and Recreation for Certificate in Aboriginal Recreation and Sport and BA in Indigenous Recreation, Sport and Community Development.
- Inter-professional education among Public Health, Nursing and Medicine and Dentistry.
- Interdisciplinary teaching clinical laboratories between Medicine and Dentistry and Public Health.
- Delivery of professional programs for pharmacists in collaboration between Pharmacy and Extension.
- New PhD studentships between Public Health and Medicine and Dentistry.
- Expand interdisciplinary activities for Rehabilitation Medicine students (including thesis programs) with other faculties and the Health Sciences Council.
- Establish interdisciplinary modules with professional programs in Rehabilitation Medicine and share teaching resources with Education.

***Access Goal 22—To maximize program innovation at the Campus Alberta level in order to create exciting learning opportunities and program efficiencies***

***Access Strategy 22.1—Work with Campus Alberta partners to determine program possibilities, develop and implement new programs.***

Faculty-specific examples of Campus Alberta collaboration include:

- Collaborations with Grant MacEwan University (GMU) in Fine Arts (Arts).
- Banff Research in Culture in the Faculty of Arts (summer institute with Banff Centre).
- More formalized 2+2 arrangements between Augustana and Red Deer College, Grande Prairie Regional College.

- Maskwachees Cultural College 1+3 arrangement into Bachelor of Management at Augustana.
- Master's in Educational Leadership with Blue Quills, offered via blended models of delivery.
- Northern strategy in the Faculty of Education to serve the communities in the North (ATEP programs plus Keyano College).
- Collaborative B. Ed degree in Secondary Education with Grande Prairie Regional College.
- Campus Alberta partnerships for first-year Engineering programs.
- Possible program expansion in LLB program targeting applicants from smaller communities, potential collaboration with University of Lethbridge.
- Pre-clerkship networked Medical Education initiative in partnership with University of Calgary.
- Partnerships with First Nations colleges and the Faculty of Native Studies.
- Potential partnerships with Blue Quills, Maskwachees to develop nursing programs in Aboriginal communities.
- Linkages in Nursing with University of Calgary and Alberta Health Services, possibly as part of Alberta Academic Health Network.
- Shared Pharmacy faculty position with AHS in Calgary and elsewhere, new residency programs for PharmD graduates.
- Bio Sci 200-level courses offered collaboratively with Grande Prairie Regional College, Lakeland, etc.
- ZOOL 352 shared with University of Calgary.

***Access Goal 23—To maximize program innovation in collaboration with national partners in order to create exciting learning opportunities***

**Access Strategy 23.1—Work with Canadian partners to determine program possibilities; develop and implement new programs**

Faculty-specific initiatives related to national partnerships include:

- New Northern Studies major in the ENCS program at Yukon College.
- Civil law of contracts video-conference course collaboration with University of Ottawa.
- Pilot partnership in Native Studies with Dechinta Bush University.
- Partnership with University of Saskatchewan on Doctor of Pharmacy course offerings.
- Collaborations with Collège Maisonneuve and Collège de Matane in Quebec for the Campus Saint-Jean initiative.

- NSERC CREATE grant on Molecular Probes held jointly between U of A and McMaster.

**Access Strategy 23.2—Create national partnerships to maximize international coverage**

- The CALDO partnership—we have entered into a partnership with three other G13 universities (Laval, Dalhousie, Ottawa) in order to better access international opportunities, particularly for graduate student recruitment, in countries where large sponsored student programs are run by national governments, foundations or corporations that don't normally work with individual institutions. The consortium will focus on a select number of partner countries, such as Chile, Brazil, possibly Vietnam, and Iraq.

***Access Goal 24—Leverage and extend our international research consortia, and use these as a platform for delivering innovative shared credential graduate programs with top calibre partner institutions***

**Access Strategy 24.1—Work with international partners to determine program possibilities; develop and implement new programs.**

Suggested partnerships include:

- Partnership in ALES with M S Swaminathan Research in Southern India.
- Humanities computing collaboration with King's College London, possible expansion to Nebraska, Georgia Tech.
- Exploring opportunities in Arts with Aga Khan University in East Africa.
- Dual graduate degree with Seoul National University in Education.
- Master of Education Studies Leadership Cohort with students from Vietnam.
- Collaborative Engineering graduate programs with partners in Germany, India, China and Mexico.
- Potential collaborations with U.S. institutions in Law.
- PhD program with Shantou, funded by Li Ka Shing in the Faculty of Medicine and Dentistry.
- Continued research partnerships in Nursing with PAHO WHO Collaborating Centres.
- Joint Master's of Physical Activity and Public Health with four WUN Universities.
- Public Health Student exchange MOUs with University of Zambia, Makerere U., Kaunas Medical School (Lithuania), U. of the West Indies, Public Health Foundation of India.

- Campus Saint-Jean PhD program in Canadian Studies in collaboration with Sorbonne U. in Paris.
- Development of shared credential programs that build upon the research activities of the Helmholtz-Alberta Initiative.

## **5.5. Part B: Scholarship, Research and Creative Activities**

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We are committed to a foundation of discovery-driven research, scholarship, and creative activities across the academy. Excellence in both translational and discovery-driven research, scholarship, and creative activities is the responsibility of research-intensive teaching institutions in our society today. The generation of knowledge and scholarship across disciplines is the special role and responsibility of the University of Alberta for the citizens of Alberta, for Alberta's cultural, social, and economic objectives, and those of Canada as well.

With the Province's support, we are recognized as one of Canada's leading research-intensive universities, and our profile is rising on the international stage. Our ability to attract top calibre international partners and investments allows us to extend the boundaries of Alberta's research and innovation system, as well as the magnitude and quality of its research capacity. This too is our unique contribution to Alberta's research and innovation framework and to Alberta's broader objectives for its citizens.

Research planning is a process that involves all levels of our institution. As with access initiatives, the opportunity and necessity to develop capacity in particular areas of research, scholarship, and creative activities germinates at the level of the departments and faculties. This process reflects our institutional philosophy to trust the insight of the professoriate for identifying where our institution needs to be positioned, on a 15-50 year time frame, in its research and scholarship capacity. These needs start to direct recruitment and hiring strategies, so that we invest in the new faculty who will ensure we are at the forefront of the research curve. Our research plan also reflects the strategic priorities that emerge through the translation of our President's vision into specific goals for each senior administrative portfolio. Our senior executive team works to create institutional research opportunities at the provincial and international level, to leverage what our deans and professoriate have created as our areas of established and emerging impact. While we focus specific attention on our existing and emerging areas of strength, we are committed to the need and responsibility to respond opportunistically to evolve new areas of strength.

Our institutional initiatives for research, scholarship, and creative activities reflect two key themes:

### **Research Theme 1: Diversified Excellence**

Excellence is a pre-requisite for impact. We do not aim for the unachievable goal of being excellent in all areas. Rather, we adopt the goal of valuing, fostering, and developing excellence in any area in our academy, with recognized national and international impact in the social sciences, humanities, fine arts, natural sciences, engineering, and health sciences.

### **Research Theme 2: Internationalization**

Internationalizing our research enterprise means making strategic investments with select international partners to create multinational research consortia and through them, foster the exchange of faculty, graduate students, PhDs, and undergraduates. Our ability to create and broker international collaborations of this sort brings the intellectual and financial resources of other jurisdictions, nations, and research associations into the province. It extends Alberta's own research and innovation system beyond its borders.

These two themes contribute to and complement our overarching principles and specific access goals. Namely, we place a high priority on balanced research and scholarship excellence and impact, which requires and enables recruitment and support of the best faculty members, postdoctoral fellows, graduate students, and specialized staff across the academy. Our internationalization focus provides the foundation for the development of shared credential programs and student exchange in a focused way that capitalizes on where we have shown leadership and impact in research and scholarship (See Access Goals 13 and 16). We continue to evolve new ways to integrate our research and creative activities with student learning and engagement, offering them the unique advantages of learning within a leading, research intensive post-secondary institution (see Access Goal 1).

### ***Scholarship, Research, and Creative Activities Themes***

### **Research Theme 1: Diversified Excellence**

Emerging and established areas of impact exist across our institution. Of all institutions within Alberta, we have a distinct responsibility and commitment to focusing on excellence across disciplines, as we contribute to current areas of priority with fundamental scholarship and long-term vision. A focus on excellence directs us to sustain a diverse research portfolio with acknowledged impact in areas of science, humanities, social sciences and creative arts; embrace outstanding professional schools; build an undergraduate experience that capitalizes on our research expertise; and

exploit a physical infrastructure and world-class information and knowledge resources that underpin both the teaching and research enterprise.

This is what defines a comprehensive academic research institution. The internationally recognized publicly-funded research intensive teaching universities have recognizable impact and excellence in a diverse set of areas across the entire academy. This breadth of impact is what distinguishes the very best public universities as intellectual and economic leaders for their community and for society at large.

***Research Goal 1—Attract and retain talented researchers, post-doctoral fellows, graduate students, and visiting faculty from around the world and maximize resources to support their work.***

Research, scholarship, and creative activities in many disciplines depend on teams of highly qualified professional support staff, graduate students, and PDFs. A sustained and growing innovation environment requires highly educated people from around the world not only to come to Alberta, but also to stay.

*Research Goal 1 Measures:* Assessment of our institution relative to our selected peer group; total research funding and Tri-Council funding; prestigious national and international awards for faculty, post-doctoral fellows, and graduate students.

**Research Strategy 1.1—Attract and retain talented faculty, and maximize resources to support their work**

- Focus on excellence in our recruitment and retention efforts.
- Allocate federal infrastructure funds (CFI) to all disciplines as a means of retaining and attracting leading scholars, and work to obtain matching funds for proposals that have passed national adjudication standards.
- Strike visionary partnerships with the public and private sectors to secure the state-of-the-art platform infrastructure in advanced computing analytics.
- Develop and resource internal mechanisms that support increased success within national and international funding competitions, especially on large cross disciplinary team grants.
- Seek resources to ensure there is sufficient matching funding to make faculty competitive for all Tri-Council funding programs available to or through our institution, relative to other provinces and universities.
- Demonstrate how we value our talented faculty through internal recognition and support mechanisms to facilitate their external recognition on the national and international scale.
- Increase partnerships with private and public sectors to leverage dollars, federally and internationally, to keep facilities competitive.



- Work to maximize resources, both physical and financial, for our current faculty and, when possible, respond opportunistically to attract additional exceptional individuals.

**Research Strategy 1.2—Attract talented visiting researchers, post-doctoral fellows and graduate students**

- See research strategy 1.1 and access strategy 1.3.
- Identify and secure funding for institutes and initiatives that serve as intellectual destinations for visiting scholars from around the world.
- Seek resources to increase our competitive advantage in recruiting a greater number of top calibre PDFs in all disciplines.
- Work with Alberta Innovates to define aggressive and nimble funding mechanisms that support international graduate students and post-doctoral fellows, and encourage research reciprocity with international partners.

***Research Goal 2—Sustain a diversified portfolio of research, scholarship, and creative activities, while developing areas of research impact, profile, and leadership in response to current provincial and global challenges***

Diversified excellence is a requirement for a leading university as it is for a leading jurisdiction. It is impossible to predict which issues being investigated now will be transformative 15 years in the future. Unimaginable economic, environmental, and social events can quickly dislodge current priorities and define new cultural, economic, and scientific imperatives. A diversified portfolio of research excellence lays the groundwork for meeting the challenges and opportunities presented by an uncertain future.

Our research strategy aims to advance Alberta's immediate priorities with the pursuit of diversified research excellence that will create national and international opportunities for Alberta and its citizens—now and in the future.

Alberta has also recognized the overarching objective that our province must be a place that people choose to live in—a place that attracts people because it offers vibrancy, intellectual and cultural vision, inclusiveness, and resilience in its urban and rural communities; a place which enables newcomers to contribute fully to enhancing the quality of life in Alberta; and engages ordinary citizens in keeping communities alive economically and culturally. These are among the key issues identified in the Premier's Economic Strategy discussion paper (June 2010).

***Research Goal 2 Measures:*** The number of prestigious national and international awards won by faculty; the diversity of funding

organizations, government bodies, and other groups engaged in our research and creative activities.

**Research Strategy 2.1—Sustain a diversified research portfolio to advance knowledge of our world, our selves, and our societies**

- Apply research strategies 1.1 and 1.2 to all disciplines.
- Seek funding for scholarship and creative activities in fine arts and associated infrastructure required to support these activities (e.g., state of the art design studios and music performance facilities).
- Continue to promote the China Institute, Kule Institute for Advanced Study, and the Wirth Institute for Austrian and Central European Studies as catalysts for multidisciplinary international partnerships in the social sciences and humanities at our institution.
- Continue to focus on Northern Research that spans science, cultural, and political issues, including the impact that natural resource development and reclamation activities have on traditional uses of lands, northern societies, cultures and languages, as well as economic development, history and governance.
- Support interdisciplinary collaborations that define new areas of investigation and creativity and represent innovation in cultural and social approaches. Examples here include fine arts and nanoscience; the art and design of healthcare equipment; narrative and visual design for computer gaming; intersection of computing science, history, and literature and the intersection of anthropology, science, and Aboriginal studies; postcolonial studies.
- Align research activities in areas of established and emerging strengths to increase capacity in: global citizenship, international relations, and conflict and conflict resolution; cultural, legal, and social theory; globalization and social policy; social policy at the interface of contemporary biomedical technologies, genetics, and mental disabilities; and deliberative democracy on climate change.
- Focus on social, cultural, and economic aspects of our scientific and technical initiatives.
- Ensure Alberta's participation in 'big science' initiatives at the international scale, to enhance the province's intellectual leadership profile and develop the possibility of further economic diversification potential.

**Research Strategy 2.2—Develop areas of research impact, profile, and leadership in response to provincial and global priorities, challenges, and needs**

- Continue to deliver research capacity and leadership in bioresources, energy, environment, science and technology, and health and wellness.

- Seek greater engagement with organizations such as the Alberta Research Development Network, for initiating, funding, and working on joint projects, to encourage development of research partnerships and initiatives that address the challenges faced by rural communities.
- Promote and advance research centres and institutes that connect university researchers with Edmonton and Alberta needs, such as the Institute of Health Economics, the Hope Foundation, the Institute for Land Use Innovation, Alberta Biodiversity Institute, the Community-University Partnership program, Imperial Oil Sands Centre for Oil Sands Innovation, and the Kule Institute for Advanced Study.
- Accelerate our research capacity in the legal, ethical, educational, health, and cultural issues facing Aboriginal communities.
- Continue to work in partnership with the University of Calgary and Alberta Health and Wellness (AHW) on framing a vision for a unified and secure health data repository that captures all sources of data from AHW, Alberta Health Services, Children and Family Social Services, electronic health records, and other ministries as well.
- Work with Alberta Health Services, the University of Calgary, and the University of Lethbridge to create a pan-Alberta Health Outcomes and Population Health network, to respond to Alberta's priorities in areas of health education, chronic disease prevention and management, water quality, and mental health.
- Establish, with industry and government partners, a nationally and internationally unique research institute with a focus on research, training, and the production of a wide range of key medical isotopes without the need for nuclear reactors.

Under the theme of Diversified Excellence in Scholarship, Research and Creative Activities, we describe our research and scholarship activities in terms of broad domains that are investigated across faculties and disciplines. We have identified certain areas for additional strengthening and development, through reallocation of resources and continued institutional investment over the next several years. These include the following:

### ***Bioresources***

There will be continued growth in innovative bio-based sciences and technologies for nutrient efficiency, sustainable livestock and crop practice, land and water use, forestry, and land remediation. Research with impact, especially on topics unique to Alberta, requires an integrated continuum from discovery research, through to social policy research, all of which is conducted at the University of Alberta. There are Alberta-specific issues related to crop science activities—focused on optimizing production and quality of traditional and new crop species, and on novel traits through genomics,

breeding, crop protection systems, and agricultural practices—with similar issues emerging for Alberta’s livestock and wildlife. We will sustain and grow both core and cross-disciplinary work in proteomics, environmental toxicology, plant and animal genomics, metabolomics, molecular biology, advanced mathematics, computing and chemistry. We also have recognizable strength in the economic, social policy, business, and cultural scholarship of the bio-economy and will leverage that strength further.

We continue to invest in the challenges of optimizing and utilizing biological resources for food production, and in addressing the socio-economic systems underlying agricultural economics, trade, marketing, and consumer behaviour. These activities are centred in livestock sciences, crop sciences, food science and safety, and agri-business, with genomics serving as a critical platform science for research and technology developments. We will continue programs in the development of probiotics, nutraceuticals and specialized seed oils to improve the health benefits of food production, and processes and feedstocks in biorefining.

Continued research investment in bioproducts, biomaterials, and bioenergy is essential to support Alberta’s bio-economy objectives. This includes sustained capacity in value-added food and non-food product development, and in agricultural genomics and proteomics. It will be important to continue to develop South Campus in order to accelerate the breadth and depth of the bio-economy research activities we undertake with industry and government agency partners.

### ***Energy resources***

Energy is one of the focus areas for our expanded research consortia with China, Germany, Mexico, and Brazil, and other globalization efforts related to graduate student programs and researcher mobility. There will be continued investment and growth in oil sands research (i.e., upgrading, non-aqueous extraction; water and tailings management; energy intensity; process measurement; monitoring, control and improvement); clean coal/carbon and mineral processing; and the development of conventional and unconventional oil and gas resources. Nanoscience and nanotechnology initiatives in this area include advanced materials for improved recovery techniques, alternative energy, bioremediation, and nanotoxicology. The Canada Excellence Research Chair in Oil Sands Molecular Engineering will develop new detection and extraction technologies to improve the overall efficiency of oil sands processing. This capacity, including many core facilities and interdisciplinary initiatives such as Imperial Oil-Alberta Ingenuity Centre for Oil Sands Innovation, the Canadian Centre for Clean Coal/Carbon and Mineral Processing Technology, the School of Energy and the Environment, and the Helmholtz Alberta Initiative, support the priorities set by *Alberta Innovates—Energy and Environment Solutions* on bitumen upgrading, clean carbon/coal, and improved recovery.

We will sustain and grow interdisciplinary activities in energy and resource solutions that develop and apply advances in materials science and nanotechnologies, molecular chemistry and biology, computational sciences, earth sciences, and chemical and environmental engineering. We will continue fundamental research directed at understanding hydrocarbon (traditional and unconventional resources) and mineral deposits (diamonds, precious metals, iron) in Alberta, and globally, that will be instrumental in the discovery of new deposits. The Canada Excellence Research Chair in Arctic Resources will establish programs that extend Alberta's integrated geophysical-geochemical research and analytical capacity into the areas of science and technologies for mineral exploration. Several clean energy research initiatives are underway in photovoltaic solar cells, new fuel cells, and evaluating the potential for engineered geothermal systems in Alberta. This existing and new research capacity in energy continues to address the core mandate of *Alberta Innovates—Energy and Environment Solutions*.

In the Capital Plan, we have signalled the need for resources directed at completing or renovating buildings for the science and engineering activities that support this work. This includes completion of the Centennial Centre for Interdisciplinary Sciences, restoration of the Biological Sciences and Chemistry West buildings, and the expansion and repurposing of the Chemical and Materials Engineering Building. Possible space requirements to support the Helmholtz Alberta Initiative have not yet been determined; however, these could include fit-outs of shell space within existing engineering buildings or repurposing of space elsewhere on campus.

### ***Environment***

We have internationally recognized strength in environmental studies, with a strong focus on climate change, conservation biology, biodiversity, aquatic resources, land reclamation, sustainability and bioremediation of land impacted by natural resource extraction and processing. This research capacity addresses the expanded and interdisciplinary mandate of *Alberta Innovates - Energy and Environment Solutions*, which includes priorities set by the Water Research Institute and Alberta's Water for Life Strategy.

We will sustain and leverage established centres that are focused on integrated remote sensing and earth imaging sciences, and the development technologies for environmental monitoring, resource exploration, land use applications, and agriculture applications. This activity aligns with the *Alberta Innovates - Energy and Environment* priority for "environmental technologies in enhanced ecology" that support better water, land, and air management, as well as sustained biodiversity. A number of established research initiatives are providing research capacity to reach environmental objectives set by both *Alberta Innovates – Energy and Environment* and *Alberta Innovates - BioSolutions*. For example, the Alberta Biodiversity Institute, a consortium of university, government,

and industry partners, collects unbiased and scientifically sound data on biodiversity for the province, and the energy, agriculture, and forestry sectors. The Centre for Earth Observation Sciences conducts interdisciplinary research on remote sensing and develops technologies for fossil fuel exploration, forestry and agriculture applications, and environmental monitoring with Albertan, Western Canadian, and international partners. Our Alberta Centre for Sustainable Rural Communities coordinates, facilitates and supports the educational, research, outreach and knowledge mobilization activities of the University of Alberta, as they relate to the sustainability and development of rural communities. This centre is undertaking several initiatives related to the management of recreational lands in the Beaver Hills initiative, to support our existing MOU with Alberta Tourism, Parks, and Recreation in the area of sustainable recreational lands.

We have created an Institute for Land Use Innovation that will deliver increased research capacity and impact at the intersection of natural sciences and socio-economic research in environmental sciences, ecology, land management, and conservation sciences. Efforts here will develop knowledge on the ecological and economic impact of land management practices, conduct pilot-scale projects to understand best management practices, and develop and test economic and policy tools to promote and deliver environmental goods and services. This will have direct consequences for supporting aspects of rural Alberta's economy. The integration of natural sciences and socio-economic research across disciplines, with government agencies and NGOs, will create a collaborative group of researchers, regulators and practitioners who are equipped to manage both public and private lands and natural resources in sustainable ways. These activities support a broad range of land use objectives within the mandate of the Land Use Secretariat, a priority investment for the Government of Alberta, and other provincial ministries.

We will also continue to develop the basic science and technologies to support environmentally sustainable agriculture. The economic valuation of ecosystem services, environmental protection, and environmental regulation are also part of our integrated approach to informing policy and practice in these areas. An important emerging area for us is "green chemistry"—chemistry directed at discovering new chemical processes that decrease environmental impact.

### ***Health and Wellness***

We will sustain and further develop an integrated approach to human health and wellness that addresses all aspects of the determinants of human health, including: clinical factors and pre-dispositions, social-political and economic environments, and an individual's characteristics and behaviours. Investment will continue in a broad base of activities in discovery and translational research, clinical research and training, health economics, health law, and population health. We look to make additional investment

in areas that focus on the special needs of children, youth, and adults with disabilities, and on rehabilitation research for elderly populations. This approach aligns directly with the holistic commitment of the *Alberta Health Research and Innovation Strategy* to wellness at every age, with particular attention to the requirements of marginalized populations. The Edmonton Clinic was designed precisely to support this holistic, cross-disciplinary approach to training, research, and clinical care.

We will continue investment to grow our capacity in detection, prevention and management of chronic diseases, such as diabetes and obesity, through integrated centres such as the Alberta Diabetes Institute, the Alliance for Canadian Health Outcomes Research in Diabetes, the National Centre of Excellence in Obesity, the Centre for Health Promotion Studies, and the upcoming Alberta Institute for Physical Activity and Health, which is in the final stages of development. The physical proximity we have created for the Cardiovascular Research Centre, the Mazankowski Alberta Heart Institute, and the Canadian VIGOUR Centre<sup>5</sup> creates an integrated continuum of pre-clinical, clinical care, and outcomes research, respectively. Research capacity will also continue in the molecular and biochemical research of environmental risks to human and animal health, with near-term investment in the molecular diagnostics for bacteria, viruses, prions, and parasites occurring in the environment. This approach positions us well to support Alberta's health strategy focus on environmental health.

We continue to invest in activities to support advances in therapeutics and infectious disease treatments—such as carbohydrate science and glycobiology, bacterial pathogenesis, new drug development, molecular microbiology, systems biology, metabolomics, health informatics, and neuroscience—and in monitoring the spread of disease (e.g., bioinformatics, mathematical biology, public health). The Alberta Innovates Centre for Carbohydrate Sciences works at the intersection of chemistry, biology, medicine, and engineering to create breakthroughs in glycobiology and carbohydrate synthesis for new drugs and vaccines. The Canada Excellence Research Chair in Virology will build on his seminal work on hepatitis B and C viruses to develop low cost vaccines and therapeutics for hepatitis sufferers.

We have set an objective to renew, expand, and integrate infrastructure and human resources to sustain our position in metabolomics and to ensure that it effectively supports translational research in areas of University focus (e.g., biomarker discovery, diagnostics, and drug target identification in areas such as diabetes, maternal and child health, and cancer).

We are fostering a number of areas of substantial strength with greater investment, in order to increase their research innovation and impact. These include basic and translational research in women's and children's health, cardiovascular biology,

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<sup>5</sup> Virtual Coordinating Centre for Global Cooperative Cardiovascular Research

transplantation, neurological diseases and cellular neuroscience; and cancer studies using molecular imaging and radiopharmaceuticals. All this work occurs through interdisciplinary teams. We will also be working to establish clinically annotated biobanks to facilitate translational and clinical research. In the area of drug development, we are expanding initiatives on the molecular mechanisms of drug and toxicant action, and on technologies to improve drug delivery and efficacy, and to decrease toxicity. These initiatives cross several disciplines and support related research activities in chronic diseases, specifically obesity and diabetes, and conditions affecting the elderly (e.g., Alzheimer's disease). The Canada Excellence Research Chair in Diabetes will create new training and research programs in basic cellular biology and diabetes pathology and treatment, with a special focus on the biological engineering and propagation/expansion of insulin-producing cells.

Work will continue to develop an interfaculty Health Outcomes and Population Health consortium that will sustain and expand research capacity in health services and epidemiology; health economics; community-based population health surveillance; intervention and policy research for health services and population health; and health services and population health research methods. We continue to work with Alberta Health Services, the University of Calgary, and the University of Lethbridge to create a pan-Alberta Health Outcomes and Population Health network. Targeted investment here will significantly improve our ability to respond to Alberta's priorities in areas of health education, chronic disease prevention and management, water quality, and mental health.

Many of these interdisciplinary research and scholarship activities will be undertaken in the recently completed additions to our health academy complex. Some will require the repurposing of space within the Clinical Sciences building and the Medical Sciences Building, as we make the transition to the new facilities. Others will require investments in a radiopharmaceutical facility and additional biosafety facilities.

### ***Humanities and Fine Arts***

There are areas of substantial strength in humanities and the fine arts that we are supporting with continued investment, in order to increase or sustain their impact. We have aligned research capacity at the intersection of computing science, history, and literature to create internationally leading initiatives in digital humanities and digital social sciences. The unique demands of "big social science" investigations and distributed teams of humanities researchers will continue to define innovations in linking, managing, and analyzing extensive databases of digitized texts and visual information. We will foster research in areas that break disciplinary boundaries, define new areas of investigation and creativity, and represent innovation in cultural and social approaches. Examples here include fine arts and nanoscience; the art and design of healthcare equipment; narrative and visual design for computer gaming; and the



intersection of anthropology, science, and aboriginal studies. We will also sustain and capitalize on our national and international presence in postcolonial studies.

It is important that we continue to work to improve infrastructure for scholarship and creative activities in fine arts. We need to seek funding and support for state of the art design studios and music performance facilities. It is also important to recognize the changing nature of funding for research in the humanities and fine arts, and specifically, the increasing expectation for institutional contributions to attract external funding. From relatively modest investments, we anticipate significant social and cultural returns.

### ***Science and Technologies***

We continue to build a strong presence in nanotechnologies and nanosciences across our campus and through our partnership in the National Institute for Nanotechnology. Areas of growth include fundamental research in nano-enabled biomaterials, nanotoxicology, hybrid silicon/organic molecular devices, micro-biosensors, molecular membranes, molecular electronics, nanoparticle films, nanocrystalline semiconductors, nanophotonics, and fuel cells. This work is driving the provincial nanotechnology strategy and serves as the cornerstone for Alberta's international collaborations in this area, particularly with India. Nano-enabled biomaterial represents an area of particular importance within the nanotechnology accelerator as part of Alberta's nanotechnology strategy.

It is essential to retain our present depth in bioinformatics, data mining, and computational intelligence research (particularly for health, humanities, and educational research initiatives). We will similarly sustain our depth in wireless communications, sensors and sensor networks, and look to capitalize on aspects of that expertise for applications in resource management, agriculture, environmental, climate change, and forestry applications.

We will integrate our existing mathematical biology capacity with provincial and international initiatives in infectious diseases, public health and epidemiology, and environmental health. We are developing our biomedical engineering activities in a number of areas, including regenerative medicine, diagnostic devices, wound care, and biomaterials. We are participating in pan-Alberta initiatives in neurosciences, space sciences, and advanced computational sciences. Investments by *Alberta Innovates – Technology Futures* have created or accelerated jurisdictional advantage for Alberta's science and innovation profile in the areas of oil sands research, livestock genomics, prion and protein folding diseases, carbohydrate sciences, and machine learning. We will use this capacity to create international partnerships, graduate student and mobility programs, and commercialization opportunities.

**Society and Culture**

We will strengthen and develop our research on society and culture to advance the understanding and resolution of complex issues that underpin many of Alberta's socio-economic challenges and those of Canada and the international community as well. These include legal policy and the regulation of natural resource allocation; the social and cultural underpinnings of vibrant and engaged urban and rural communities; the development of inclusive and effective social frameworks; open innovation policies and models of business organization and development; preservation of indigenous languages; medical and health ethics; and the economics of energy consumption, regulation, and policy.

We will continue investment in Northern Research that spans science, cultural, and political issues, including the impact that natural resource development and reclamation activities have on traditional uses of lands, northern societies, cultures and languages, as well as economic development, history and governance.

There is strong national and provincial priority associated with legal, ethical, educational, health, and cultural issues facing Aboriginal communities. We have accelerated our research capacity to address these matters, in response to a number of internal and external indicators. Nearly every ministry has an Aboriginal initiative in alignment with provincial objectives. The University of Alberta has trained the most Aboriginal physicians in Canada, and the City of Edmonton is responsible for all northern health issues. We are home to the multidisciplinary CIHR Network for Aboriginal Health-Research Training, which assembles professionals in Aboriginal health care, education, public health, sociology, nursing and nutrition. We also house the Aboriginal Health and Education initiative, which investigates culturally appropriate health care and services, and indigenous approaches to health service and delivery issues. These university-city-provincial alignments position Alberta as a national leader in science and policy to improve health and education for Aboriginal peoples. These initiatives also support the priority given to marginalized populations within the *Alberta Health Research Innovation Strategy*. Our recent appointment of a Canada Research Chair in Aboriginal and Global Health is a sign of the continuing priority we are giving this area.

Our Capital Plan also signals the centrality of Aboriginal research, scholarship, and student engagement, through the high priority request for the Aboriginal Gathering Place. Our Access and Programming Plan presented earlier in this chapter discussed several programs that build on this research strength in aboriginal issues, including the highly successful Aboriginal Teacher Education Program (ATEP). Research grants played a central role in enabling a "technically enriched" learning environment for our most recent cohort of ATEP students, through the provision of laptops and connectivity for each student, professional development opportunities for students and

instructors, and the integration of technology and K-12 curriculum software across the program.

There are other areas of substantial strength that we are supporting with continued investment to sustain their innovation and impact, and use to form international partnerships. These include cultural, legal, and social theory; globalization and social policy; social policy at the interface of contemporary biomedical technologies, genetics, and mental disabilities; and deliberative democracy on climate change. New initiatives with the Banff Centre will establish an international summer institute in cultural studies, with a focus on training and graduate student mobility. We are aligning our research capacity in global citizenship, international relations, conflict and conflict resolution, and on legal and restorative justice. This initiative will support the development of post-secondary graduate credentials that will give Albertans "the competencies, skills, cultural awareness, and understanding to compete and succeed on a global stage"<sup>6</sup> and will attract an international graduate audience to the province.

## **Research Theme 2: Internationalization**

The University of Alberta's international profile is a significant driver of the attention given to the province by industries, foreign foundations, and international research associations that add to Alberta's prosperity. The international excellence of our discovery, research, and creative activities serves as a proxy for the high quality of the talent they will find here, as employees or as innovation partners. This is an intangible benefit that defies quantification, but one that is increasingly important to the Province's long-term diversification and prosperity objectives.

### ***Research Goal 3— Increase partnerships with top-tier international entities, agencies, and institutions.***

Internationalization of our research enterprise means making strategic investments with select international partners to create multinational research consortia and, through them, foster the exchange of faculty, graduate students, PhDs, and undergraduates. We have already begun this process through strategic partnerships with the Smithsonian Institution, the Li Ka Shing Foundation, the Chinese Ministry of Science and Technology, and the Helmholtz Association, and have several emerging interactions with other international partners. Our ability to create and broker international collaborations of this sort brings the intellectual and financial resources of other jurisdictions, nations, and research associations into the province. Through these relationships, we can functionally extend Alberta's own research and innovation system beyond its borders.

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<sup>6</sup> AET International Education Framework, March, 2009, p. 12

These efforts are directed towards establishing and expanding international consortia in three areas of institutional strength: infectious diseases; energy and the environment; and water research. We focus as well at the interdisciplinary strengths we can bring to challenges arising at the intersection of these areas, drawing upon our research capacity in areas such as public and environmental health, mathematical modeling, remote sensing, and ecology.

**Research Goal 3 Measures**—Level of international research investment from foreign national agencies and funding bodies; increase in foreign post-doctoral fellows and graduate students

**Research Strategy 3.1—Build on existing international investments and partnerships**

- Use the China Institute and expertise in East Asian Studies to continue to anchor discussions in China on all matters of scholarship, creative activities, science, and programmatic initiatives.
- Leverage our Helmholtz MOU to expand the scope of our partnership with the Helmholtz Association to include other areas of institutional strength. For example, we aim to expand our energy and environment initiative to include economic, policy, social science, and cultural themes. This strategy will take us into partnerships with different Helmholtz institutes. We are actively developing Helmholtz partnerships in several new areas as well: infectious diseases (as part of the broader international virology strategy); diabetes and obesity; neuroscience; and earth monitoring and space sciences. We continue to develop our long-standing relationships with Bavarian universities, both for graduate program development and for participation in related Helmholtz initiatives.
- Move our existing international relationships to the next level of engagement and investment, in joint projects, exchanges, or graduate programs. These include, but are not limited to, a number of top German universities, Tata Consultancy Services in India, and the worldwide Aga Khan Development Network; Indian Institute of Technology-Bombay (IIT-B) in India, Zhejiang University in China, Ludwig Maximilian University in Germany, and Tec de Monterrey in Mexico; the National Commission of Science and Technology in Mexico (CONACYT), the German Research Foundation, Brazil's CAPES,<sup>7</sup> and not-for-profit research institutions, and the China Scholarship Council.
- Continue to use our membership in the Worldwide Universities Network (WUN) to develop new research partnerships with other institutions in this network.

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<sup>7</sup> The Coordination of Improvement of Higher Education Personnel (CAPES) plays a fundamental role in the expansion and consolidation of post-graduate studies (masters and doctorate) in all states of the Federation of Brazil.

**Research Strategy 3.2—Leverage our existing partnerships to create new research consortia**

- Establish the University of Alberta as the intellectual anchor for international research consortia that bring together existing and new partners in broad institutional initiatives in three areas of strength and credibility: infectious diseases; energy and the environment; and water research.
- Secure additional international research funding through partnerships with agencies and institutions in countries such as China, Brazil, India, and the U.S. and leverage that funding to support these new innovative research consortia.

**Core Research Infrastructure**

The core research infrastructure at the University of Alberta is what sets us apart from many other research universities. Core research infrastructure is the highly specialized facilities that provide unique support to the majority of researchers and research labs across the University. They are the facilities that design, engineer and build all of the one-of-a-kind equipment and apparatus required by researchers. They are the facilities that provide other research supports vital to the advancement of biomedical research. Examples of such facilities include the University of Alberta Centre for Nanofabrication (NanoFab), the Alberta Centre for Surface Engineering and Science (ACSES), the Mass Spectroscopy services and services within Chemistry and Medicine and Dentistry that provide everything from glass blowing to metal machining. In many cases these facilities due to their high level of specialization and sophistication provide services to the research community across Alberta and Canada. In the past these facilities were supported largely by research grants. Unfortunately this source of funding is rapidly decreasing. As well, as these are such highly specialized services they cannot be easily replicated or accessed through other providers or the private sector in a cost effective or timely manner. These core research infrastructure facilities require base funding of \$25 million to sustain their operations and to continue to receive the economies of scale by having these facilities on campus.

**An Additional Comment on Metrics**

As noted in Chapter 9, performance indicators are starting points for monitoring progress toward expected outcomes and goals. In addition to the metrics identified in this chapter and in Chapter 9, we have worked with all Faculties to identify a set of performance metrics that will assist in moving the institution toward its goals. Faculties will report on their progress on the following metrics on an annual basis:

1. **Enrolment management**
  - Enrolment in relation to targets (separately for undergraduate, graduate programs)
2. **Fund Development**

- Total dollars raised
3. **International**
    - Visa undergraduate enrolment in relation to institutional target of 15 percent
    - Visa graduate enrolment
  4. **Research**
    - Tri-Council funding (including a section on graduate funding)
    - Overall research funding (including a section on graduate funding)
  5. **Teaching**
    - USRI scores for each Faculty (Universal Student Ratings of Instructors)
    - Completion rates (undergraduate; graduate)
    - Innovations in teaching and program delivery (provided directly by each Faculty)

Faculties also have the option to report on up to three additional metrics of their choice to illustrate their contributions in advancing institutional and faculty level objectives. Thus, we will be tracking performance at both the institutional and faculty levels.

### ***Summary and Implications for Capital Infrastructure***

The two parts of our academic enterprise are inextricably linked and work together to advance the vision of the University of Alberta espoused in *Dare to Discover*. We have ambitious plans for our academic enterprise that have been outlined under broad themes—quality, learning environment, student experience and engagement, innovative programming, and connections and collaborations – in our access and programming plans, and diversified excellence and internationalizing our research enterprise—under the scholarship, research and creative activities plans.

One of the key principles that guides our academic enterprise is balance – balance between professional faculties and our arts and science core, the number of undergraduate and graduate students, international and domestic students, and professors and students. Importantly, also as part of this balanced approach, exposure to and experience in research opportunities of all types is needed across the breadth of our academy. Overall, at the University of Alberta, we strive to have a balance between innovative programs and innovative research and creative activity. This balanced academy allows the University to help define the innovation landscape within Alberta, creating global leadership.

In order to achieve the balance for which we are striving, we have identified that we need to differentially increase the number of graduate students and post doctoral fellows, creating ratios of undergraduate to graduate students that are indicative of enhanced student experience, engagement, and innovation that should be expected of a comprehensive academic research institution.

We share in the provincial vision of increasing enrolment and access for underrepresented groups such as Aboriginal and rural students, knowing that this will positively change the social fabric of our institution and our province. A strong contingent of international students on our campus will help promote global citizenship within the ranks of our students, faculty, and staff, as will education abroad opportunities for students, and international mobility agreements for faculty and staff. Our international research consortia will help to establish Alberta as an international destination for education, discovery and innovation, through access to ideas, facilities and future students.

We have also identified that the learning environment is critical to student engagement and experience, and goes beyond the walls of the formal classrooms, labs, and individualized study space. Recent capital investment has resulted in world class teaching and research facilities in many areas of our campus. As a result of the design processes used in combination with program integration and pedagogical principles, we have established a template for the development of learning and research spaces that are effective and transformative.

Two examples of transformative teaching, learning and research spaces are the Centennial Centre for Interdisciplinary Sciences (CCIS) and Edmonton Clinic Health Academy (ECHA), which will enter our building inventory within the next year. In order to maximize the reach of these buildings, and given the current fiscal climate, lights-on-funding is critical. This funding will allow the buildings to be filled and thus create an opportunity for us to repurpose and renew decanted spaces/buildings in order to accommodate learning, teaching, and research environments. As we work to achieve the balanced academy highlighted above, the need for graduate student research and study space will be high, and vacated space allows for a repurposing to accommodate this need. The combination of renewal with repurposing leverages funding and achieves a sustainable solution to ensure our infrastructure is not only sound, but meets the needs of the learners and researchers of tomorrow. In order to ensure best value and maximize the utilization of all space on campus, extensive and integrated planning is required and should be a consideration for funding. Planning will allow us to identify and respond to opportunities as they arise, without sacrificing the vision of the overall development of our campuses.

Over the past decade, we have come through a tremendous growth period on our campus in order to accommodate access goals of both the Province and the University. We have seen a concomitant increase in our research productivity and reputation. In the competitive world of post-secondary education, where there is choice of institution, it is important for us to provide quality experiences that engage students. We have identified a number of facilities over the past few years that are important in ensuring the kinds of experiences we think are critical in attracting and retaining students. These facilities support the overall learning environment on a campus. Some examples include the Physical Activity and Wellness Centre, Cameron Library and Information Pavilions,

Student Housing, Daycare, The Aboriginal Gathering Place, and a new transformative Science Building at Campus Saint-Jean. More information on all of our capital priorities can be found in Chapter 6.

In the end, our academic enterprise must continue to evolve with integrated and innovative curricular programs, co-curricular opportunities, and internationally-recognized research and scholarship, so that we will be a destination of choice for students and faculty from Alberta, Canada, and around the world. We want our students to have life-changing experiences here that will instil in them an understanding of knowledge and creative activities as essential to the human experience and to creating a better world.



<b>Appendix 5.1 Enrolment Targets Measured in FLEs</b>																
	<b>2010-11 Target</b>				<b>2011-12 Target</b>				<b>2012-13 Target</b>				<b>2013-14 Target</b>			
	Undergrad	Grad Masters	Grad PhD	Total	Undergrad	Grad Masters	Grad PhD	Total	Undergrad	Grad Masters	Grad PhD	Total	Undergrad	Grad Masters	Grad PhD	Total
ALES	1,197.0	237.0	230.0	<b>1,664.0</b>	1,214.0	233.0	230.0	<b>1,677.0</b>	1,227.0	229.0	225.0	<b>1,681.0</b>	1,227.0	225.0	215.0	<b>1,667.0</b>
Arts	5,071.0	393.0	366.0	<b>5,830.0</b>	5,121.0	393.0	366.0	<b>5,880.0</b>	5,121.0	393.0	366.0	<b>5,880.0</b>	5,121.0	393.0	366.0	<b>5,880.0</b>
Augustana	829.0	-	-	<b>829.0</b>	849.0	-	-	<b>849.0</b>	869.0	-	-	<b>869.0</b>	899.0	-	-	<b>899.0</b>
Business	1,819.0	289.0	77.0	<b>2,185.0</b>	1,819.0	289.0	73.0	<b>2,181.0</b>	1,819.0	289.0	73.0	<b>2,181.0</b>	1,786.0	234.0	73.0	<b>2,093.0</b>
Education	2,909.0	380.0	233.0	<b>3,522.0</b>	3,012.0	380.0	233.0	<b>3,625.0</b>	3,047.0	380.0	233.0	<b>3,660.0</b>	3,107.0	340.0	233.0	<b>3,680.0</b>
Engineering	3,560.0	708.0	612.0	<b>4,880.0</b>	3,460.0	708.0	612.0	<b>4,780.0</b>	3,334.0	708.0	612.0	<b>4,654.0</b>	3,334.0	708.0	612.0	<b>4,654.0</b>
Extension	-	30.0	-	<b>30.0</b>		30.0	-	<b>30.0</b>		30.0	-	<b>30.0</b>		30.0	-	<b>30.0</b>
Law	505.0	10.0	2.0	<b>517.0</b>	505.0	10.0	2.0	<b>517.0</b>	505.0	10.0	2.0	<b>517.0</b>	505.0	10.0	2.0	<b>517.0</b>
Medicine & Dentistry	1,060.0	259.0	279.0	<b>1,598.0</b>	1,069.8	259.0	279.0	<b>1,607.8</b>	1,070.9	259.0	279.0	<b>1,608.9</b>	1,036.0	259.0	279.0	<b>1,574.0</b>
PGME/DE -exempt	1,085.1			<b>1,085.1</b>	1,085.1	-	-	<b>1,085.1</b>	1,085.1	-	-	<b>1,085.1</b>	1,085.1	-	-	<b>1,085.1</b>
Native Studies*	100.0	-	-	<b>100.0</b>	110.0	5.0	-	<b>115.0</b>	120.0	5.0	-	<b>125.0</b>	130.0	8.0	-	<b>138.0</b>
Nursing	1,385.0	84.0	84.0	<b>1,553.0</b>	1,385.0	84.0	84.0	<b>1,553.0</b>	1,385.0	84.0	84.0	<b>1,553.0</b>	1,385.0	84.0	84.0	<b>1,553.0</b>
Pharmacy Physical Ed & Recreation	506.0 834.0	16.5 53.0	34.0 56.0	<b>556.5 943.0</b>	506.0 822.0	15.0 48.0	31.0 56.0	<b>552.0 926.0</b>	506.0 822.0	15.0 48.0	31.0 56.0	<b>552.0 926.0</b>	506.0 822.0	15.0 48.0	31.0 56.0	<b>552.0 926.0</b>
Rehab Medicine	-	723.0	31.0	<b>754.0</b>	-	723.0	31.0	<b>754.0</b>	-	723.0	31.0	<b>754.0</b>		723.0	31.0	<b>754.0</b>
Saint-Jean School of Public Health	474.0	28.0	-	<b>502.0</b>	484.0	28.0	-	<b>512.0</b>	494.0	28.0	-	<b>522.0</b>	514.0	28.0	-	<b>542.0</b>
		149.0	33.0	<b>182.0</b>		148.0	37.0	<b>185.0</b>		148.0	42.0	<b>190.0</b>		158.0	42.0	<b>200.0</b>
Science	5,497.0	555.0	700.0	<b>6,752.0</b>	5,497.0	555.0	700.0	<b>6,752.0</b>	5,488.0	517.0	700.0	<b>6,705.0</b>	5,488.0	517.0	700.0	<b>6,705.0</b>
Open Studies	403.5			<b>403.5</b>	305.2			<b>305.2</b>	393.1			<b>393.1</b>	437.0			<b>437.0</b>
				<b>-</b>				<b>-</b>				<b>-</b>				<b>-</b>
Less: Exempt FLEs	(1,106.7)			<b>(1,106.7)</b>	(1,106.7)			<b>(1,106.7)</b>	(1,106.7)			<b>(1,106.7)</b>	(1,106.7)			<b>(1,106.7)</b>
<b>Total FLEs</b>	<b>26,127.9</b>	<b>3,914.5</b>	<b>2,737.0</b>	<b>32,779.4</b>	<b>26,137.4</b>	<b>3,908.0</b>	<b>2,734.0</b>	<b>32,779.4</b>	<b>26,179.4</b>	<b>3,866.0</b>	<b>2,734.0</b>	<b>32,779.4</b>	<b>26,275.4</b>	<b>3,780.0</b>	<b>2,724.0</b>	<b>32,779.4</b>

\* Native Studies - undergrad base 170 FLEs- Master's program approved at 1:5 graduate:undergraduate ratio

**Appendix 5.2: Five-Year Plan of Academic Unit Reviews**

Academic Unit Name	Review Year	Site Visit Date
Faculty of Arts	2010-11	February 7-8, 2011
Augustana Faculty	2010-11	February 14-15, 2011
Faculty of Pharmacy and Pharmaceutical Sciences	2010-11	April 4-5, 2011
Faculty of Education	2011-12	Fall, 2011
School of Public Health	2011-12	Winter, 2012
Alberta School of Business	2012-13	To be determined
Faculty of Engineering	2012-13	TBD
Faculty of Extension	2012-13	TBD
Faculty of Rehabilitation Medicine	2012-13	TBD
Faculty of Graduate Studies & Research	2013-14	TBD
Faculté St. -Jean	2013-14	TBD
Faculty of Law	2013-14	TBD
Faculty of Native Studies	2013-14	TBD
Faculty of Agricultural, Life & Environmental Sciences	2014-15	TBD
Faculty of Medicine & Dentistry	2014-15	TBD
Faculty of Nursing	2014-15	TBD
Faculty of Arts	2015-16	TBD
Augustana Faculty	2015-16	TBD
Faculty of Physical Education and Recreation	2015-16	TBD
Faculty of Science	2015-16	TBD

### ***Appendix 5.3: Program Initiatives at the University of Alberta***

#### **Recently approved programs to be implemented**

BA in Environmental Studies (ALES, AR)  
BSc/BEEd (Secondary) Combined Degrees Program (Augustana) (AU, ED)  
MA in Native Studies  
Master of Financial Management  
LLB to JD degree name change

#### **New Programs**

Northern Studies Major at Yukon College (ALES, NS)  
Course-based Master's program (ALES)  
New specialization in Urban Ecology (ALES)  
Business Management major in existing BSc program (ALES)  
Joint graduate program in Resource, Energy and Environmental Economics (ALES, AR, BU)  
PhD in the History of Art, Design and Visual Culture (AR)  
PhD in Performance Studies (AR)  
MA/PhD in Cultural Studies (AR)  
MA in Women's Studies (AR)  
MA in Science, Technology and Society (AR)  
PhD in Writing Studies (AR)  
MFA in Theatre Practice (AR)  
PhD in Writing Studies (AR)  
MA in Peace and Governance (AR)  
Certificates in Performance (AR)  
Media Studies Program (AR)  
New Korean Studies concentration (AR)  
MA in Public Economics (AR, BU, ALES)  
MA in Medical Humanities (AR, MD)  
Post-graduate certificate programs (BU)  
MBA in Finance (BU)  
Joint MD/MBA (BU, MD)  
PhD program in Library and Information Studies (ED)  
New certificates in Library and Information Studies (ED)  
Course-based Executive MEng (EN)  
MSc and PhD programs in Geostatics (EN)  
BSc in Ophthalmic Sciences (MD)  
BSc in Biomedical Sciences (MD)  
MSc in Pathology Assisting (MD)

Certificate in Aboriginal Governance and Partnership (NS)  
Doctor of Pharmacy (PH)  
Joint degree in Aboriginal Sport and Recreation (NS, PER)  
Degree in Mountain Studies (PER)  
Master of Athletic Coaching (PER)  
Master of Ice Hockey Coaching (PER)  
Post-professional MSc in Occupational Therapy (RM)  
BSc in Occupational Sciences (RM)  
PhD program in Études canadiennes (CSJ)  
MEd specialization in science teaching (CSJ)  
BA Major in Theatre Studies (CSJ)  
College-level programming (CSJ)  
BSc, BA in Planning (AR, SC)  
BSc in 3D Multimedia (SC)  
New major in Computing Sciences in BSc/BEEd program (SC)  
New Biodiversity and Evolution, Cell and Molecular Biology programs (SC)

## 6. Capital Plan

### 6.1. Introduction

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The Capital Plan sets the framework for how the University is building toward the future by outlining key capital priorities, assumptions, objectives, and risks as they relate to meeting the outcomes outlined within the Consolidated Institutional Plan. The Capital Plan seeks to draw a balance between the current provincial fiscal environment and the emerging issues to which the University of Alberta must respond as part of its mission and vision.

The Capital Plan forms the basis for the institution's request to the Province, as its primary funding partner, for provincial contributions to the cost of priority projects to address current space, program and renewal needs for the expected differential growth in the short term, as well as forecasting for the next ten years. It continues to align with the stated government priorities and goals as identified through the Ministries of Advanced Education and Technology and Infrastructure, and looks at opportunities to leverage capital planning priorities with public, private, and institutional partners. Flexibility and consultation between University and Provincial officials is critical as Alberta Infrastructure further develops and implements such directives as sustainability through LEED<sup>®</sup> certification, ensures prudent management of capital grant expenditure in capital project implementation, and identification of deferred maintenance.

This plan endeavours to take a balanced approach in identifying the need for capital funding in support of identified planning, engineering, and/or construction activities. As we look forward, the University has identified seven strategic priority areas that guide our capital planning efforts:

- Increased focus on preservation, deferred maintenance, renewal and repurposing/backfill to accommodate the needs for tomorrow's learners and researchers, resulting in improved functionality and utilization, which in alignment with a major initiative by the Government of Alberta.
- Increased focus on planning and pre-design services in order to have an inventory of shovel-ready projects at the time of economic recovery, and to develop project delivery models that provide the maximum value for money and the flexibility to respond to funding opportunities.
- As the University continues to take a measured response to growth in accordance with the CIP, there is still a need for strategic planning and construction of critical new facilities.

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<sup>®</sup> LEED<sup>®</sup> (Leadership in Energy and Environmental Design) – a green building rating system with certification offering third party validation of a project's green features and verifies that the building is operating exactly the way it was designed to.

- Ensuring there is an appropriate level of academic support facilities that not only support learning and research, but provide a campus environment that enhances and promotes learning and living.
- The University continues to respond to pressures for additional student residences, as well as faculty and staff housing. Research indicates that the quality of these facilities and the academic program contained within correlate with academic performance and the attraction and retention of students, faculty and staff. The University maintains its vision of at least 20 percent of students located within institutional housing.
- Continued focus on opportunities to leverage funding, partnerships and collaboration in order to secure funding for project completion, including government opportunities such as the Knowledge Infrastructure Program (KIP).
- Refinement and updating of the University's sector plans in response to the academic needs of the institution and the interests expressed by our neighbouring communities. Through this exercise, the University continues to review and respond to industry standards promoting strong urban design and sustainability principles.

Over the past ten years, the University has greatly benefited from significant and continued funding that addressed our growth and assisted in making positive gains in deferred maintenance. As we enter into our next century, repurposing and renewal remain significant and critical to our ability to maintain the institution's vitality and vibrancy. Current facility inventory of the University of Alberta totals 1.5 million square metres of gross floor area and will increase to 1.65 million square metres with completion and turnover of the Edmonton Clinic Health Academy and the Centennial Centre for Interdisciplinary Studies. The estimated liability of deferred maintenance on University facilities (supported and unsupported), which specifically identifies condition related deficiencies recommended for remediation within five years, totals \$987 million (\$807 million for supported facilities<sup>9</sup> and \$180 million for unsupported facilities<sup>10</sup>) as of December 31, 2009. The provincial reporting process for deferred maintenance utilizes Facility Condition Index (FCI) values based on the total value of deferred maintenance liabilities over a five year period, divided by the replacement value of the facilities.

**While the deferred maintenance listed above remains high, the figure has begun to trend down, and through increased funding from the Government of Alberta the FCI for a number of our buildings has improved significantly.**

Recent completion of large-scale, new capital projects provides the University with an opportunity to sustainably maintain our aging assets and infrastructure. When looking at

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<sup>9</sup> Supported Facilities – facilities for which the University receives Government of Alberta operational base funding and which qualify for deferred maintenance supported grant funds.

<sup>10</sup> Unsupported Facilities – facilities for which the University does not receive Government of Alberta operational funding and do not qualify for deferred maintenance supported grant funds.

areas/buildings vacated as a result of relocating programs to newly constructed buildings, the focus on development needs to look beyond simple renewal, and extend to explore repurposing opportunities necessary to meet the needs of today's learners and the University's continued growth in research intensive activities. The ultimate goal is to have buildings that can be renewed in a cost effective manner, that work and make sense; now and in the future. For example, with the completion of Centennial Centre for Interdisciplinary Science (CCIS), several units within the Faculty of Science will be relocated, resulting in backfill projects in a number of buildings like; Henry Marshall Tory, the Biological Sciences Building, Chemistry West, and the Civil Electrical Building. As well, fit-out of the Li Ka Shing Centre for Health Research Innovation and the Katz Group Centre for Pharmacy and Health Research, along with the addition of the soon to be completed Edmonton Clinic Health Academy (ECHA), results in the opportunity to accommodate the needed repurposing and renewal within Dentistry Pharmacy, Medical Sciences Building (MSB), and Clinical Sciences Building (CSB), which will benefit several faculties.

**By coupling renewal and backfill projects, the University is able to provide a sustainable, best value model in creating projects that look towards our future operational and academic needs at a reduced capital cost.**

Given the current marketplace and best value models, envelope funding for planning and preliminary engineering of critical projects would position the University and Government to be prepared to quickly enter the construction market as funds become available. The University would also be better able to refine project scope and budget, and therefore be in a stronger position to identify the most appropriate implementation strategy including P3 options. South Campus master planning is just one example where pre-design efforts have focused on the types of utility infrastructure needed to support sustainable practices of today and support accommodation for future innovation. It is centred on the production and distribution of energy and the integrated usage of water resources. Essential to the long term viability of such an approach is the design of a plant that can utilize various renewable fuel sources as they become economically viable. Reliability of the utility infrastructure will be a very important criterion in selecting methods and approaches.

In response to the measures and goals outlined in Chapter 4, there is still a need for a number of new and expansion projects. These projects represent a continued need for new infrastructure in response to past growth, program enhancements, changes in program delivery methods, and additional academic support space. While past capital funding has provided formal learning and research space, changes in enrolment and student demand has resulted in an increased strain on existing academic support space like; fitness facilities, formal and informal collaboration/social space, libraries, collections and storage, housing, and daycares. These facilities are critical to the attraction and retention of students, faculty,

and staff and provide an environment that promotes and aids in achieving a successful academic experience.

The capital priorities outlined within the plan are intended to further the goals of the institution and provide a rational context that is aimed at addressing the greatest need. Outside of identifying needs and capital requests to Government, the Capital Plan provides a mechanism for the University to target and leverage partnered funding. The University remains committed in seeking partnership opportunities, which results in an ability to leverage provincial funding and maintain the momentum of the University's initiatives in support of its vision and of Government's priorities for post-secondary education. Examples of current partnered projects are:

- GO Community Centre – development of a community based, multi-use recreation and sports complex on South Campus in a partnership between the University and GO Community Board, which is comprised of three community based organizations, and all three orders of government. Construction is underway with substantial completion targeted for March 2011.
- Camrose Performing Arts Centre – the University is working in partnership with the City of Camrose and Camrose County in the development of a performing arts facility at Augustana. Phase one of this project is progressing toward design development.
- Devonian Botanic Garden – development of the Ecological Learning Centre, a new facility to house the Garden's diverse teaching, research and community outreach initiatives that are appropriate to the natural setting as well as a partnership with the Aga Khan Foundation for the development of an Islamic Garden. Preliminary concept work has commenced on both these projects.
- Helmholtz Alberta Initiative – an initiative between the University of Alberta and Helmholtz Association of German Research Centres with a goal of collaborating to address sustainability challenges related to oil sands production.
- Triplex Arena project – a potential partnership is being discussed with the City of Edmonton.
- Residences/Housing – the University continues to explore partnering or financing opportunities as each project is brought forward for consideration.

Lastly, the University's commitment to sustainability on campus is evident throughout various programs and services that have been in place for over 30 years. In 2010, the University was recognized by Maclean's magazine as one of Canada's Greenest Employers— one of only two universities on the list. The University continues to be recognized as a sustainability leader based on the College Sustainability Report Card rating issued by the Sustainable Endowments Institute. A number of University buildings are seeking LEED® recognition, including: Centennial Centre for Interdisciplinary Sciences; Edmonton Clinic



Health Academy; East Campus Village Graduate Student Housing; Chemical Materials Engineering Building (CMEB) renewal and infill; and the Cooling Plant on Campus (CPOC). It should be noted that success measures for building and operational sustainability are not solely focused on the Canadian Green Building Council's LEED® standards; rather, the University seeks to apply a variety of recognized standards and evaluation mechanisms that provide a best-fit to a specific project scope. For example, the University is working with other certification processes such as BOMA BEST and Green Globe, which also accredit building design and operations from a sustainability perspective for our non-grant projects and operations across the various campuses.

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## 6.2. Review of 2010-11

### 6.2.1. *Initiatives in 2010-11*

**Aboriginal Student Housing** – The University submitted two responses to a Request for Proposal from Housing and Urban Affairs, one for the development of a residence for single undergraduate Aboriginal students and one for the development of accommodation and childcare facilities for Aboriginal students with families. Although the University was not successful in obtaining these grants, the granting agencies encouraged the institution to continue the dialogue and seek funding for these initiatives. In 2010, the University responded to another request for proposal for a housing grant, with the anticipated grant announcement to occur in early 2011.

**Camrose Performing Arts Centre** – The University continues to work with the City of Camrose and Camrose County on the development of a performing arts complex at Augustana. This facility will serve a large number of local and surrounding area groups and planned future expansion opportunities will further service Augustana's Fine Arts program.

**Chemical Materials Engineering Infill** – Even with the renewal and repurposing of the existing CME building, there is a continued and pressing need to develop additional program space for the Faculty of Engineering. Through an aggressive fundraising campaign and additional Faculty resources, the University is proceeding to build the shell and core of the new infill project. Once fit out, the infill project will provide a contiguous home for the administrative office of the faculty, as well as necessary research and collaborative space for the faculty's graduate students. The fit-out of this project is highlighted in *Table III – Highest New and Expansion Priorities*.

**East Campus Village Graduate Student Housing** – In August, 2010, the University completed construction of graduate student housing in the East Campus Village area. The new facility can accommodate 234 graduate students and assist the University and Government in their goals of attracting and retaining graduate students. Additionally, all of the buildings have dedicated student social spaces. The facility opened on schedule in

September of 2010 and is tracking to LEED® silver. Additional units and opportunities are under consideration.

**Ecological Learning Centre** – The Ecological Learning Centre is a new project for the Devonian Botanic Garden, which would address three current needs: renewal of existing infrastructure that has reached the end of its serviceable life; improvement in the ability of the Garden to operate year round; growth of outreach programs such as the University’s Green School; and provide support for additional research activities. The business case has been internally approved and funding is now being sought from lotteries, donations, and grants. This project is highlighted in *Table III – Highest New and Expansion Priorities*.

**Energy Management Program** – The Energy Management Program identified the potential for \$25 million of energy management projects phased over a seven-year program (approximately \$3.5 million/year). It is anticipated that the University could generate annual savings of \$3.3 million at completion of the program.

Examples of recent projects include heat recovery, mechanical system optimizations, lighting reductions, window tinting, and variable speed drive installations. An Order in Council was received in November 2010 for Year seven (\$3.575 million). These projects are currently in the design phase for subsequent tender and construction.

Given the success of the current program, preliminary audits and feasibility studies are in progress to develop the next generation of the Energy Management Program. As in previous years, it is proposed that this next generation of the Program be financed through borrowing and is paid back through the resulting energy savings.

**Enterprise Square** – While Mount Royal University was the first institution to be located within Enterprise Square, the University continues to work with other institutions, the City of Edmonton, TEC Edmonton, and other private partners to determine opportunities that would provide continued utilization, program synergies, and operational support.

**Helmholtz Alberta Initiative** – In 2009, the University of Alberta and the Helmholtz Association of German Research Centres signed a memorandum of understanding to create a five year agreement called the Helmholtz Alberta Initiative. The goal of the initiative is to collaborate with a world class research partner outside of Alberta in order to address sustainability challenges related to oil sands production. New space requirements related to this initiative have yet to be determined.

**Knowledge Infrastructure Program (KIP)** – In partnership with the Province, the University was able to leverage approved project funding and receive Federal KIP funding of \$62 million. Project readiness, an ability to enhance and expand research capacity, and the accommodation of additional students were all contributing factors towards the selection of projects put forward for funding under this program. At the conclusion of this program, the University will have completed a substantial fit out of the Li Ka Shing Centre for Health Research Innovation and The Katz Group Centre for Pharmacy and Health

Research, providing critical links between various faculties. This funding will also reduce the Facility Condition Index (FCI) of a number of buildings through the completion of critical deferred maintenance projects that received additional funding through this program.

**Physical Activity and Wellness (PAW) Centre** – In response to the growing demand for additional recreation and fitness space on campus and space required for growing research within the faculty of Physical Education and Recreation, the University has partnered with the Students' Union and the Graduate Students' Association in the programming, planning, and schematic design of the PAW Centre. A student referendum was passed in 2010 allowing the councils of each student group to support the collection a universal fee to support student borrowing requirements (up to \$30 million) for the facility. The University has also received an additional \$9.5 million in grants and private donations. This project is highlighted in *Table III – Highest New and Expansion Priorities*.

**Sustainability** – This initiative builds on the many sustainability practices and programs already in existence by bringing them together and adding to them through a more formal approach and focus. The ultimate goal of the Office of Sustainability is to demonstrate leadership and instil sustainability as a core value at the University of Alberta. The Office of Sustainability continues to provide the conduit and overarching coordination of all the institution's sustainability activities such as design and operations, teaching and research, and engagement and outreach.

## **6.3. Highlights of Successes**

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### **6.3.1. 10-Year Strategic Preservation Plan for Maintenance and Functional Renewal**

The University and Government continue to use better data, reporting and collection tools (RECAPP) for methods to assess priorities and understand the scope of condition and functional problems, and identify potential funds for remediation. Prioritization of the application of available funding is required to strategically address those facilities in poor condition and requiring functional improvement to meet the needs of increased and changing programming.

Current levels of regular Infrastructure Maintenance Program (IMP) grants are nearly double those committed in 2007. This, together with the recent one-time special project funding, has allowed the University to make some inroads into the deferred maintenance backlog. Continued funding at 2008 levels would provide the University with the ability to make significant progress in resolving the institution's deferred maintenance. An updated progress report focusing on the success and achievements of the targeted approach was released in mid 2010, and was well received by Government.

### 6.3.2. **Government of Alberta Funding for:**

**Preservation Projects** – Projects funded and undertaken in recent years have resulted in the following reductions in the Facility Condition Index (FCI)<sup>11</sup> of some facilities:

- Central Academic Building reduction in FCI from 84.8 percent to 44.6 percent in 2010-11.
- Chemical Materials Engineering Building estimated to have a reduction in FCI from 55.8 percent to 32.9 percent with completion of this phase of work.
- Phillips Services Building reduction of FCI from 34.5 percent to 9.4 percent.

**Centennial Centre for Interdisciplinary Science (CCIS)** – With continued support to direct positive project variances to this project, additional fundraising, and a \$7.5 million Faculty of Science mortgage, CCIS will be completed within the institution’s capital funding envelope. While this project was caught in the peak of the escalated construction period, it was through the efforts of all parties that this project was able to meet its program obligations and provide the campus with a teaching and research facility for years to come.

**The Edmonton Clinic Health Academy** – Completion of this project will provide an integrated, interdisciplinary model of ambulatory care, teaching and research. Through the course of concept planning, preliminary engineering and ongoing market escalation, the University had projected a significant budget gap compared to the approved budget. In 2009, a mitigation plan was developed and issued to Government, which identified areas of continued cost savings as well as additional funding targets. While the approved budget is \$425 million, the projected cost identified in the mitigation plan was in the order of \$469 million. As of March 2011, the projected funding gap has been fundamentally mitigated to the satisfaction of our Government partners, with substantial completion expected by July 2011.

**Li Ka Shing Centre for Health Research Innovation and Katz Group Centre for Pharmacy and Health Research** – As noted, great progress has been made over the past year due in large part to the funding support provided by the Government of Alberta. Continuing with ongoing and aggressive development plans, the University has been successful in leveraging provincial funding to match the funding received through the Knowledge Infrastructure Program (KIP). Together, these increased funding commitments will provide for the completion of much needed research space. The completed research space will help the University and Government attract top tier researchers and build on existing collaborative projects related to various medical and health initiatives. With the integration of pedway connections between Edmonton Clinic Health Academy, Medical

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<sup>11</sup> Facility Condition Index (FCI) – an indicator of relative building condition, it is a ratio of the deferred maintenance cost for five years divided by the current replacement value. An FCI of 0 to 15 percent is good; 16 to 40 percent is fair; 41 to 100 percent is poor.

Sciences Building, Heritage Medical Research Centre and Education, the entire area will be interconnected by a series of interior and exterior pedways.

**Replacement Land Base** – Leased land at the Ellerslie Research Station has been replaced with the St. Albert Research Station, a 777 acre (314 hectares) parcel that was partly donated and partly purchased with University funds and a Provincial grant. Additionally, the Province purchased the Cathton ranch and adjacent Kinsella ranch, which were in turn transferred to the University and provide approximately 12,000 acres (4,856 hectares) of agricultural research land.

In 2009-10 the University received the second of three grant payments for the relocation and replacement of research functions and for the initial infrastructure required to operate programs at the St. Albert and Kinsella lands. The University is grateful for Government support of \$12 million over a three-year period and looks forward to being able to undertake the planned development in a timely manner.

### **6.3.3. *Partnerships with Communities, Post-Secondary Institutions, and Private Organizations***

**Camrose Performing Arts Centre** – Development of a performing arts facility on Augustana Campus. The University has entered into a Memorandum of Understanding with the City of Camrose and Camrose County. The intent will be to proceed to the completion of design development - at which time the budget can be established along with the integration of required fundraising events.

**Canada Foundation for Innovation (CFI) Contributions** – Since the advent of CFI in 1998, the University has received approximately \$224,769,068 from CFI for major infrastructure purchases including equipment, renovation and new construction. This funding has directly leveraged approximately \$330 million from other sources including the Province of Alberta, corporate partners, and other funding agencies.

**Devonian Botanic Garden** – Development of a new facility to house the Garden's diverse teaching, research and community outreach initiatives that are appropriate to the natural setting. Current lottery funding has provided some seed money for the initial planning phase and additional funding is being sought from Government and private sources.

**GO Community Centre** – Development of a community based multi-use recreation and sports complex on South Campus. The University has entered into a Memorandum of Understanding with the GO Community Board, which is comprised of three community-based organizations. Funding is now in place. Construction is underway with substantial completion being targeted for June, 2011.

**Islamic Garden** – In June 2009, His Highness the Aga Khan announced plans to create a traditional Islamic garden within the University's Devonian Botanic Garden to express the growing partnership between the University of Alberta and Aga Khan University. Currently in the initial phase, the project will be developed in consultation and

collaboration with the Ismaili Council for Edmonton and the Ismaili National Council for Canada, and will allow for further program development and community outreach. The Ecological Learning Centre is intended to integrate this and the other gardens within the Devonian Botanical Garden site.

#### **6.3.4. Project Completion**

##### ***The following projects were recorded as substantially completed in fiscal year 2010-11:***

**Augustana Library and Forum** – While the Library was completed in September 2009, the Forum project was officially completed on September, 2010. This project provides space for teaching and learning as well as collaborative and social interaction social space. Serving the campus and the community at large, the Library and Forum project has energized a campus and created true town and gown opportunities within the community.

**Centennial Centre for Interdisciplinary Science (CCIS)** –The North Lecture Theatres turned over in January 2010, and substantial completion of the entire facility was achieved in January 2011. Work will continue in the coming months to deal with the commissioning processes and remaining building deficiencies. It is anticipated that faculty and staff will begin to relocate to the facility in May 2011, with the building will being fully open to students for September 2011. This project will be seeking LEED® Silver certification.

**East Campus Village Graduate Housing** – This project was initiated by the University to meet the demand for additional graduate student housing. Although private sector partnerships were explored, the University found that it was better served to develop the project itself due to the project's size and scope. In September 2010, the four new housing units, accommodating up to 234 graduate students were opened. The University is currently seeking LEED® Silver certification for this project.

**Li Ka Shing Centre for Health Research Innovation Facility and Katz Group Centre for Pharmacy and Health Research Fit-Outs** – An ongoing fit-out program in 2009-10, saw the completion of wet lab and administrative space fit-outs, including facilities for the: Institute of Virology; Institute for Biomolecular Design; Cardiovascular Translational Research Centre; Centre of Excellence for Gastrointestinal Inflammation and Immunity Research; Ultra-Trace Clean-Laboratory; Surgical Medical Research Institute; and Alliance for Canadian Health Outcomes Research in Diabetes. Tenant fit-out work continues in both buildings as a result of KIP funding and provincial support. By July 2011, it is anticipated that approximately 98 percent of these two buildings will be fully developed and ready for occupancy. Due to additional partnered funding, the buildings will be close to fully fit-out by the end of 2012.

**HUB Mall Skylight** – The existing skylight in HUB Mall was an ongoing source of maintenance that represented a portion of the building’s deferred maintenance. Market contraction in the construction sector provided significant cost savings to the original project estimates, which allowed the University to seek and obtain approval to address other critical deferred maintenance areas within the building.

**HM Tory Abatement and Upgrades** – A major interior space renewal program commenced in the HM Tory tower in 2009-10 with three floors of space undergoing a program of abatement of asbestos floor tiles, floor filler and drywall compound. Occupants were relocated to decant space in the North Power Plant for the duration of the project and moved back to renewed floors once work was complete. The project is ongoing through the summer of 2011-12.

**114 Street Pedway** – Construction of a pedestrian bridge over 114 Street, connecting the Edmonton Clinic Health Academy with the Medical Sciences Building. This project will allow for easy and safe movement of students, faculty, and staff between the two buildings, which have inter-related departments. Anticipated project completion is summer 2011 in accordance with KIP funding requirements.

**87 Avenue Pedway** – Construction of a pedestrian bridge from the Heritage Medical Research Centre to the Education Building. Anticipated project completion is summer 2011 in accordance with KIP funding requirements. The new pedway will allow for much needed student connectivity to the health sciences precinct shared between the University and Alberta Health Services and will address safety concerns.

**Scientific Support Facility** – 3,680 gross square metres (GSM) fit-out of a planned program facility in the Katz Group Centre for Pharmacy and Health Research as part of an overall integration plan for scientific support. The project will be substantially completed in the first quarter of 2011.

### **6.3.5. Major Funded Capital Projects Underway**

**Biological Sciences/Chemistry Centre West Building Upgrades** – Select modernization of building systems in these two facilities on North Campus; Government of Alberta match of \$14.5 million to \$10 million in KIP funding. Work will be completed in 2011

**Continued fit-out of the Li Ka Shing Centre for Health Research Innovation Facility and Katz Group Centre for Pharmacy and Health Research** – 17,993 gross square metres of tenant improvements for the groups listed below with planned substantial completion dates as indicated.

- Early summer 2011: Alberta Diabetes Institute, Women and Children’s Health Research Institute, and Pivotal – Neurosciences, Oncology, Dentistry, and Ophthalmology.

- Late summer 2011: Institute of Virology\*; Pharmacy (Phase 1).
- 2012: Pharmacy, Phase 2\*\*.

*\*Some projects with KIP funding have project components that are not funded through KIP. Therefore only the portions of those projects affected by KIP are planned for substantial completion between March and October 2011 as provided to Alberta Education and Technology, otherwise the remainder of those projects will be completed at a later date.*

*\*\*Dependent on turnover and move-in dates associated with Edmonton Clinic Health Academy.*

**The Edmonton Clinic Health Academy (ECHA)** – A maximum of 55,753 gross square metres, the University’s component of the ECHA, a joint project with Alberta Health Services, for a state of the art facility on North Campus for integrated, patient centred clinical care, interdisciplinary education and research. \$425 million total Government funding. Anticipated substantial completion is expected in July 2011 with classes commencing in the fall term of 2011-12.

**Facility Alteration Request (FAR) Program** – Functional renewal projects of a moderate scale for instruction, research or administrative functions within a faculty or, on occasion, a support unit. Government of Alberta funding of \$5,878,331 through the Infrastructure Maintenance Program grant matched to \$2,121,669 KIP funding.

**Pharmacy Fit-Out** – A 6,742 gross square metres development of new Faculty of Pharmacy space to be incorporated into the second and the third floor footprint of the Katz Group Centre for Pharmacy and Health Research. The project budget is \$33,800,000 and is funded through a provincial, one-time capital grant. Work began in early 2010, with an estimated 15 month construction period, and the project is on schedule. At the turnover of the Edmonton Clinic Health Academy, Phase II will commence with the renewal and repurposing of assigned space within the Medical Sciences Building and is scheduled for completion at the end of 2012.

**Utility Expansion, Phases 2 and 3** – While Phase 2 was completed this year, completion of Phase 3 is anticipated in July 2011 in order to service both buildings associated with The Edmonton Clinic projects. This project will provide expansion of existing infrastructure required to provide a range of utilities to all of the proposed facilities in the greater campus area.

### **6.3.6. Major Funded Preservation Programs Underway**

**Chemical and Materials Engineering Building Renewal (Phase 1)** – Redevelopment of this facility on North Campus will see floors four, five and six renovated and modernized with significant envelope improvements and much needed wet labs for the Faculty of Engineering. The project has partnered funding from the Government of Alberta and KIP. The KIP portion of the project is expected to reach substantial completion for March 2011. The completion of the remaining renewal (Phase 2), estimated at \$51 million, is dependent upon additional funding.



**Infrastructure Maintenance Plan (IMP) Priorities:**

- Asbestos Management – Development of a more comprehensive asbestos management database is in progress. Removal of hazardous materials will continue to impact project budgets.
- Emerging Projects – Over the last five years, the University has experienced emerging projects that are a result of system or building failures. Examples include failures of the mechanical systems in the Humanities Building, and at Campus Saint-Jean, as well as building envelope concerns in the General Services Building and the Universiade Pavilion. These projects were managed as emergency work. Given the value of deferred maintenance on campus, this trend of unexpected serious issues occurring may continue, and new projects that are not identified within the Capital Plan will be brought forward. Submissions for these types of projects will be made to the Buildings and Land Information Management System (BLIMS)<sup>12</sup> in order to keep Alberta Infrastructure and Alberta Advanced Education and Technology informed of new needs.
- Fall Arrest Program – Changes to Occupational Health and Safety legislation have resulted in a requirement for a review of all roofing systems for fall restraint and access. The University has undertaken this review with an external consultant. The results of the review have been finalized with the identification of new remedial safety work required for roofing systems.
- Fire and Life Safety – These continue to be priority projects for the University with significant investments being made for renewal of fire detection and emergency communication systems. The next level of projects will need to include provisions for upgrades to additional fire suppression systems.

Facilities and Operations has developed an approach to these challenges that focuses limited capital funding into facilities supporting excellence or facilities with high maintenance costs. This proactive approach has resulted in a lower Facility Condition Index (FCI) in key strategic buildings.

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## **6.4. Key Priority Areas and Planning Considerations**

### **6.4.1. *General Assumptions***

The Capital Plan assumes that Government guidelines and directions, including sustainability initiatives, must be met in the undertaking of planned projects. The University will continue to work with Government to develop a sustainability model for the institution that would be approved by all parties to facilitate sustainable design and operational practices.

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<sup>12</sup> Building and Land Information Management System – Government’s prioritization for capital project submissions.

It outlines the highest project priorities, listed in alphabetical order, for which the University has identified a need for additional funding support from the Alberta Government. Due to continual review of budgets, and scopes of previous projects and emerging projects, the priorities and estimated costs within the Capital Plan may not match the University's list of capital projects or values as outlined in the 2011 BLIMS submission. Project cost estimates are reviewed and updated annually and adjusted as required. The projected cash flow requirements for completion of these projects to support the University's vision and the University of Alberta's Comprehensive Institutional Plan are outlined in the *Major Capital Requirements Ten-Year Forecast* located in Appendix 6.7.1. Estimates have been adjusted to align with current market conditions and the University's and Government's experience of the current construction costs and projected market escalation.

#### **6.4.2. *Preservation, Renewal, and Repurposing Projects***

##### ***Assumptions***

It is assumed that, as a minimum, the current IMP funding levels will be maintained. Furthermore, given there may be no new capital funding commitment announced, the University's main focus will be on the continued preservation, repurposing, and renewal of its facilities. It is hoped that the recent economic slowdown will continue to present opportunities for more competitive bidding and excellent value for approved projects.

It is assumed that any building planned for renovations will have associated decant space available during construction, and any facility planned for major renovation or renewal will remain in use for an extended period of time after the renewal program is complete. Also, the University and Government assume that a portion of annual IMP funding available must be either initially uncommitted or have the potential to be reallocated to allow for contingency and emerging issues that arise during each year's operations.

Finally, it is assumed that the institution must support whatever a building's primary function is now and in the future. This strategy is aimed at ensuring effective and efficient building use, and maintaining the University's existing inventory while transforming learning environments to meet the needs of tomorrow's learners, educators, and researchers.

Please refer to Table 6.2 for a list of highest priority renewal and repurposing projects.

##### ***Objectives***

- Obtain sufficient resources to meet priority and contingent needs for maintaining and upgrading existing facilities.
- Aid in the assignment of preservation funding, the University will continue to address renewal programs such as roofing, building envelope, piping, sidewalks, life

safety, and security. The University will support these programs by allocating a portion of the Infrastructure Maintenance Program (IMP) dollars across the institution, as accepted by the Province and within the guidelines set by IMP.

- Identify and proactively address deferred maintenance in a collaborative way with Government, maximizing the opportunities and impacts through the combination of joint renewal and repurposing projects and identification of assets at, or near, the end of their functional life.

### ***Initiatives***

- Three-Year Infrastructure Maintenance Program Expenditure Plans – This initiative was adopted by the University in 2004 and formalized with a request by Government for an initial submission in 2008. The rolling three-year plan is now part of the University’s annual reporting to Government. This plan has recently faced new restriction challenges by Alberta Infrastructure and the University is working through a process to have the conditions reassessed.
- Update to the 10-Year Strategic Preservation Plan for Maintenance and Functional Renewal – This initiative began in 2005 and was updated in 2010-11. This will provide the University and Government with updated strategies and project prioritization to maintain and renew the institution’s owned facilities, as a result of new IMP funding commitments, IMP Guidelines, and changes in building renewal priorities.
- Functional Deficiencies Data – The University of Alberta, in partnership with Government and other post-secondary institutions is in discussions to develop a system to address the issue of lack of data for functional deficiencies in buildings. This will be a long term initiative.
- Life-Cycle Costing – The University will be working with Government to prepare a planning document related to infrastructure, deferred maintenance, renewal and repurposing needs that would provide a long-term life cycle cost approach addressing all aspects of a facility. This plan would allow for a long-term funding approach to address the backlog of deferred maintenance and facilities renewal/repurposing requirements. This plan must be data driven and while the University of Alberta has accurate data to support this undertaking, not all institutions do. Therefore, the University will be breaking new ground regarding support for funding requests with this process.
- Preservation - Good News Stories – In the middle of 2010, the University provided an update message on its achievements in reduction of deferred maintenance and renewal of facilities. The University intends to continue reporting good news stories on an annual basis.

### ***Key Issues***

- Sustainability – Renewal and repurposing of target buildings that are functional and structurally sound result in lowering the carbon footprint and energy

requirements associated with these older assets. The potential social, environmental, and economic benefits that result can be dramatic.

- Renewal and/or Repurposing – Adequate funding for repurposing space in key buildings is still a challenge. Deferred maintenance is an ongoing issue, but when renewal projects are coupled with modernization projects, the entire functionality of the building is upgraded to meet the needs of today’s learners, teachers, and researchers.
- Backfill – While backfill is not normally thought of as being a part of preservation, it is critical and urgent since nearly every project has some backfill and adjacency impacts. Upgrades required in adjacent facilities have an impact on the cost of major projects. There are times when these spaces can accommodate required swing space to lower project costs associated with multiple phasing of larger renewal projects.
- Space Utilization – The University is reviewing space utilization to determine how underutilized space could contribute towards assisting in providing swing space to facilitate a more logical and comprehensive renewal/repurposing project. Repurposing of space provides the institution with a mechanism to incorporate, to the extent possible, current space standards and sustainable design principles.

### **6.4.3. *Envelope Funding for Planning and Pre-Design Services***

#### ***Assumptions***

It is assumed that prior to entering design phases for a capital project certain services, beyond the capacity of the institution’s staff, must be procured in order to clarify needs (e.g. general and functional space programming), identify solution alternatives, select the preferred solution, and determine scope, size, and a relatively firm cost of the solution. When dealing with existing facilities, it is imperative to understand the constraints that facility presents, within which the project team must work in the case of a redevelopment/renewal program. In addition, services of external professionals are often required to assist with significant initiatives, such as studies and master plans to clearly define objectives, future use and adjacency issues.

Planning and pre-design funding is required for the University to have an inventory of projects in a state of readiness as new capital funding becomes available. This will position potential projects to lead rather than follow the recovery of the construction sector, potentially saving millions of dollars in inflationary costs as projects will be able to move quickly into construction utilizing the best construction procurement model. This would allow the University and Government to be prepared to quickly enter the construction market as funds become available. The University understands that approval of planning and pre-design funding does not constitute approval of a full capital project.

### ***Objectives***

Establish a funding envelope to ensure that critical projects and initiatives can be funded adequately and in a timely manner. The funding plan for the envelope would include Government contributions through capital grants as well as contributions from internal sources where possible.

### ***Initiatives***

- Secure Funding for Planning and Pre-Design Services – In October of 2009, a letter was submitted to Government outlining the importance of planning and pre-design funding under the current economy. The letter delineated two potential approaches to planning and pre-design funds. The first was a list of projects and estimated design costs per project, with funds proposed to be disbursed over three fiscal years. The second approach would be to work with Government to establish an annual funding allowance – at that time, the suggested annual planning request was \$3.4 million.

Within this framework, projects yet to be approved would be partially advanced prior to project approval. Taking this action provides significant benefits since better defined project scopes and budgets provide a higher level of program and cost certainty. It also facilitates both a quantitative and qualitative approach in matching the project with the most appropriate delivery model, whether it be a traditional design-bid-build or a more entrepreneurial P3 approach. Lastly, it positions the institution and Government to respond quickly to the ever-changing construction market place and new potential funding programs like the Knowledge Infrastructure Program

Please refer to Table 6.1 for a list of high priority projects that would benefit from planning and pre-design funding.

### ***Key Issues***

- Backfill Planning and Repurposing – With the completion of a number of new buildings, there is an opportunity to leverage renewal with redevelopment. Given the goals and aspirations outlined in the CIP and the existing deferred maintenance associated with these buildings, there are a number of factors that require consideration in assessing the residual capacity resulting from new construction. Upfront planning will enable the University to create a renewal and repurposing plan to ensure today's assets can deliver tomorrow's programs in the most sustainable way.
- Increased Research Intensity – As a research intensive institution, there is a growing need to convert administrative and undergraduate space to accommodate growth in the graduate, doctorate, and post-doctorate programs. These research

spaces require significantly more physical space and infrastructure than the University's aging inventory can accommodate. Advanced planning is essential in order to investigate how to best renew and repurpose these areas to maximize utilization.

- Increasing Area of Aging Infrastructure – While new construction has accommodated the planned growth of the institution, the University must continue to respond to the CIP. There are a number of targeted buildings for which planning work must be completed to ensure that issues such as access, teaching, learning, and support needs, are addressed in a planned and sustainable manner. These buildings include: Dentistry/Pharmacy, Medical Sciences Building, the Clinical Sciences Building, and the Civil Electrical Building. Advanced planning and pre-design funding, would provide the opportunity to responsibly accommodate future growth, while aligning with the expectations of government.
- Campus Planning and Community Expectations – As part of building relationships with our surrounding communities, the University continually engages its neighbours and University stakeholders in the planning and design of its campuses as they develop. Communities are requiring the University's planning documents be detailed enough so the communities are fully aware of development impacts. Critical to a project, like the development of sector plans for the South Campus, is the creation of a framework that in turn provides clarity and understanding, as well as an interpretive plan that guides a multitude of designers and planners for the next 30 plus years.

#### **6.4.4. *New Space***

##### ***Assumptions***

Over the next two years the University, through the support of Government, will add approximately 150,000 m<sup>2</sup> of new/expansion space, most of which has already been accounted for in approved program expansions. The University will continue to grow in accordance with the goals and aspirations outlined in Chapter 5, and as such priority projects for additional space to meet program and institutional needs remain.

The institution has identified a number of new and expansion projects critical to the mission, vision, reputation, and global competitiveness of the institute, a majority of which were identified prior to the economic downturn. Some of these highest priority projects include: a building expansion to accommodate the science programs at Campus Saint-Jean; a new School of Business Building to accommodate growth within the Faculty of Business and needed space within the Humanities and Social Science Departments within Arts; Chemical Materials Engineering Infill; Relocation and program accommodation for both the Faculties of Agricultural Life and Environmental Sciences and Physical Education and Recreation at South Campus.

There are also a number of critical facilities that have been identified as supporting the broad academic instruction of the institution, including the Physical Activity and Wellness Centre, Cameron Library and Information Pavilions, and the Aboriginal Gathering Place. These are all examples of the types of support infrastructure required to ensure the academic success of every student. These academic support facilities are discussed in greater detail in the next section.

Please refer to Table 6.3 for a list of highest priority new and expansion projects.

### ***Objectives***

Outline the capital needs of the institution in order to deliver the vision and programs outlined within the CIP as the University continues to advance program changes. Through this process, the University of Alberta, in partnership with Government, can continue to ensure that it is an institution of choice for Albertans, Canadians and the global communities it seeks to serve. Space must not only provide simple access, but it must ensure that the entire educational and life experience is supported for student success.

### ***Initiatives***

- The University will continue to work on advanced planning of high-priority projects in order for those projects to be in a state of readiness once new capital funding becomes available.
- The University will also continue to explore partnerships as well as donations and alternate financing in order to leverage any available funding.
- The University will continue to work with Government to align priorities for new capital and partnerships.

### ***Key Issues***

- Currently the key issues affecting new space on campus are receiving new capital funding and continued economic uncertainty and volatility.

## **6.4.5. Academic Support Facilities**

### ***Assumptions***

In addition to building and maintaining specific academic support facilities necessary for learning in all areas of the institution, the University provides spaces to allow for a variety of activities including: physical activity/recreational facilities; study space; and shared information commons. These facilities provide needed infrastructure to increase access, enable higher completion rates, and align the University to compete with other institutions outside the province for Albertan, Canadian, and international students.

## ***Objectives***

Confirm the state of the current inventory of academic support facilities, identify adequacy, appropriateness and availability, and engage Government in discussions to outline the importance of these facilities and remediate identified shortfalls in these integrated program areas.

## ***Initiatives***

- Aboriginal Gathering Place – A key issue facing all institutions is to increase the participation and success of this under-represented group. As an institution with a vibrant Faculty of Native Studies, the University remains committed to the success of Aboriginal students as well as those students studying within the field of Native Studies. It is imperative that the University provide the support and linkages to these students.
- Cameron Library and Information Pavilions (CLIP) – A multi-faceted project for innovation in learner services. This phased project focuses on three initiatives: Cameron Library upgrade (Phase 1) completed in 2008-09; a dedicated Book and Records Depository (BARD) (Phase 2); and the Curatorial Research Facility (Phase 3). CLIP will be a site of institutional collaboration by virtue of the inter-campus services it houses, creating a model of intensive support and organizational efficiency for teaching, learning and research. Services offered at CLIP will provide best practices for implementation and collaboration throughout not only campuses within Alberta, but all partners served by the University. At this time, the location and funding remain to be determined for learner services related initiatives such as the BARD and the proposed Curatorial Research Facility.
- Physical Activity and Wellness (PAW) Centre – Although there is a strong academic core within the programming of the PAW Centre, there is a significant call by students, faculty and staff for increased fitness areas. Key to the attraction, retention, and success of these individuals is the ability to provide programmed areas that support a balanced lifestyle. The very nature of their studies and work requires students, faculty and staff to spend a significant amount of time on campus. Easily accessible, multifunctional fitness facilities create an environment that not only promotes healthy living, but also ensures the health and well-being of the campus.

## ***Key Issues***

These facilities play an instrumental role in academic achievement and fundamentally support learning and research, as well as the attraction and retention of students, faculty and staff. Over the past ten years, there has been a concentrated focus on funding projects that lead directly to a much needed increase in access, which has now put a strain on our



academic support spaces. The current economic situation provides an opportunity to take a second look at determining how best to accommodate the need for adequate academic support space, which has not grown proportionally with recent increases in enrolment.

#### **6.4.6. Student and Workforce Housing**

##### ***Assumptions***

In alignment with the University's White Paper on Student Housing, the University Plan, and the priorities of the Government of Alberta, it is assumed that there is an increased need for on-campus, purpose-built, and accessible housing. There is also an increasing need to integrate support programs and academic learning space to attract and retain targeted groups such as graduate, rural, Aboriginal and international students, as well as students with families. There is a continued need to explore funding strategies for student housing in support of increased access.

It is further assumed that during this planning period, there will be emerging pressure to strategically develop market housing options for staff and faculty in order to remain competitive with respect to attracting and retaining talented faculty and staff.

##### ***Objectives***

Present and discuss the findings and recommendations contained in the University of Alberta's White Paper, *Student Housing – for Now and for the Future* (August 2009). To continue working with Advanced Education and Technology, other ministries, and stakeholders to develop creative housing solutions that meet the goals of students and their families as well as those of the University of Alberta. As stated in the White Paper, the University's objective is to emphasize the importance of funding for program space in residences that support the academic mission and student success.

##### ***Initiatives***

- The University does not receive targeted deferred maintenance funding for student residences. Student residences have high infrastructure needs and these are compounded by the University's inability to recover the cost of the maintenance backlog via rental revenues. In 2010-11, the University began reviewing strategies that would help build a reserve fund to be accessed for maintenance, renewal and expansion of student residences (Residence Services Capital Reserve Strategy, June 2010).
- The University continues to explore strategies to add student residence capacity on its campuses, as well as to provide workforce housing options on the West 240 lands at South Campus. Locating students closer to other campus services and facilities has an important impact on student engagement and supports the institution's stated goals of 20 percent of students housed in University residences.

- The University will continue to meet with private sector developers to explore viable options to achieve our residence and housing targets.

#### **6.4.7. Key Master and Sector Plans**

##### ***Assumptions***

North Campus has nearly reached its growth capacity and is one of North America's densest campuses. For the University to continue to grow and meet its obligations under the Roles and Mandates document, expansion of South Campus is becoming critical. Master planning is underway to determine the critical mass required for the sustainable development of South Campus.

The Office of the University Architect will continue updating Sectors 3<sup>13</sup>, 4<sup>14</sup>, 7<sup>15</sup>, 8<sup>16</sup> and 10<sup>17</sup>, which are located at North Campus, along with sectors 12, 13, and 14, which are located at South Campus. The updating of these sector plans remains a priority for the Office of the University Architect. While significant consultation with the communities has already taken place, these efforts will continue as we work to finalize these plans. The LRDP will need to be updated to include acquired land holdings since the LRDP was last submitted in late 2002.

##### ***Objectives***

Provide strong and clear campus planning documents that are rooted in leading urban design and sustainability principles. The plans will seek to provide the necessary direction ensuring the academic program needs of the University are provided, with careful considerations to the expressed interests of the surrounding neighbourhoods.

##### ***Initiatives***

- Scientific Support Facilities Master Plan – The University currently has a variety of scientific support facilities across its campuses, some of which have severe deferred maintenance issues. With the upcoming release of the Ellerslie lands, and several new facilities providing research space, a comprehensive review of all scientific support facilities and their locations is required. This plan will provide strategies to meet the challenges of providing this program in a multi-faculty, multi-location setting in the most cost effective manner without sacrificing access, care or quality. Potential for consolidation of facilities, where appropriate, will be explored

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<sup>13</sup> Sector 3 – encompasses the area between Windsor Car Park and Stadium Car Park and from 116 Street to the Quad.

<sup>14</sup> Sector 4 – encompasses the area between Saskatchewan Drive and 89 Avenue and from Pembina Hall, Athabasca Hall and Assiniboia Hall over to Hub Mall.

<sup>15</sup> Sector 7 – encompasses the area east of HUB Mall to 111 Street and from 87 Avenue to Saskatchewan Drive.

<sup>16</sup> Sector 8 – encompasses the remainder of the Garneau area from 111 Street to 110 Street and 87 Avenue to Saskatchewan Drive.

<sup>17</sup> Sector 10 – encompasses the area shared with Alberta Health Services and the Jubilee Auditorium.

- Sectors 3 and 4 Update – This update is required in order to accommodate an expansion to the Chemical and Materials Engineering Building to provide office space in addition to base building upgrades.
- Sectors 7 and 8 Updates – The intent of the update is to amend the plan in accordance with extensive community consultation and concerns raised during the development of the Design Guidelines for this area.
- Sector 10 Update and Boundary Change – Sector 10 is the Health Sciences precinct. An update is required as a result of the addition of leased land from the Government of Alberta (Jubilee Auditorium) and the significant amount of building underway or planned.
- South Campus – The University is experiencing unprecedented space pressures on its North Campus and is beginning to look at ways to promote academic growth and development of its South Campus. Working within the parameters of the Long Range Development Plan, the development of the Sectors Plan continues as we work with the neighbouring communities in a consultative process towards a finalized plan.
- Way-Finding Study (Stage II) – This master plan aims to harmonize signage design standards for the University’s five campuses, the Devonian Botanic Garden, and Michener Park. It will provide recommendations for the design of way-finding signage on the exterior and public interiors of buildings. Upon completion and approval of the way-finding study, the existing signage system guidelines for all other permanent signs on campus will be revised. Addressing of buildings may be added in order to enhance campus way-finding.

### ***Key Issues***

- Master Plans and Studies – Planning of improvements to various aspects of land use is constantly required to address issues and emerging opportunities – plans include the South Campus Master Plan, architectural guidelines, campus way-finding, space utilization studies, and an update to the Augustana sector plan, including a general space program.
- Residence Services Accommodation and Program Study: *Dare to Deliver* – Purpose-built, accessible, on-campus student housing has the ability to augment and enrich students’ academic experiences. The Residence Services Accommodation and Program Study: *Dare to Deliver* presents a road map with respect to how residences might develop in the future as well as what types of programs and activities should occur in support of the development of the whole person. The University will be using this document as a guide in planning and developing additional space to provide opportunities and access to rural, Aboriginal, under-represented and international students, as well as students with families.
- Sector Plans – Sector plans that need to be updated include: Campus Saint-Jean, Augustana Campus, and Sectors 3, 4, 7, 8 and 10.

- Surrounding Communities – Through its planning process, the University must ensure proper and effective consultation with its surrounding communities.

#### **6.4.8. Land Asset Review**

##### ***Assumptions***

It is assumed that the University's land base must be sufficient to accommodate long-term growth. South Campus will be the focal point for future academic, partner and residence expansion. The University appreciates that there is no committed funding at this time to create the necessary core facilities and critical mass required for a fully functional campus. There is considerable internal and external pressure for innovative use of the existing land base. It is assumed that the University will be able to utilize the Ellerslie lands in some fashion, even after the existing leases expire, until such time as the lands are needed for other purposes. The University is responsible for the removal of existing infrastructure on the leased Ellerslie lands. The University must also determine how research land at South Campus can be replaced by new land in the University inventory in order to facilitate the development of South Campus.

##### ***Objectives***

Updated the 2002 Long Range Development Plan to include land holdings that were not included.

##### ***Initiatives***

- Long Range Development Plan – The Long Range Development Plan needs to be updated to reflect new lands acquired such as Enterprise Square, St. Albert lands, Devonian Botanic Garden, Kinsella. Amendments may also be required as various Sector Plans are updated.
- Planning for Major Projects – The Office of the University Architect continually undertakes planning exercises to ensure that appropriate and adequate space, along with supporting infrastructure, will be available when needed by individual faculties/departments and/or by the University in general, which include:
  - Planning for the next 10 to 30 years for an appropriate infrastructure to support a variety of developments on the University's 601 acre (243 hectare) South Campus.
  - Utilization study of North Campus facilities, using updated space guidelines as approved by the University's Facilities Development Committee (FDC).
  - Review of the Faculty General Space Program and assess what, if any, impact may arise as a result of major initiatives in individual faculties.

**Key Issues**

- North Campus – Development density continues to be one of the most challenging issues for the University, and the student experience requires that open spaces continue to be available.
- The University’s utility system, and indeed the City of Edmonton, are increasingly challenged to meet infrastructure demands to accommodate development density on North Campus. The northeast quadrant of the campus is the only area that does not have significant siting issues for construction of new facilities. Priorities include student housing, utilities, renewal and open spaces.
- Enterprise Square Campus – The University continues to explore opportunities for partnerships for the remaining undeveloped space and the space vacated by the Art Gallery of Alberta. Additionally, the University continues to look at opportunities to expand its downtown presence through additional academic uses and residences, as well as collaborations with other post-secondary institutions and private sector partners.
- South Campus – Development of lands west of 122 Street provides different opportunities than the area currently developed east of 122 Street. The University must carefully consider all options to develop up to 200 acres (81 hectares) of the 230 acres (93 hectares) available west of 122 Street, With a focus on:
  - Pressure for increased student housing, including increased numbers of graduate students and future demand for workforce housing, requires viable solutions in addition to those on the densely massed North Campus. South Campus, particularly near the LRT, provides a key opportunity for housing development.
  - The Faculty of Physical Education and Recreation and the Faculty of Agricultural, Life and Environmental Sciences will be the first to relocate in order to provide for efficiency of operations; to alleviate specific space pressures on North Campus; and to provide additional access for student-led activities.
  - The University will focus on strong urban design principles and sustainable development. It will continue to explore partnership opportunities, such as the GO Community Centre, to achieve the critical mass required to ensure a thriving South Campus. The University continues to engage various stakeholders and experts as these plans are developed.
  - For the successful implementation of a utility system, it must be recognized that substantial lead time is required for regulatory permits, deployment of a P3 approach if appropriate, long delivery items and commissioning.

- Michener Park – The Residence Services Accommodation and Program Study: Dare to Deliver supports further development of accommodation for students with families as a retention strategy in order to enable the University of Alberta to achieve its goals. At the same time, a recent update to the unit condition report for this community indicates that Michener Park is in need of redevelopment.
- Ellerslie Research Station – Discussions are continuing to allow the University use of the lands until they are required for some other purpose. The University is grateful for the Government of Alberta grant in the amount of \$12 million. Thanks to this funding, the relocation of research functions to St. Albert and Kinsella lands can be implemented.

#### **6.4.9. *Additional Planning Considerations***

##### ***Space Management***

- Provision of Right Space – The University continues to work to provide adequate and appropriate space in order to accommodate changing pedagogy and program requirements in response to the needs of tomorrow’s learners and increased sponsored research activity.
- Campus Alberta – Another challenge facing the University is how to address the space needs related to attracting, recruiting, and retaining students and faculty in alignment with the Province’s Roles and Mandates Policy Framework. The University will continue to explore strategies in collaboration with other institutions to aid in student recruitment and retention.
- Leveraging Funding – The University continues to leverage funding from Government (e.g. grants, KIP), donations, and public/private partnerships (e.g. GO Community Centre, Devonian Botanic Garden, Physical Activity and Wellness Centre to develop its current space and building assets.

##### ***Institutional Strategies and Support***

- Alternate Financing Arrangements – Along with pursuing innovative partnerships for property development, the University also looks for alternate financing arrangements where feasible and advantageous. Other alternative financing, such as bond issues and P3s, will also be explored where appropriate. Increasingly, the funding of projects in this Capital Plan will reflect the partnerships noted above and will include funds from multiple sources. Donations, as well as partner contributions, will be sought and used to complete needed facilities. Leasing options will also be considered to lessen the demand for capital funding. The University will continue to look at ways to involve the private sector in the repair, development and operation of new and existing housing inventory.

- Partnership Development – Opportunities to develop partnerships could allow the University to leverage funding and develop its physical resources in a cost-effective manner. While this priority initiative presents a major opportunity for the University to develop its physical resources in an innovative and cost effective manner, it also presents significant challenges to both the institution and Government. First, the institution, along with Government as its primary funding partner, must work within current public policy. Second, the University must carefully weigh the advantages apparent in a partnership arrangement against the potential loss of control over the future of its resources.
- Campus Alberta – The University continues to work with its post-secondary partners to explore opportunities of sharing resources, both physical and operational, for the mutual benefit of all parties. The University has a significant intellectual resource base and capacity to assist and support these institutions as requested.
- Data Systems – In order to abide by Government mandate, determine investment need, and track results of investing, appropriate data systems with reliable, detailed and consistent information are an essential starting point. Facility data is contained in several different information systems, which are maintained and used for a variety of purposes.
- For building operations and asset management, computerized maintenance management systems provide the critical means needed to manage response; maintenance; budget; supplies, parts and materials inventory; track building labour costs; and building system life-cycles; equipment; and structure. In addition, faculty work requests and project financial tracking provide the University with the ability to accurately manage costs and apply charges.
- In this regard, Facilities and Operations’ Utilities department has successfully deployed a billing system that has replaced an in-house legacy system. As Utilities fully explores the capabilities of the new system, customers will be provided with timely access to their usage data so that they can successfully manage their businesses.
- At different levels, all internal constituents have a have a stake in appropriate quality and quantity of University facilities. However, when planning the functional renewal and the operation of facilities, there are key stakeholders who must understand issues, have access to available data, and be able to contribute to identifying necessary, achievable and effective investment options.
- The legacy system used by Facilities and Operations is currently being updated in order to accommodate reporting requirements. The update will also help to mitigate risk to operations and operational data, as well as provide meaningful information to internal and external stakeholders in a consistent manner.

### ***Unsupported Services***

- Information Technology – Although grants cover purchases for information technology, there is a need for agreement on Government support of maintenance and replacement for core information technology services. A key element to this support is that it must be a new funding source and not take funds away from the existing facilities deferred maintenance grant. Information technology is foundational in a modern building. It can be used to control security, power usage, air conditioning, elevators, telephones, and many other core services. This infrastructure eventually wears out and/or needs upgrading to continue meeting operational, teaching and research needs.
- Residences – Government considers residence operations to be cost recovery and does not currently provide any level of funding support. The University, in conjunction with other institutional partners, authored a white paper on student housing, which was submitted to Government in August of 2009. This white paper makes practical recommendations with respect to how the University of Alberta, while working with the Government, can ensure the availability of accessible student housing that supports the development of the whole person and meets the goals and aspirations of the Province and the University. The white paper also discusses the fact that effective student housing can include 20 percent to 35 percent program area spaces that are used for the delivery of co-curricular and other programs that help students succeed. These spaces are currently funded via student rents and receive no central support.
- Childcare – The lack of available and affordable childcare options on campus is becoming a deterrent, not only to the recruitment of staff and faculty, but also to the attraction and retention of graduate students and students from traditionally represented cohorts such as those from the Aboriginal community.

#### **6.4.10. *Other Influences and Challenges***

- Facility operating costs for high intensity research facilities may still be greater than the funding provided through the Base Operating Grants. The University must carefully monitor actual costs in these facilities to determine if a significant shortfall continues, and report to Government accordingly.
- While the University appreciates and acknowledges Government's efforts to provide lights-on-funding for the Centennial Centre for Interdisciplinary Science and Edmonton Clinic Health Academy, failure to provide adequate operational support/bridging would result in a significant operational shortfall to the institution that will directly impact overall operational service for existing facilities.
- The objectives of accessibility, affordability and quality education contained in Campus Alberta and Access to the Future will continue to influence the



University's planning processes. Also, the Government's initiative to ensure sustainability of facilities will influence planning and implementation of both renovation and new construction projects.

- Many elements influence planning and implementation of preservation, expansion and new construction projects, including:
  - Business case development required for projects outlining the need for additional space and/or grant funding.
  - The deferred maintenance liability cannot be reduced unless an increase in grant funding and/or one-time funding is received for preservation and renewal projects. Although not recognized as deferred maintenance, there is also a need to expend significant amounts on functionality issues for which data is not readily available.
  - Government's capital planning process and its timing of approval decisions and funding announcements greatly influence the ability of institutions to plan and implement capital projects, including presentation of final budgets.
  - New construction is required to be at a LEED® Silver certification level. The University continues to engage Government to look for the most economical means of validating building designs and operations in the interest of achieving the University's sustainability goals and is actively pursuing alternative, cost effective, strategies to provide equal or greater certification levels at a lower cost of delivery.
  - The ability to leverage donor contributions and other sources of funds with Government funding for capital projects is decreasing but still pursued.

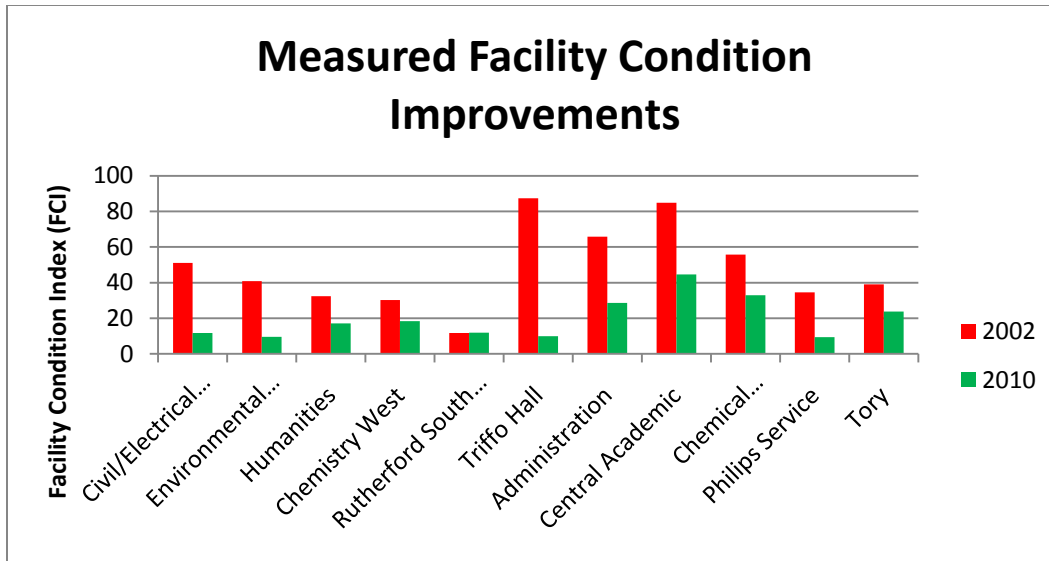
## **6.5. Current State of Assets**

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The University manages a portfolio of facilities totalling 1.5 million gross square metres and averaging 46 years of age.

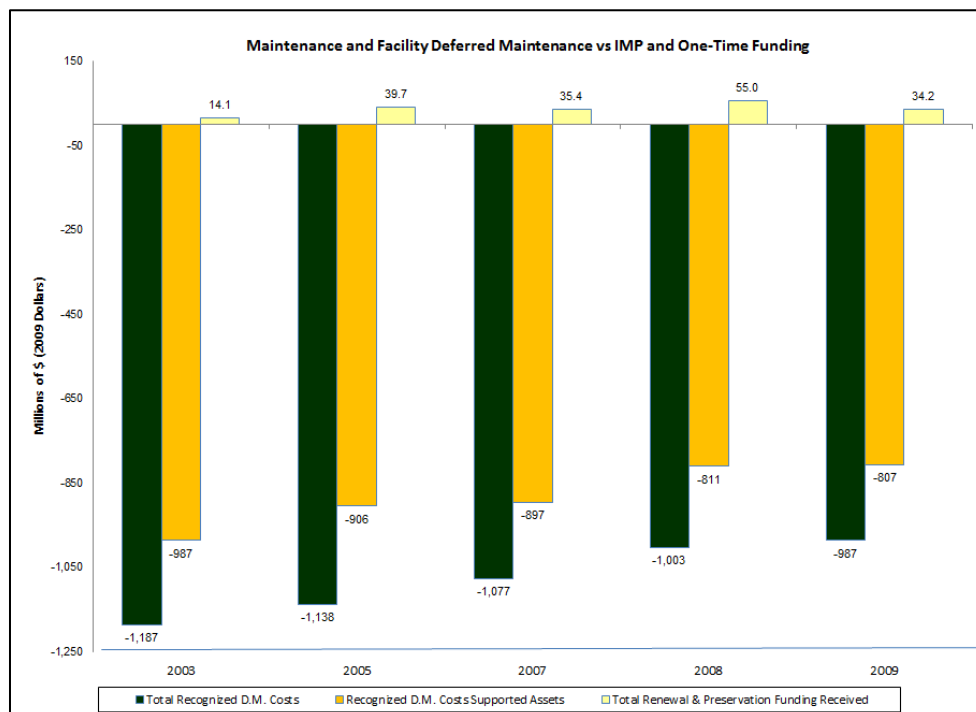
### **6.5.1. *Deferred Maintenance Program***

The University is grateful for the continuation of the increased IMP base funding support which was received in 2010-11 and additional one-time grants, which have helped to address some serious condition and functional deficiencies, benefitting the students and faculty of the University. The University of Alberta, with assistance from the Government of Alberta, continues to make progress in reducing the overall deferred maintenance value, and has resulted in significant improvements to the Facility Condition Index for a number of our buildings. The University will continue to provide a separate report on the progress made and the benefits to its deferred maintenance program.



While current levels of regular IMP grants have resulted in slight decreases to the measured deferred maintenance liability, current funding is inadequate to eliminate the backlog of infrastructure renewal required without supplementary one-time grants for large high-priority projects. Additional funding envelopes and/or one time-grant for deferred maintenance are need for the University to make significant inroads in reducing our deferred maintenance liability.

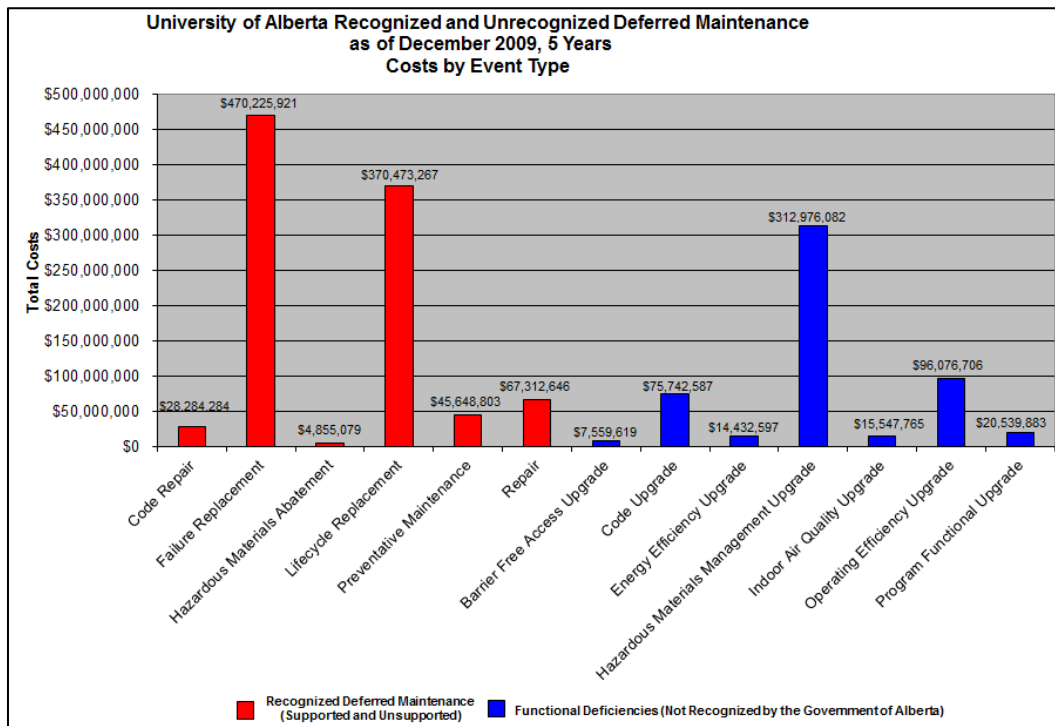
The following chart (Maintenance and Facility Renewal Costs vs. IMP and One-Time Funding) shows current comparisons between deferred maintenance backlog and current funding commitments over the last eight years.



### 6.5.2. *Upgrading*

While the extent of functionality issues is known, there is no current system in place with Government for measuring, tracking or funding of functionality issues. Additionally, there is no support for functional deficiencies such as code upgrades, life safety, and hazardous materials removal. For the 2011-12 fiscal year Facilities and Operations will be preparing a model for presentation on the impact of functional renewal for budget planning.

The chart on the following page, University of Alberta Recognized and Unrecognized Deferred Maintenance as of December 2009, Five Years, Costs by Event Type, shows the deferred maintenance backlog of supported and unsupported facilities by type of event (red bars) and the upgrades or events not recognized by Government as deferred maintenance (blue bars), which have been identified to date through building condition assessments. Functional renewal costs associated with deferred maintenance are not included. It is expected that a systematic audit of functionality deficiencies will uncover substantially higher dollar figures. Only a detailed audit on asbestos has been performed internally, with the resulting figure shown in the chart.



### 6.5.3. *Challenges*

#### *Residences*

Student residences have high infrastructure renewal needs. This is compounded by the inability to recover the cost of the backlog from rental revenues. At the University of Alberta, a large portion of current residence accommodation is not only at the end of its

useful life, but is functionally challenged to support the directions of the University and Government; as an example, supportive accommodations directed at increasing the numbers of Aboriginal students attending the University of Alberta. As new facilities are brought on stream, capital reserves have been established as part of the operating budget.

**6.5.4. Risk Management/Life Safety Issues**

Despite continued funding pressures and deferred maintenance backlog, some projects must proceed in order to respond to emergency situations. These projects may have to be funded from internal or alternate sources until specific grant funding is available from Government. Also, contingency funds from existing funding can be inadequate to cover major system failures in large aging facilities. Due to the number of recent major failures, the University has pursued the creation of a risk pool to enable the institution to be in a position to address future events should they occur. The risk pool would be created from the increased IMP grant funding over a period of three to five years. This mitigation strategy has been discussed with Government officials, and will form part of the institution’s Three Year IMP Expenditure Plans.

**6.6. Funding Request**

**6.6.1. Pre-Design Projects Requiring Funding**

Planning and pre-design services work is critical to the long range planning of the institution because it demonstrates how best to maximize utilization of land holding, buildings available for repurposing, or projects critical to the delivery of the institution’s academic program. The projects listed below represent priority planning projects that are planned over the next three to four years. **Due to the critical nature of these projects, some of them have proceeded in advance of Government funding approval (denoted by\*)**

Table 6.1 - Pre-Design / Design Projects Requiring Funding (listed in alphabetical order)

Project	Description	Request (\$)
Aboriginal Gathering Place *	Design for a centre focused on Aboriginal students, faculty and staff to serve as a community gathering place that embraces and provides an inclusive and supportive learning environment to increase participation by First Nations peoples within the post-secondary sector.	1,500,000
Agricultural, Life & Environmental Sciences (ALES)	Planning for the growth and emerging priorities of the faculty in research and teaching and the feasibility of consolidating faculty departments in a single facility on the South Campus, including the assessment of other lands.	3,000,000
Biomedical Engineering Building (Pre-Design)	Pre-design to build infrastructure and acquire equipment necessary to facilitate development of Canadian Institute of Bio Medical Engineering on the U of A campus.	1,250,000

Campus Saint Jean – Science Expansion *	Expansion and infrastructure improvements of the existing facility to meet the needs related to the expansion and improvement of Sciences programs, partnerships with other faculties and dedicated research space.	1,500,000
Dentistry/Pharmacy Building (Renewal) *	Pre-design for the functional renewal of the building once the Edmonton Clinic Health Academy is complete and faculties have relocated. The existing building, constructed in 1921, has a high deferred maintenance (\$160,000,000) liability and must be completely retrofitted before new tenants can be moved in.	3,500,000
Physical Activity and Wellness Centre *	Pre-design for the construction of an addition and upgrades to the physical education and fitness/wellness centre for use by the entire campus community and for the more efficient placement/expansion of services.	1,500,000
Physical Education and Recreation (PER) new faculty building and research consolidation	Planning for the growth and emerging priorities of the faculty in research and teaching and the feasibility of consolidating faculty departments in a single facility on the South Campus, including the assessment of other lands.	3,000,000
School of Business	Development of a building for the School of Business in a partnered opportunity with private sector. A building for the School of Business also accommodates backfill requirements of social sciences and support their growth needs.	1,750,000
Scientific Support Facilities Master Plan *	Plan to undertake a comprehensive review of all scientific support facilities and their locations and develop strategies to meet the challenges of providing this program in a multi-faculty, multi-location setting in the most cost effective manner without sacrificing access, care or quality.	1,000,000
South Campus Master Plan *	Sector planning needs to be completed for the land use and for a phased and sustainable utilities/infrastructure strategy that will accommodate projected long-term growth on this site and the possible relocation of some of the existing operations to off-site research stations.	2,000,000
<b>Total</b>		<b>\$20,000,000</b>

### 6.6.2. *Unfunded Priorities*

The following are the University’s highest priorities in the categories of; (1) Preservation and (2) New and Expansion, for which the institution is requesting consideration of Government approval and funding support. Due to continual review of budgets and scopes of previous and emerging projects, the priorities and costs within the Capital Plan may not necessarily match the University’s list of capital projects outlined in the 2011 BLIMS submission. However, the University assumes that projects identified as priorities in this update will, for the most part, be carried forward in the 2012 BLIMS submission.

The project costs are adjusted annually with current values representing 2011 construction dollars. Escalation values are provided by Alberta Infrastructure at the time of final entry.

The projected cash flow requirements for completion of these projects to support both the University’s vision and the University of Alberta’s CIP are included in Appendix 6.7.1. **Preservation Projects in Table 6.2, included in the \$40 million dollar annual deferred maintenance one-time grant program identified within the major Capital Requirement Ten-Year Forecast chart are denoted by an asterisk (\*).**

**Preservation Projects – No Additional Space in Inventory**

Table 6.2 - Highest Preservation Priorities (listed in alphabetical order)		
Project	Description	Request (\$)
Biological Sciences Renewal Program – Phase 1	Phase 1 of renewal program for Biological Sciences. Significant upgrades to mechanical and electrical base building infrastructure to support current and future needs.	53,874,500
Cameron Library Information Pavilions Phase 1 *	Phase 1 redevelopment and upgrade of Cameron Library to create an integrated learning environment with comprehensive user support, group study rooms and a variety of settings for group discussion and quiet study zones.	11,000,000
Campus Wide Fire Alarm Modernization *	Replace/retrofit/renew fire alarm infrastructure in University buildings.	10,496,000
Campus Wide Fire Suppression Upgrade *	Replace/retrofit/renew fire suppression infrastructure in University buildings.	10,408,000
Chemical and Materials Engineering Building – Renewal (Phase 2)	Renewal and repurposing of the building to provide needed wet lab space for Engineering and address building envelope and operational issues. The Faculty of Engineering is providing \$5,000,000 toward Phase 2 of the renewal.	51,000,000
Chemistry West – Phase 3 of Renewal – Building Envelope and Perimeter Heating	Re-cladding of building envelope on west face including replacement of windows. Replacement of perimeter heating system with individual controlled room zones.	25,412,500
Chemistry West & Chemistry East – Electrical Vault / Emergency Power Upgrade *	Electrical services for the facility are at capacity; no emergency power is available for building life safety systems. New electrical room and generator required.	3,100,000
Clinical Sciences Building: Phase 1 Design *	Building renewal and backfill to occur once the Edmonton Clinic Health Academy is complete – pre-design funds required for 2009-10 allowed for development of schematic design and project budgets. Focus is for improved condition and change in functionality.	10,165,000

Dentistry/Pharmacy Building - Renewal	Functional renewal of the building once the Edmonton Clinic Health Academy is complete and faculties have relocated. The existing building, constructed in 1921, has a high deferred maintenance liability and must be completely retrofitted before new tenants can be moved in. Please note \$26,900,000 of this value is part of the scope for renovations related to the School of Energy and the Environment.	160,000,000
Institutional Backfill *	Backfill renewal and repurpose of space that becomes available once CCIS-2 is complete, primarily within Biological Sciences, Earth Sciences, Chemistry and Civil Electrical Engineering for other institutional growth needs across the institution.	12,900,000
Medical Sciences Building: Phase 1 Renewal *	Select building renewal and repurposing/backfill to occur once the Edmonton Clinic Health Academy is complete.	24,980,000
Medical Sciences Building: Phase 2 Building Upgrade	Full facility renewal program and backfill.	81,320,000
Replacement of Remote Control Monitoring System (RCMS) *	Current remote control monitoring system provides control and monitoring of the major mechanical systems and space conditions in all major buildings, both on and off main campus. Replacement of obsolete system which is critical to day-to-day operation of University buildings.	20,479,000
Roofing Program *	Campus wide program for upgrading of roofing systems for a three year period to deal with roofing systems that are in the 12 to 15 year range and will be nearing the end of life expectancy.	7,632,750
Scientific Support: Renewal	Campus wide program to update scientific support spaces, renewal required to meet current code requirements.	4,350,000
Universiade Pavilion: Building Envelope Upgrade *	Renewal of building envelope to replace failing panels.	7,100,000
University Hall – Building System Upgrades *	Complete replacement of mechanical systems serving University Hall. Will require architectural renewal to accommodate changes.	4,600,000
Van Vliet East & West - Upgrade of Mechanical Systems *	Complete renewal of building mechanical systems currently in very poor condition.	10,700,000
Various Facilities – Electrical Vault Upgrades *	Campus-wide upgrades of electrical vaults currently in poor condition and close to failure.	10,400,000
<b>Total</b>		<b>\$ 519,917,750</b>

**Highest New and Expansion Projects – Additional Space in Inventory**

Table 6.3 - Highest New and Expansion Priorities (listed in alphabetical order)			
Project	Description	New Space (m <sup>2</sup> )	Request (\$)
Aboriginal Gathering Place	Centre focused on Aboriginal students, faculty and staff to serve as a community gathering place that embraces and provides an inclusive and supportive learning environment. <b>The University has secured a donation of \$1,000,000 to initiate the project.</b>	6,500	35,000,000
Agricultural, Life and Environmental Sciences Building	Planning for the growth and emerging priorities of the faculty in research and teaching, and the feasibility of consolidating faculty departments in a single facility within South Campus. Assessment of the impact of other lands being utilized by the faculty on its operations and programs.	61,000	357,000,000
Augustana Classroom Building	Repurpose of existing library space after completion of new library at Augustana. Includes abatement, exterior, code and repurposing.	2,2290	8,595,000
Cameron Library & Information Pavilions (CLIP)– Phase 2	Construction of new Book and Records Depository (BARD) in order to meet program growth and storage requirements of the existing BARD collection.	14,870	73,000,000
CLIP – Phase 3	New space for Museum and Collections Services (MACS) to provide centralized space for collections with proper temperature and humidity controls.	32,437	165,000,000
Campus Saint-Jean Science Building	Expansion and renovation of existing facility to meet the needs related to differential program enrolment throughout the entire campus, the creation of new programs and partnerships with other faculties, and dedicated research space, which will allow opportunities for reuse within the backfill area. <b>The University is targeting and additional \$10 million in Federal support.</b>	5,319	31,400,000
Chemical and Materials Engineering Infill Building – Fit-out	Shell and core construction of an adjacent North Tower expansion ( <b>\$80,000,000</b> ) <b>has proceeded with funding through the Faculty of Engineering.</b> The fit-out is required to provide teaching and research space to accommodate the program growth within the faculty. This project will also consolidate and co-locate department's offices and administrative units.	29,406	\$40,000,000
Clover Bar HWM Facility and Ellerslie Site Remediation	Construction and commissioning of this hazardous waste management facility is complete. Remediation and post decommissioning monitoring of the former Ellerslie Waste Management Facility site still required.	645	12,604,600



ECO Centre - Devonian Botanic Garden	New facility to allow Devonian Botanic Garden (DBG) to open year-round and support community outreach. Addition of parking lot and sound walls, as well as a new formal gate. <b>University is targeting \$10 million of addition support through fundraising.</b>	3,861	40,000,000
Heating Plant – Boiler #7	Purchase and installation of new boiler required to ensure plant reliability. About 50 percent of the plant’s boiler capacity is close to 40 years old.	N/A	35,984,100
Michener Park Family Housing	Renewal of all building systems for row houses, walk-ups, high rise, and supporting infrastructure. Equity requirement for attainable rate structure.		30,000,000
Pedway – Underground 115 Street & 87 Avenue	Construction of an underground pedway to allow easy and safe access between the Physical Activity and Wellness Centre and the Edmonton Clinic Health Academy. This will finalize the connection of the Health Sciences precinct to the campus north of 87 <sup>th</sup> Avenue.	N/A	8,945,000
Physical Activity and Wellness (PAW) Centre	Construction of an addition and upgrades to the physical education and fitness centre for use by the entire campus community and for more efficient placement/expansion of services. <b>The University expects to contribute an additional \$44,500,000 from various sources.</b>	6,500	13,500,000
School of Business Building/Social Sciences Departments	Development of a building for the School of Business in a partnered opportunity with private sector. A building for the School of Business would facilitate accommodation of the backfill requirements of the Social Sciences and support their growth needs. The Social Sciences are currently experiencing significant shortfall of space.	27,000	190,000,000
South Campus – Infrastructure for Shared Use Facilities	New infrastructure to support the development of the NE sector of South Campus – deep sewer, water supply, road lighting and improvements specifically to support the siting of community complexes on campus. Work has proceeded in support of projects and timelines to accommodate Federal Grant timing.	N/A	6,260,000
South Campus – Utility Infrastructure	Initial Infrastructure to provide first phase of utility and services in support of campus growth and accommodate infrastructure located on adjacent GoA land. (could also be provided through a P3 model)	N/A	120,000,000
Student Housing – East Campus Village	Development of 500 to 700 additional bed spaces to enhance the University’s ability to accommodate projected growth over the long term. The request represents a cost of \$117,000 per bed (750 bed spaces) with an equity component of 50 percent.	32,900	43,500,000
<b>Total</b>			<b>\$1,210,788,700</b>

## 6.7. Appendices

### 6.7.1. Major Capital Requirements Ten-Year Forecast

*Funding Dollars are in millions and represent cash flow requirements, not total project cost.*

PROJECT LISTING BY TYPE	Previous	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-2021	Total
<b>PRESERVATION &amp; REPURPOSING</b>	<b>\$ 1</b>	<b>\$ 108</b>	<b>\$ 182</b>	<b>\$ 197</b>	<b>\$ 168</b>	<b>\$ 185</b>	<b>\$ 231</b>	<b>\$ 191</b>	<b>\$ 165</b>	<b>\$ 152</b>	<b>\$ 102</b>	<b>\$ 1,681.5</b>
Biological Sciences Renewal Program		\$ 2	\$ 30	\$ 22								\$ 54.0
Canada School of Energy and Environment						\$ 15	\$ 35	\$ 45	\$ 45	\$ 38		\$ 178.0
Chem Materials Phase 2 Renewal		\$ 15	\$ 25	\$ 25	\$ 10							\$ 75.0
Chem West- Phase 3 Renewal- Building Envelope		\$ 2	\$ 20	\$ 3								\$ 25.0
Dentistry/Pharmacy Repurpose	\$ 1	\$ 2	\$ 8	\$ 10	\$ 22	\$ 50	\$ 50	\$ 17				\$ 180.0
Medical Sciences Building - Phase 2 Building Upgrade			\$ 6	\$ 40	\$ 35							\$ 81.0
Quad Redevelopment					\$ 6	\$ 25	\$ 15	\$ 3				\$ 49.0
Scientific Support Renewal			\$ 2.5	\$ 2								\$ 4.5
Repurposing and Renewal Services Bundle *		\$ 40	\$ 40	\$ 40	\$ 40	\$ 40						\$ 200.0
10 Year Deferred Maintenance Plan		\$ 47	\$ 50	\$ 55	\$ 55	\$ 55	\$ 81	\$ 76	\$ 70	\$ 66	\$ 52	\$ 607.0
Capital Reserve (1.5% capital replacement value)							\$ 50	\$ 50	\$ 50	\$ 50	\$ 50	\$ 250.0
<b>NEW</b>	<b>\$ 14</b>	<b>\$ 20</b>	<b>\$ 151</b>	<b>\$ 207</b>	<b>\$ 248</b>	<b>\$ 247</b>	<b>\$ 205</b>	<b>\$ 167</b>	<b>\$ 90</b>	<b>\$ 90</b>	<b>\$ 71</b>	<b>\$ 1,508.7</b>
Aboriginal Gathering Place		\$ 2	\$ 26	\$ 7								\$ 35.0
Agricultural, Life and Environmental Sciences				\$ 4	\$ 66	\$ 120	\$ 120	\$ 46				\$ 367.0
Augustana Classroom Building			\$ 8.6									\$ 8.6
Camrose Performing Arts Phase 2					\$ 1	\$ 8	\$ 8					\$ 17.0
CLIP Phase 2 (BARD)			\$ 4	\$ 32	\$ 32	\$ 18						\$ 86
CLIP Phase 3 (Curatorial)		\$ 8	\$ 52	\$ 60	\$ 60	\$ 16						\$ 196
Clover Bar Hazardous Waste Management Facility	\$ 12.6											\$ 12.6
ECC Centre - Devonian Botanic Garden		\$ 1	\$ 10	\$ 20	\$ 9							\$ 40.0
ECV Housing (500-700 beds)			\$ 21	\$ 21								\$ 42.0
Edmonton Clinic Health Academy Expansion						\$ 3	\$ 12	\$ 80	\$ 90	\$ 90	\$ 71	\$ 346.0
Midhener Park Family Housing			\$ 20	\$ 10								\$ 30.0
Pedway- Underground 115St & 87 Ave PAW to ECN					\$ 2	\$ 7						\$ 9.0
Physical Activity and Wellness Centre				\$ 8	\$ 6							\$ 13.5
School of Business Building/Social Sciences		\$ 2	\$ 6	\$ 30	\$ 45	\$ 45	\$ 40	\$ 22				\$ 190.0
South Campus Utilities Infrastructure		\$ 2	\$ 3	\$ 15	\$ 25	\$ 30	\$ 25	\$ 20				\$ 120.0
South Campus Infrastructure (Shared-Use Facilities)	\$ 1	\$ 5										\$ 6.0
<b>EXPANSION</b>	<b>\$ 1</b>	<b>\$ 2</b>	<b>\$ 50</b>	<b>\$ 48</b>	<b>\$ 6</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 107.0</b>
Campus Saint-Jean Science Building	\$ 1	\$ 2	\$ 25	\$ 3								\$ 31.0
CME Infill Structure Fit Out			20	20								\$ 40.0
Heating Plant - Boiler #7			\$ 5	\$ 25	\$ 6							\$ 36.0
<b>PRE-DESIGN/ DESIGN PROJECTS</b>	<b>\$ 2</b>	<b>\$ 4</b>	<b>\$ 4</b>	<b>\$ 4</b>	<b>\$ 4</b>	<b>\$ 4</b>	<b>\$ 3</b>	<b>\$ 3</b>	<b>\$ 2</b>	<b>\$ 2</b>	<b>\$ 2</b>	<b>\$ 34.0</b>
Planning and Pre-Design Services Bundle	\$ 2	\$ 4	\$ 4	\$ 4	\$ 4	\$ 4	\$ 3	\$ 3	\$ 2	\$ 2	\$ 2	\$ 34.0
<b>Total Project Costs</b>	<b>\$ 18</b>	<b>\$ 134</b>	<b>\$ 386</b>	<b>\$ 456</b>	<b>\$ 426</b>	<b>\$ 436</b>	<b>\$ 439</b>	<b>\$ 361</b>	<b>\$ 257</b>	<b>\$ 244</b>	<b>\$ 175</b>	<b>\$ 3,331.2</b>

\* Refer to Table 6.3 Highest Preservation Projects included in Repurposing and Renewal Service Bundle

**6.7.2. Other Current and Emerging Capital Project Priorities**

Other Current and Emerging Capital <b>Preservation Project</b> Priorities (Not ranked - listed in alphabetical order)		
Project	Description	Request (\$)
Augustana Auxiliary Building Repurpose	Building redevelopment including upgrades to the architectural, mechanical and electrical systems	2,080,776
Augustana Storm Water Management	Correction of storm water management issues and addition of secondary access to ravine entrances.	3,659,400
Balmoral Centre Repurpose	Repurpose to accommodate future program needs	3,059,400
Elevator Upgrades	Campus wide program for renewal of aged elevators that are experiencing failures.	7,623,750
McDougall Church – Redevelopment and Renewal	Building redevelopment and renewal to accommodate University and community use.	7,165,000
Mechanical Engineering Building (pre-design, minor upgrades)	Planning and design for renewal of the building systems to meet new functionality and utilization requirements	4,888,653
Quad Redevelopment	Redevelopment of this historic heart of North Campus in celebration of the University’s first successful century of achievement and development.	48,500,000
Research Transition Facility – Building Systems Upgrade	Replacement of various building system elements and upgrades to internal spaces to address building code and system performance issues for continued use of the facility	2,606,814
Various Facilities – Card Access System Renewal	Campus wide program for upgrade of the card access system that has reached the end of its service life	2,500,000
Various Facilities – Cooling Coil Upgrade Program	Campus wide upgrade of cooling coils for major ventilation systems that have exceeded their life expectancy	3,557,750
Various Facilities – Medium Voltage Electrical Systems Upgrade	Campus wide program for upgrade of the medium voltage electrical systems that have exceeded their service life and capacity requirements.	6,607,250
Various Facilities – Motor Control Centre Upgrade Program	Campus wide upgrade of motor control centres that have exceeded their life expectancy	4,910,000
Various Facilities – Canada School for Energy and the Environment	Renewal of space in existing facilities to accommodate the new program initiative of the Canada School of Energy and the environment and to address deferred maintenance.	175,612,000
<b>Total</b>		<b>272,770,793</b>

Other Current and Emerging Capital <b>New and Expansion Project</b> Priorities (Not ranked - listed in alphabetical order)		
<b>Project</b>	<b>Description</b>	<b>Request (\$)</b>
Campus Wide Wireless Network – New Infrastructure	Development of a campus wide wireless system for information system access across campus	4,500,000
Camrose Performing Arts Centre (Phase 2)	Expansion of the facility aimed to increase its flexibility while increasing the support space capacity, allowing for growth of existing programs and development of new programs related to theatre, drama and the performing arts	17,000,000
East Campus Village Amenities Building	New facility designed as a multi-purpose use occupancy building, primarily daycare and academic support space for residents of East Campus Village (formal and informal social space, quiet space, seminar space). The University is looking at additional funding models for this building	18,500,000
Edmonton Clinic Health Academy Expansion	Continued expansion for Medicine, U of A Clinics, Nursing and Rehabilitation Medicine to address continued program growth and reduce leasing costs.	345,610,000
<b>Total</b>		<b>\$385,610,000</b>

## **7. Institutional Budget**

### **7.1. Budget Document, 2011-12**

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In the absence of any significant improvement in the provincial economic climate, the 2011-12 fiscal year will remain a budgetary challenge for the University. Although there are some signs of positive economic recovery, the investment climate remains cautious and world economies remain volatile. For Alberta, the high value of the Canadian dollar, lower natural gas prices, and lower income and corporate tax revenue has had, and will continue to have, a negative impact on government revenues. The positive effects of increasing oil prices and oil royalties on government revenues in part have been offset by the negative effects of lower natural gas prices and the high Canadian dollar.

The fact is, however, the Alberta economy is showing signs of recovery, so now is the time to invest in highly skilled and talented people to position Alberta for economic growth. Alberta's future depends on the key sectors of energy, agriculture, education, ICT and health, in addition to the vital areas of the arts and humanities to ensure a balanced, well rounded society. The provincial government must make strategic decisions about its level of investment in the post-secondary sector.

For 2010-11 it was necessary for the University to take steps to minimize the effects of a zero percent increase on its base grant through initiatives to enhance revenues, slow the rate of expenditures and achieve administrative efficiencies. Without new levels of government investment, such actions will need to continue for the 2011-12 budget year to move toward a balanced budget.

### **7.2. Consolidated Budget**

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Prepared under Canadian Generally Accepted Accounting Principles (GAAP), the University of Alberta's 2011-12 consolidated budget reflects the entire enterprise of unrestricted and restricted funds. This includes general operations, research activities, capital projects and ancillary operations.

For 2011-12, the excess of revenue over expense is budgeted at \$1.9 million. This does not include an estimated \$3.3 million provision for the University's share of the Universities Academic Pension Plan (UAPP) unfunded pension liability expense. This represents the 2011-12 allocation of the net actuarial losses on the accrued benefit obligation, which are being amortized over the expected average remaining service life of the employee group.

Details on the consolidated budget are presented in table 7.1. The statement of financial position and statement of changes in net assets is presented in Appendix 7.

**Table 7.1 – Consolidated Budget (GAAP), 2011-12 (\$ '000)**

	2010-11 Approved Budget	2010-11 Estimated Actuals	2011-12 Recommended Budget
<b>Revenue:</b>			
Provincial Government	725,533	745,603	752,660
Federal and Other Government	191,152	183,431	180,292
Credit Course Tuition and Related Fees <sup>a</sup>	242,648	250,222	246,916
Grants and Donations	99,503	98,816	102,116
Investment Income (Cash Management)	16,903	25,087	24,827
Endowment Income	29,977	30,887	33,159
Sales of Services and Products <sup>a</sup>	205,132	194,171	214,394
<b>sub-total</b>	<b>1,510,848</b>	<b>1,528,217</b>	<b>1,554,365</b>
Amortization of Deferred Capital Contribution	84,689	83,812	104,925
<b>Total Revenue</b>	<b>1,595,536</b>	<b>1,612,029</b>	<b>1,659,290</b>
<b>Expense:</b>			
Salaries	774,582	797,401	807,061
Employee Benefits	157,399	150,681	160,406
Materials, Supplies And Services	308,298	296,960	311,252
Utilities	48,521	43,696	48,795
Maintenance	59,481	74,672	69,682
Interest	10,694	13,759	14,123
Scholarships and Bursaries	81,612	86,536	87,948
Amortization of Capital Assets	138,395	135,424	158,123
<b>Total Expense</b>	<b>1,578,982</b>	<b>1,599,129</b>	<b>1,657,390</b>
<b>Excess(Deficiency) of Revenue Over Expense</b>	<b>16,554</b>	<b>12,899</b>	<b>1,900</b>
Investment in Capital Assets	10,596	(7,664)	(26,161)
<b>Increase(decrease) for the Year in Assets</b>	<b>27,150</b>	<b>5,235</b>	<b>(24,261)</b>
Unrestricted Net Assets(Deficiency), Begin Year	(107,517)	(60,554)	(60,646)
Universities Academic Pension Plan	(22,000)	(5,327)	(3,276)
<b>Unrestricted Net Assets, End of Year</b>	<b>(102,367)</b>	<b>(60,646)</b>	<b>(88,183)</b>

(a) 2010-11 Approved Budget includes a restatement of non-credit fees from sales of services and products to tuition and other related fees.

### 7.2.1. Consolidated Revenues

Budgeted revenue for 2011-12 is \$1,659 million. This includes \$1,072 million in unrestricted funding primarily for the purposes of general operating, and \$587 million in restricted funding for sponsored research, special purpose and capital projects and related deferrals.

As illustrated in Figure 7.1 the majority of revenue is provided by the province of Alberta in the form of the Campus Alberta Grant for general operations, and through grants for capital projects and research totalling \$752.7 million.

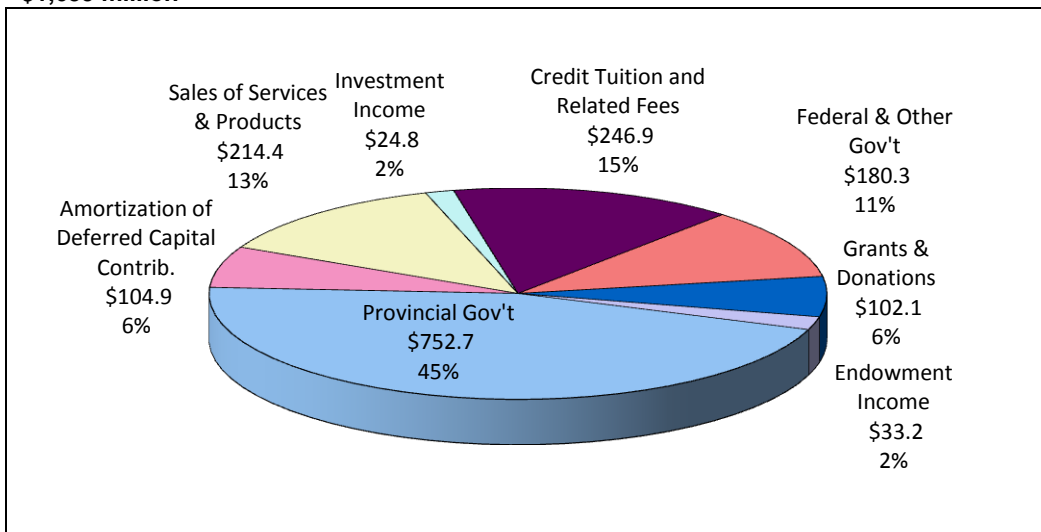
Funding for capital and research is restricted to the uses for which it is provided, and therefore cannot be used in general operations.

The second largest source of revenues comes from credit tuition and related fees which are budgeted at \$246.9 million for 2011-12, and includes \$10.7 million for the Common Student Space, Sustainability and Services (CoSSS) fee. These revenue sources are effectively part of general operations and are discussed in greater detail under the section on the operating budget.

Sale of products and services represents 13 percent of total revenue, or \$214.4 million. This is primarily derived from ancillary operations such as residence services, the bookstore, parking and food services.

Although investment income makes up a small percentage of overall revenue, it is worth noting that it reflects a recovery from previous years, which saw institutions across the world post losses. For 2011-12, investment income is budgeted at \$24.8 million, compared to only \$16.9 million in the previous year. This is due in part to a steady, continued, improvement in short-term interest rates.

**Figure 7.1**  
**Consolidated Revenue, 2011-12**  
**\$1,659 million**

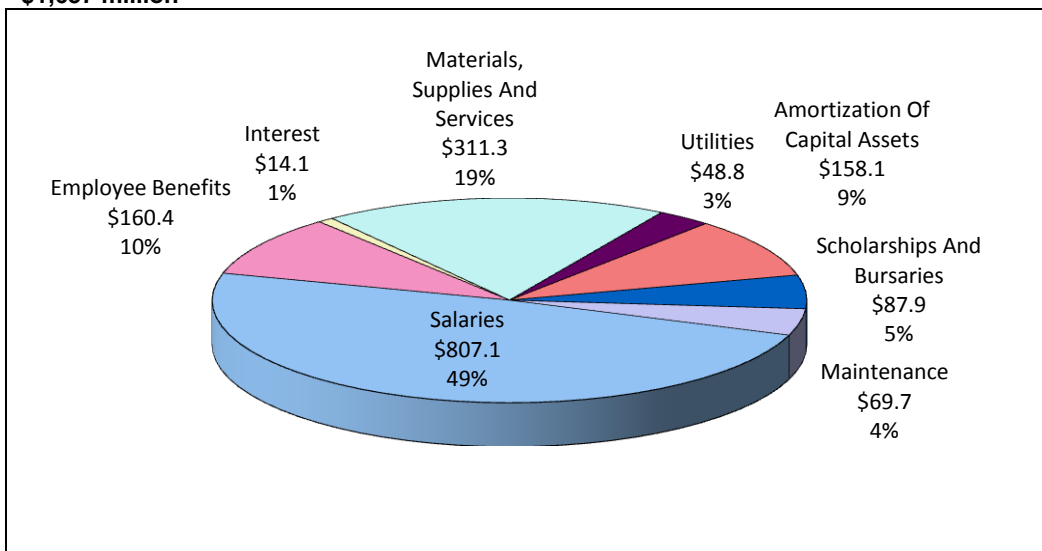


### 7.2.2. Consolidated Expense

Total consolidated expense is budgeted at \$1,657 million for 2011-12. Salaries and benefits account for almost 60 percent of the total to maintain faculty and support staff engaged in teaching, research and ancillary operations across campus. The majority of salary and benefit expenses are incurred under the general operating budget. Although the percentage of total expense for salaries and benefits has remained constant over the past five years, the total expense has increased significantly. This is a reflection of the University’s ongoing commitment to investing in staff.

The second largest expenditures are for materials, supplies and services. These expenses represent 19 percent of consolidated expense, or \$311.3 million (see figure 7.2), and largely support key functions such as library acquisitions and information technology under general operations, capital expenditures and expenditures associated with the research mission of the University.

**Figure 7.2**  
**Consolidated Expense, 2011-12**  
**\$1,657 million**



Other major expense items are the amortization of capital assets and scholarships and bursaries. For the most part, amortization expense is in recognition of new and existing buildings but also includes major equipment purchases. The \$87.9 million in scholarships and bursaries supports graduate and undergraduate students across the institution, primarily through operating and research funds.



### 7.3. Operating Budget

The operating budget represents the day to day operations associated with teaching, administrative support, and facility operations and maintenance for classrooms and buildings. Despite significant financial constraints, the University continues to strive for a balanced approach in maintaining the quality of the teaching environment, maximizing its utilization of resources and continually striving for administrative efficiencies. In the 2011-12 year, the University is budgeting for a deficit of \$4.9 million.

**Table 7.2 General Operating Budget, 2011-12 (\$'000)**

	<b>2010-11 Approved Budget</b>	<b>2010-11 Estimated Actuals</b>	<b>2011-12 Recommended Budget</b>
<b>Revenues:</b>			
Campus Alberta Grant	565,647	565,647	577,647
Other Provincial Grant Funding	9,566	9,525	3,866
Tuition and Related Fees	230,336	237,527	234,470
Common Student, Sustainability & Service Fee (CoSSS)	10,587	10,952	10,676
Investment Income	13,583	23,632	22,751
Sales of Services and Products	41,818	43,428	52,651
<b>Total Revenues</b>	<b>871,537</b>	<b>890,711</b>	<b>902,061</b>
<b>Expenditures:</b>			
Salaries	555,690	564,043	575,729
Employee Benefits	124,473	116,968	127,383
Utilities	41,315	37,140	42,162
Materials, Supplies & Services	93,896	88,799	95,392
Maintenance	16,237	21,949	22,973
Scholarships and Awards	27,331	27,931	27,621
Capital Acquisitions	35,218	35,584	32,676
Transfers and Other, Net	(7,867)	(12,787)	(17,024)
<b>Total Expenditure</b>	<b>886,294</b>	<b>879,626</b>	<b>906,912</b>
<b>Operating Surplus (Deficit)</b>	<b>(14,757)</b>	<b>11,085</b>	<b>(4,851)</b>

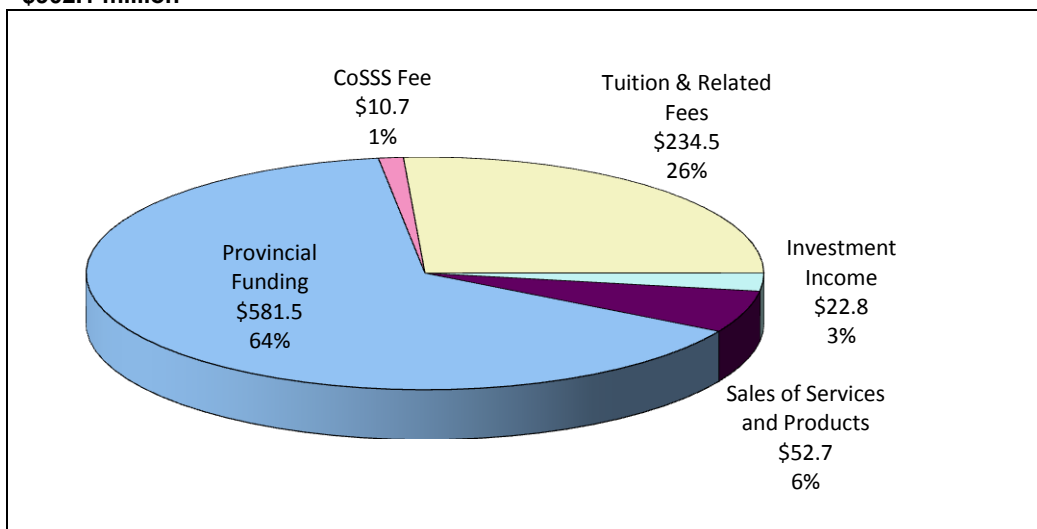
### 7.3.1. Operating Revenue

Budgeted revenue for 2011-12 is \$902.1 million, compared to \$906.9 million in the previous year. Key highlights from the 2011-12 revenue budget are:

- Zero percent increase on the base Campus Alberta Grant.
- Budgeted lights-on funding for CCIS and ECHA at \$12 million.
- 0.35 percent increase to credit tuition fees.
- Implementation of new market modifier tuition as approved in 2010.
- Modest recovery in investment income.
- Continuation of the Common Student Space, Sustainability and Services (CoSSS) fee.
- Accounting adjustment to Sales of Services and Products.

As illustrated in figure 7.3, the province is the primary funding source of the operating budget through the base Campus Alberta Grant. Similar to the previous year, the 2011-12 increase to the grant is budgeted at zero percent. With a second consecutive year of a zero percent increase, the cumulative effect has placed tremendous budgetary pressure on the University. In effect, the absence of an increase reduces the purchasing power of the institution due to inherent increases in fixed costs, particularly from inflationary and related pressures. Conversely with a base grant of \$565.6 million, a one percent increase to the grant would have provided almost \$5.7 million in new revenue to the University.

**Figure 7.3**  
**Operating Revenue, 2011-12**  
**\$902.1 million**



The second largest source of operating revenue comes from tuition and other related fees. For 2011-12, this is budgeted at \$234.5 million, or 26 percent of total revenue. This includes an increase to the credit course tuition fees of 0.35 percent, and revenue

from the implementation of new market modifier tuition that was approved by the Minister of Advanced Education and Technology in April of 2010.

The 0.35 percent tuition increase for 2011-12 aligns with the maximum allowable under the provincial Tuition Fee Regulation which limits annual increases to the Alberta consumer price index. In seeking Board of Governors approval for the increase, consultations were held with stakeholders primarily through the Budget Advisory Committee, which has senior representation from the Students' Union, Graduate Students' Association and University administration.

Market modifiers will be assessed at the undergraduate level for business (course based), engineering (course based) and pharmacy (program based), and on graduate thesis programs. With a phased implementation beginning in September 2011, market modifiers are expected to generate \$1.4 million in revenue for 2011-12. Eighty percent of market modifier revenue collected will provide direct teaching and scholarship support to students, and the remainder will provide indirect support through maintaining institutional infrastructure.

The University has prepared its operating budget based on the assumption that it will receive \$12 million in lights-on funding for the Centennial Centre for Interdisciplinary Science (CCIS) and Edmonton Clinic Health Academy (ECHA). This funding has been budgeted based on the provincial government's commitment to provide the required lights-on funding at the time it approved construction of the two capital projects. In the event that the government does not provide the funding, two mitigation strategies could be applied. The first could be the introduction of a two percent budget cut across the institution, which is equivalent to approximately \$12 million. The second could be the delayed and or phased occupancy of both ECHA and CCIS until government provides the necessary funding.

The other major revenue sources are from sales of services and products and from investment income. For 2011-12, sales of services and products are budgeted to increase to \$52.7 million. This significant increase of almost \$10 million is the result of an accounting change. To more accurately align the unrestricted revenue to where the expenditures were being incurred, a one-time adjustment was made in the 2011-12 budget. In terms of investment income, with a slow but steady recovery in the investment markets, the University is budgeting \$22.8 million in investment income, compared to \$13.6 million budgeted last year. The investment climate is expected to continue to improve in the medium-term.

### **7.3.2. Operating Expenditures**

With limited revenue growth, and rising teaching and related costs such as library acquisitions, contractual obligations and information technology, the University continues to carefully manage expenditures. With last year's implementation of a five

percent institutional budget reduction and a voluntary retirement program, the University has limited capacity for additional expenditure reductions without beginning to impact the quality of the educational experience.

Key highlights from the 2011-12 expenditure budget include:

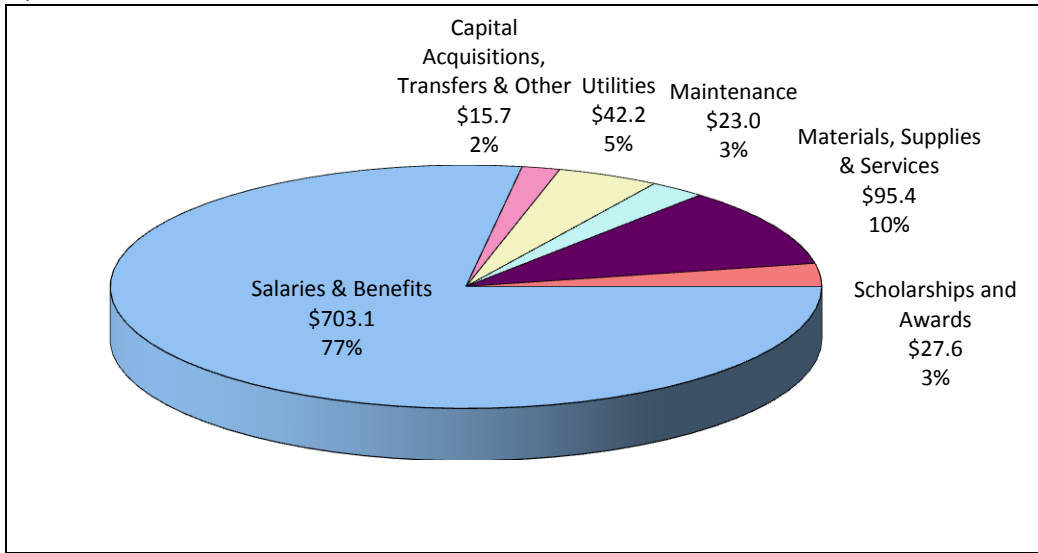
- Growth in salaries and benefits driven by removal of furlough days, the full effect of the previously negotiated salary settlements and continuing roll-in of adjusted EPE funding.
- Relatively stable utility expenditures.
- Modest growth in scholarships.
- All other expenditures stable.

As illustrated in figure 7.4, 77 percent of operating expenditures, or \$703.1 million, support salaries and benefits for faculty and staff in providing a top quality learning environment. Overall, some growth is budgeted on salary and benefit expenditures compared to last year. In particular the growth is primarily tied to building capacity to support enrolment commitments under the former provincially funded enrolment planning envelope (EPE) program.

The purchase of materials, supplies and services accounts for 10 percent of total 2011-12 operating expenditures. This \$95.4 million budget is comparable to the last year's and has been held relatively flat in light of fiscal constraints. Examples of these expenditures included those related to risk management, such as insurance premiums and hazardous waste disposal, the purchase of teaching lab equipment, and contracts for cleaning services. Scholarships and bursaries have remained stable over the last two years and will increase marginally going forward due to the implementation of the market modifiers and the commitment to invest 20 percent of the revenue in student support. It is also important to note that despite five percent budget reductions in 2010-11, scholarship budgets were essentially left intact.

With the second year of a zero percent grant increase in 2011-12, coupled with increasing fixed costs, the University may well be faced with the emergence of a structural operating budget deficit if it does not take the necessary steps to further reduce expenditures. It is the view of the University that it is better to continue with smaller perhaps annual base budget cuts now versus more significant budget cuts in future years. Such a strategy better aligns decanal decision making with the current fiscal uncertainty faced by the University.

**Figure 7.4**  
**Operating Expenditures, 2011-12**  
**\$906.9 million**



In order for the University to reach its forecast operating budget, it must receive \$12 million in lights-on government funding. As the expenditures for the lights-on operating for CCIS and ECHA have been factored into the budget, any shortfall in this funding will fall directly to the bottom line and increase the deficit dollar for dollar.

## 7.4. Budget Assumptions and Sensitivities

The University prepares its budgets utilizing a comprehensive integrated planning and budget process involving key stakeholders from across the institution. The key budget assumptions and sensitivities are an integral part of this process and are a cornerstone of the University’s multi-year budgeting. The goal is improved accuracy in forecasting elements of the budget and providing common assumptions for budget planners across the University.

In the past, the Ministry provided the University with reasonable estimates regarding adjustments to the University grant for the coming budget year as well as forecasts for the following two years. At this time the University is awaiting firm direction from the Ministry. As such, the University has limited capacity to reasonably forecast future adjustments to the base grant beyond 2011-12. What we do know is that a grant increase of zero percent in 2011-12 followed by further zero percent grant increases is in effect cuts to the University with significant implications across the institution. In order for the University to sustain its progress achieved as a result of previous government investment, the University requires government to again invest in the University through annual increases to the Campus Alberta Grant in the range of at least two to four percent.

Future tuition increases are based upon the forecast change to the Alberta CPI as stipulated in the tuition fee regulation. Tuition increases over the next three years are forecast at 2.1 percent. Short-term interest rates are forecast to increase marginally from the 2011-12 budget of 2.0 percent to between 2.7 and 2.9 percent by 2014-15.

On the expenditure side, the University is currently in negotiations with the academic staff to be followed by negotiations with the support staff. As noted earlier, approximately 77 percent of the University’s operating expenditures are allocated to salaries and benefits. As an organization driven by its human capital, any variance in salary and benefit expenditures has a significant impact on the University’s operating expenditures.

The University’s operating budget is highly sensitive to any changes in the Campus Alberta Grant and its major expenditure categories as reflected in the budget sensitivities below. Based on a budgeted zero percent grant increase and limited ability to generate other revenues such as through tuition, any significant variance in budgeted revenue or expenditures may need to be addressed through reductions in 2011-12 to faculty and unit budgets across the institution.

**Budget Sensitivities**

	Approximate Value
<b>Revenue:</b>	
1% on Campus Alberta Grant	\$5.7 million
0.25% on Short-term Interest Rate	\$1.5 million
1% Increase on Credit Tuition	\$1.6 million
<b>Expense:</b>	
1% Increase in Salary Settlements	\$4.5 million
\$1/GJ Increase on Natural Gas	\$3.4 million (ancillary budget)
1% Operating Budget Reduction	\$6.0 million

**7.5. Institutional Budget Risks**

Sustainable funding from the government in support of the University’s mandate of teaching and research continues to be the University’s major budget risk. The cumulative effect of consecutive zero percent increases to the operating grant has already resulted in substantial budget reductions and re-allocations. Without adequate investment going forward, the ability of the institution to provide a high quality educational experience and fulfill its research mission is at risk.

Indirectly, the operating grant is affected by exchange rates and energy prices. Both have an enormous impact on provincial government revenues and therefore affect the level of investments that can be made in post-secondary education. A ten cent decline in the price of natural gas reduces government revenues by over \$90 million, and a one cent increase in the Canada-U.S. exchange rate reduces revenues by over \$200 million.

Specific factors adding financial risks to the University are:

- Adequate lights-on operating dollars from the province for provincially funded/approved capital projects such as the Edmonton Clinic Health Academy and Centennial Centre for Interdisciplinary Science. The University has factored the lights-on funding expenditures into the budget as well as the corresponding funding from government. The lights-on funding risk is estimated at \$12 million, which equates to a two percent reduction in funding support to the University for 2011-12.
- Impact of realignment of provincially funded research and innovation organizations into Alberta Innovates, particularly as it relates to the former Alberta Heritage Foundation for Medical Research (AHMFR). Salary support to faculty will be phased out by 2017-18. This represents a potential salary and benefit liability of approximately \$22 million. Although some of these positions may be funded through the use of vacancies and retirements, a new source of funding for the majority of the salary support will need to be identified.
- The Canada-U.S. exchange rate will have both an upside and downside risk to the University. The upside risk will be in lower costs for such things as library materials and some lab equipment. Conversely, given that almost half of the University's endowment investments are denominated in foreign currencies, the rise in the Canadian dollar will reduce potential investment returns.
- Short and long-term interest rates, which are affected by fluctuations in credit conditions, economic events, inflation expectations and the Bank of Canada's monetary policy.
- The greatest forecast risk associated with expenditures is salaries, with all current agreements with the academic staff, Graduate Students' Association and support staff being open for negotiations.
- In the past, utilities represented a significant expenditure risk due to rapidly rising natural gas prices. More recently as natural gas prices have moderated the forecast risk to the University is lower than in previous years.

## **7.6. Capital and Ancillary Budget**

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### **7.6.1. Capital**

The University's 2011-12 consolidated budget reflects \$191 million in capital expenditures. This includes projects underway or proceeding and annual capital programs in support of health and safety, energy management, building systems, renovations and site replacement and/or upgrading.

Capital projects ultimately support the University’s academic plan and are in alignment with the goals and objectives within the Comprehensive Institutional Plan. They also align with provincial priorities in addressing space and program needs, and focuses on renewal and preservation of facilities. Further, these projects have been approved through the University’s capital expenditure authorization request policy and, as required, approved by the Board of Governors.

Table 7.3 lists the projects in 2011-12, including as major initiatives Edmonton Clinic Health Academy and the Centennial Centre for Interdisciplinary Science, both of which are nearing completion. In total, approximately \$168 million is budgeted in 2011-12 from funding provided through a variety of external and internal sources. Similarly, the budget includes almost \$23 million for annual capital programs. This includes \$21 million in funding from the provincial infrastructure maintenance program (IMP) which is assumed to continue in future years.

In addition to approved projects, there are a number of priority capital projects around pre-design and renewal that require funding (see table 6.1). Additional information on the University’s capital plan is contained in Chapter 6 of this document.

Table: Capital Expenditures & Budget, next page...



**Table 7.3 Capital Expenditures & Budget**

	Actuals to Date (prelim)	+	2011-12 Recommended Budget	+	Forecast to Complete	=	Total Approved Project Budget
Capital Projects (underway or proceeding):							
Agric Research Infrastructure - St Albert & Kinsella	1,409		4,800		5,791		12,000
Augustana Library	17,725		-		-		17,725
Augustana Forum	14,788		50		-		14,838
Biological Sciences - Exhaust Air System Upgrade	9,517		-		-		9,517
Biological Sciences - Scientific Support	930		170		-		1,100
Camrose Performing Arts Centre (CPAC)	454		296		-		750
CCIS Phase Two	461,846		3,154		-		465,000
Chemical Materials Eng. -Phase 1 Functional Renewal	30,905		4,095		-		35,000
Chemical Materials Eng. Infill Tower	7,160		36,600		46,000		89,760
Chemistry West Building Systems Modernization	14,983		-		-		14,983
East Campus Village Graduate Residences	26,000		-		-		26,000
Edm. Clinic Health Academy	334,834		76,266		-		411,100
Edm. Clinic Health Acad. (South - Dental Operatories)	1,715		-		-		1,715
GO Centre	2,000		-		-		2,000
HM Tory - Phase 2 Building Systems Upgrade	5,124		2,879		-		8,003
HRIF Project (Li Ka Shing / Katz Group ) Base Bldgs	237,931		-		-		237,931
HRIF Project (Li Ka Shing / Katz Group ) Fit Outs	106,332		-		-		106,332
HRIF Project (CTRIC cGMP Fit Out - Li Ka Shing L7)	4,102		8,841		4,036		16,979
HUB Mall Skylight Replacement	8,929		471		-		9,400
Jubilee Auditorium Car Park	29,736		-		-		29,736
Joint Venture - AHS Interest in Jubilee Car Park	(14,868)		-		-		(14,868)
Pharmacy Fit Up	44,213		-		-		44,213
Physical Activity & Wellness Centre (PAWC)	1,576		3,000		-		4,576
Scientific Support Facilities	49,895		927		-		50,822
South Campus Infrastructure - Phase I	700		3,300		-		4,000
University Hall - Building Systems Upgrade	2,000		2,000		2,000		6,000
Utilities - North Campus Expansion	70,618		10,382		-		81,000
Other Capital Projects	22,609		11,158		9,672		43,439
<b>Total</b>	<b>1,493,164</b>	<b>+</b>	<b>168,388</b>	<b>+</b>	<b>67,499</b>	<b>=</b>	<b>1,729,051</b>
Annual Capital Programs:							
Infrastructure Maintenance Program			21,031				
Less: Project costs shown above - IMP & KIP funded			(2,000)				
KIP - FAR			-				
Energy Management			3,900				
<b>Total</b>			<b>22,931</b>				
<b>TOTAL</b>			<b>191,319</b>				

\* The Capital Budget was finalized on October 26, 2010 and contains values which may not align with or may not include projects identified in the 2011-2015 Capital Plan.

### **7.6.2. Ancillary Services**

The major units within Ancillary Services include Residence Services (Student and Staff Housing, Residence Life programs), Hospitality Services (Contract Services, Vending, Conference Services and Guest Accommodations), Operations (Parking Services, ONEcard, Managed Print Services, Information Systems Services and Finance groups), and Real Estate and Property Management Services. Ancillary Services also manages the University's day care liaison function.

The student residences and commercial properties (HUB mall, Newton Place) are all close to maximum capacity. Parking demand has decreased by approximately five percent since October 2009 due to the successes of the Travel Demand Management (TDM) program, especially with respect to transit use. Conference Services is undertaking a comprehensive review of its operations.

#### ***Ancillary Services completed a number of initiatives in 2010-11 including:***

- Opening of the graduate student housing project in East Campus Village.
- Submitting a provincial grant application seeking funding for family housing in East Campus Village. A decision is pending.
- Selecting a vendor (Aramark) via the Request for Proposal process (RFP) for the provision of food services. The contract is in the process of being finalized.
- Installing point of sale (POS) machines across all Aramark serviced food locations on North campus.
- Installing new real time parking meters in all parking facilities.
- Selecting a vendor via the RFP process (CBORD) for the provision of housing management software. The contract has been executed, and the software installation is expected to be completed in March 2011.
- Ancillary Services finalized the merger of Real Estate and Development and Commercial Property Management Services into Real Estate and Property Management Services.

#### ***Major risks to Ancillary Services include:***

- Deferred maintenance risk in Michener Park residence (family housing)
- Continued deferred maintenance challenges in the older East Campus Village residences.
- Inflation of some operating costs (labour, maintenance, construction) will exceed CPI (2011-12 0.8 percent).
- Continuation of the current economic situation, with an impact on conference activity.

- Overall monthly permit (non-visitor) parking demand has been budgeted to decrease by up to ten percent. The largest single demand decrease will be permits sold to contractors as major construction projects (ECHA, CCIS, HRIF) near completion. Overall parking demand will see small decreases over time due to alternate transportation options.
- Parking Services is developing a comprehensive parking delivery and allocation plan aligned with the anticipated client environment to mitigate future revenue risks.
- Managed Print Services will continue to see decreasing revenue streams in external photocopying due to technology changes. This decrease is expected to be offset by increases in integrated printing services revenues.

In addition to these risks, there are risks associated with the general level of deferred maintenance in the residences, and the need for modernization, functional renewal and expansion.

### ***Housing and Food Services***

The University of Alberta currently has 4,719 residence bed spaces for approximately 12.5 percent of the total student population including Augustana Faculty (11.3 percent excluding Augustana).

The Residence Services Accommodation and Program Study: *Dare to Deliver* has been endorsed by Dean's Council and will form the basis for program planning in future years. In 2009-10, Residence Services received Board of Governors' approval for the development of the 234 bed graduate student housing project in East Campus Village which opened in August 2010.

Residence Services also developed a Capital Reserve Strategy which was presented to the Board of Governors in June 2010. Residence rent increases are required to offset increases in salary and benefit costs of residence operation, general inflationary pressures, and to address deferred maintenance issues, several of which have direct health and safety implications or projects which offer the opportunity to reduce energy consumption.

On December 10 2010, the Board approved a residential rate increase of 0.8 percent on all of its Edmonton campuses and at Augustana. All rate increases will be effective May 1, 2011. The following table provides examples of market adjustments for 2011 by residence.

**Rental Rates by Residence, 2011**

Residence/Unit	Effective May 1, 2011
Augustana (double room)	\$310
East Campus Village Apartments (2 Bedroom)	\$613
East Campus Village Houses	\$405 - \$994
Residence Saint-Jean	\$577
HUB (2 Bedroom)	\$572
Lister (Double, 8 months)	\$344
Michener (2 Bedroom Row House)	\$793 - 860
Newton (1 Bedroom)	\$943 - \$1,017
Schaffer (Single)	\$647

***Parking Services***

For 2011-12 Ancillary Services brought forward to the Board in December parking rate increases of 0.8 percent for monthly and annual rates. Visitor rates were proposed to remain unchanged for 2011-12.

Parking Services capital reserves will continue to grow in anticipation of South Campus development and other capital and maintenance priorities.

***Enterprise Square Operations***

Ancillary Services continues to pursue leasing strategies and cost containments at Enterprise Square with a view toward optimizing its Net Operating position over time while maintaining alignment to the University’s mandate.

Table: Ancillary Budget, next page...

**Table 7.4 Ancillary Budget, 2011-12 (\$'000)**

	2010-11		2011-12
	Approved Budget	Estimated Actuals	Recommended Budget
<b>Augustana: Residence, Conferencing, and Food</b>			
Revenue - Internal	22	48	48
Revenue - External	3,303	2,780	2,819
<b>Total Revenue</b>	<b>3,325</b>	<b>2,828</b>	<b>2,867</b>
Reserve Balances:			
Operating Closing Balance	3,480	1,000	1,000
Capital/Maintenance Closing Balance	-	2,570	2,691
<b>Bookstore</b>			
Revenue - Internal	3,796	3,650	3,760
Revenue - External	29,272	26,146	26,930
<b>Total Revenue</b>	<b>33,068</b>	<b>29,796</b>	<b>30,690</b>
Reserve Balances:			
Operating Closing Balance	(796)	-	(251)
Capital/Maintenance Closing Balance	-	-	-
<b>Ancillary Services</b>			
Revenue - Internal	2,064	3,756	3,675
Revenue - External	50,447	50,651	51,918
<b>Total Revenue</b>	<b>52,511</b>	<b>54,407</b>	<b>55,593</b>
Reserve Balances:			
Operating Closing Balance	(3,567)	(1,144)	(2,471)
Capital/Maintenance Closing Balance	6,706	9,197	11,553
<b>University Health Services</b>			
Revenue	<b>5,453</b>	<b>5,431</b>	<b>5,463</b>
Reserve Balances:			
Operating Closing Balance	163	618	429
Capital/Maintenance Closing Balance	166	200	170
<b>Utilities</b>			
Revenue - Internal	73,971	94,547	69,182
Revenue - External	20,911	19,317	20,029
<b>Total Revenue</b>	<b>94,882</b>	<b>113,864</b>	<b>89,211</b>
Reserve Balances:			
Operating Closing Balance	2,611	2,865	2,865
Capital/Maintenance Closing Balance	15,345	16,740	16,740
<b>TOTAL REVENUE</b>	<b>189,239</b>	<b>206,325</b>	<b>183,824</b>
<b>Reserve Balances:</b>			
Operating Closing Balance	<b>1,891</b>	<b>3,339</b>	<b>1,572</b>
Capital/Maintenance Closing Balance	<b>22,217</b>	<b>28,707</b>	<b>31,154</b>

Note: Ancillary Services includes: Enterprise Square, Commercial Property, Parking Services and Housing & Food Services

## Appendix

### Appendix 7.1 – Statement of Financial Position at March 31, 2010 to 2012 (\$'000)

	Actual 2010	Estimated Actual 2011	Recommended Budget 2012
<b>ASSETS</b>			
<b>Current</b>			
Cash and cash equivalents	\$99,229	\$60,457	\$25,521
Short-term investments	718,415	405,085	262,774
Accounts receivable	168,677	162,724	156,981
Inventories and prepaid expense	21,608	24,479	27,731
	<b>1,007,929</b>	<b>652,745</b>	<b>473,007</b>
Long-term investments	877,156	970,249	1,070,481
Capital assets and collections	2,309,290	2,753,010	2,840,089
	<b>\$4,194,375</b>	<b>\$4,376,004</b>	<b>\$4,383,577</b>
<b>LIABILITIES AND NET ASSETS</b>			
<b>Current</b>			
Accounts payable and accrued liabilities	217,385	253,321	295,198
Current portion of employee future benefit liabilities	8,392	11,414	12,067
Current portion of long-term liabilities	10,656	10,862	12,409
Deferred contributions, research and other	315,411	277,309	229,629
Deferred revenue	16,897	21,446	19,029
	<b>568,741</b>	<b>574,352</b>	<b>568,332</b>
Employee future benefit liabilities	131,537	136,016	140,170
Long-term liabilities	179,765	199,414	193,293
Deferred contributions, research and other	90,000	90,000	90,000
Deferred contributions, capital	437,617	116,025	19,180
Unamortized deferred capital contributions	1,662,878	2,079,078	2,144,569
	<b>3,070,538</b>	<b>3,194,885</b>	<b>3,155,544</b>
<b>Net Assets</b>			
Endowments	717,495	767,205	815,495
Investment in capital assets and collections (Note)	466,896	474,561	500,723
Unrestricted (deficit) (Note)	(60,554)	(60,647)	(88,185)
	<b>1,123,837</b>	<b>1,181,119</b>	<b>1,228,033</b>
	<b>\$4,194,375</b>	<b>\$4,376,004</b>	<b>\$4,383,577</b>

**Appendix 7.2 – Statement of Changes in Net Assets for the Years Ended March 31, 2010 to 2013**

	<u>Endowments</u>	<u>Investment in Capital Assets and Collections</u>	<u>Unrestricted Net assets (Deficit)</u>
<b>NET ASSETS, March 31, 2010 (ACTUAL)</b>	\$717,495	\$466,896	\$(60,554)
Excess (deficiency) of revenue over expense	-	-	12,899
Investment income	13,632	-	-
Gifts of endowment principal	36,078	-	-
Transfers	-	-	-
University Academic Pension Plan Unfunded Liability	-	-	(5,327)
Net investment in capital assets (Note)	-	7,665	(7,665)
Contributions of assets not subject to amortization	-	-	-
<b>NET ASSETS, March 31, 2011 (ESTIMATED ACTUAL)</b>	<b>\$767,205</b>	<b>\$474,561</b>	<b>\$(60,647)</b>
Excess (deficiency) of revenue over expense	-	-	1,900
Investment income	11,124	-	-
Gifts of endowment principal	37,166	-	-
Transfers	-	-	-
University Academic Pension Plan Unfunded Liability	-	-	-
Net investment in capital assets	-	-	(3,276)
Contributions of assets not subject to amortization	-	26,162	(26,162)
<b>NET ASSETS, March 31, 2012 (RECOMMENDED BUDGET)</b>	<b>\$815,495</b>	<b>\$500,723</b>	<b>\$(88,185)</b>

## 8. Resource and Risk Implications

As the University's short-term operational and long-term strategic plans are inextricably linked the University has identified both immediate and long-term resource implications. Immediate resource implications directly support academic and research priorities as identified in the academic chapter of this document (Chapter 5).

In every case, where resource implications are identified, the first course of action by the University has been to determine if and how existing resources can be better leveraged, re-allocated or re-purposed. This also includes any new resources the University can bring to bear through partnerships and other initiatives before consideration is given to requesting funding from government.

At the same time, driven by *Dare to Discover*, the University has identified a series of resource requests that are linked to our role as Alberta's flagship University, and its responsibility in providing comprehensive and diverse educational choices that prepare Albertans for citizenship in the world and address Alberta's need for undergraduate and graduate students who will contribute to the economic, social and cultural prosperity of tomorrow. Resource implications are also identified which will facilitate connection to international communities, enabling the University to undertake world leading research and create innovative research agreements that will link researchers, graduate and undergraduate students, international foundations, industry and government.

### 8.1. Immediate Resource Implications

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The University must not lose the momentum created by previous years of government funding and strategic investments in students, staff, programs and infrastructure. It is vital that the Province return to annual increases to the Campus Alberta Grant of at least two to four percent; provide lights-on funding for CCIS and ECHA; and confirm a long-term funding strategy in support of the transition to Alberta Innovates.

#### 8.1.1. *Campus Alberta Grant*

The overarching resource issue for the University is a return to annual increases to the University's Campus Alberta Grant. The University has always been committed to maximizing the use of its resources, directing its resources to its academic priorities and continually investigating and implementing administrative efficiencies. A zero percent grant increase, combined with general inflationary pressures across the institution in the areas of contractual obligations, benefits and other costs drivers, reduces the purchasing power of the institution.

**The University needs annual grant increases in the range of at least two to four percent to continue to fulfill its academic mandate, meet the needs of Albertans and prevent the loss of the invaluable progress made over the last several years.**



### ***Lights-on Funding***

When the Government of Alberta gave funding approval for the construction of Centennial Centre for Interdisciplinary Science and Edmonton Clinic Health Academy, the commitment included the necessary lights-on funding. These two buildings will soon increase the University's capacity to educate the graduate and undergraduate students, particularly in the areas of science, technology and health. The additional space is also needed to achieve student to faculty ratios comparable to world leading research intensive universities. These buildings, particularly CCIS, will stimulate interdisciplinary research and collaboration not only within the University but nationally and internationally. Insufficient lights-on funding will directly impact these goals and the province's capacity to meet labour demands and its economic objectives.

**Using Ministry guidelines, the University has estimated that funding at \$12 million.**

### ***Transition to Alberta Innovates***

Through the Alberta government's visionary decisions over several years, research endowments and foundations, such as the Alberta Heritage Foundation for Medical Research (AHFMR), were established that significantly enhanced the province's research landscape and reputation for excellence. In partnership with these research funding structures, the University of Alberta has attracted and retained internationally renowned researchers who have made break-through discovers and have, in turn, attracted tens of millions of dollars in external research funding to the University and province. Across Alberta, Heritage Scholars—world-leaders in their disciplines—are seeking new approaches to everything from cancer to infectious disease, chronic pain, and the health effects of aging.

**Currently the Ministry has a proposal for \$118 million for the PSE sector to cover the transition costs of the AHFMR program to Alberta Innovates. While we support this proposal, we recognize that it will result in a decrease in health research capacity in the system. In order to replace the research capacity associated with the AHFMR transition at the University of Alberta, which includes salary support to 134 faculty, we would require \$22 million in base funding.**

A related issue to the AHFMR situation, particularly in the Faculty of Medicine and Dentistry, is the preservation, and potential expansion of the Academic Alternative Relationship Plans (AARPs). Multi-jurisdictional committees are currently meeting to develop a province-wide AARP. The AARPs are a cornerstone to Medicine and Dentistry's ability to hire the clinical researchers who are responsible for educating Alberta's future health care professionals.

**It is essential to maintain the funding of the current AARPs at \$104 million until the new provincial AARP proposal has been developed and approved.**

Implementation of the province-wide AARP, and the AHFMR transition plan, are vital to maintaining the considerable international reputation in teaching and health-related research that has developed in Alberta over the past 30 years.

## **8.2. Resource Implications: Access**

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Chapter Five, “Academic Overview,” identified five themes associated with access and quality. These themes included: *quality (people, programs and experiences); the learning environment; student experience and engagement; innovative programming; and connections and collaborations*. The cornerstone to all of these themes is people. The University of Alberta is all about its people – professors, undergraduate and graduate students, post-doctoral fellows, technicians, and the essential staff who provide an extensive range of services in support of the University’s core mission.

### ***Knowledge Generation Units***

Collectively, within an environment of a research intensive university, these people can be referred to as knowledge generation units. These knowledge generation units, along with infrastructure and financial support, are instrumental in enabling the University to achieve its priorities associated with access and quality, and the province to meet labour force demands and develop the next generation economy. Determining the number of knowledge-generation units required are three key ratios: 1:3 graduate student-to-undergraduate student; 1:4 professor-to-graduate student; and 1:16 professor-to-general student population.

These target ratios can be achieved if sufficient funding is provided in the form of knowledge generation units comprised of faculty and non-faculty salaries and benefits, advanced technical support, financial support for graduate students, material and supplies and utilities and maintenance.

**Estimated at a cost of \$600,000 per unit, the University has identified the need for 500 units totalling an investment of \$300 million.**

This estimate does include the access portion for graduate students, but does not include the graduate student research funding which is estimated at \$35,000 per graduate student.

**With each professor supervising four graduate students for a total of 2,000 students, and at a rate of \$35,000 per student, the University requires funding of \$70 million.**

It is this type of visionary investment that is required for the foreseeable future for an institution and province that has the full intention of competing on the global stage.

## ***Libraries***

As Alberta's flagship University, we assume the responsibility in providing access to core learning infrastructure such as our library systems. Our libraries must not only meet the demands of post-secondary institutions and community libraries across the province, but also must provide our students and faculty with access to materials and resources that are consistent with a research intensive university competing in an internationally global education market place.

This means investments in technology, collections, and a vast array of on-line resources. The University of Alberta allocates \$42 million a year toward its library systems, an investment which benefits all of Campus Alberta and the entire province. Due to the fact that many of its collections and serials are purchased in the international market place annual inflation rates on this material is higher.

Notwithstanding the strong Canadian dollar, inflation within our library systems for 2011-12 is estimated at 3.9 percent. On serials alone this equates to an annual increase of over \$500,000. The annual increase in journals has averaged 8.4 percent each year over the last five years.

**Investments in annual increases to the Campus Alberta Grant of at least two to four percent each year is critical to maintaining library resources typical of a world-class university.**

## ***Information Technology for Learning***

Within the learning environment, the largest resource implications are in the areas of IT infrastructure and support as well as the development of quality learning environments. Advances in information and communications technology continue to transform the world. At the University of Alberta we have an IT infrastructure that will need to be enhanced to meet the demand to mobile computing that is underway.

We must position our institution, and in particular our learning environment, to support the mobile, connected IT campus of the not-so-distant future. The University has been very strategic in its IT investments. Its current move to Gmail will save over \$200,000 in the first two years. A newly developed "low cost" smart classroom upgrade program will enable the University to more rapidly upgrade its smart classrooms at a fraction of the previous cost.

All of this requires ever-greening funds to support and maintain the systems once installed. The University already invests \$2.4 million per year in hardware ever-greening of central systems, \$2.1 million in classroom ever-greening and a further \$1.4 million in software ever-greening. These dollars only address support of existing systems and pale in comparison to the annual demand for new IT requirements.

For 2011-12, priority IT internal funding requests totalled \$8 million in combined base and one-time asks. These requests for IT infrastructure funding are the equivalent of almost a 1.5 percent increase to the University's Campus Alberta Grant.

**The inability to fund these types of requests go to the heart of the University's capacity to provide the infrastructure consistent with an internationally renowned research intensive university that can compete with the rapidly emerging powerhouses of China, India and others.**

### ***Enriched Student Experience***

The University has consistently identified as priorities, student engagement, the student experience and increasing the participation rate of underrepresented groups.

The new world economy demands that our students be global leaders. To achieve this goal we must offer all of our students the opportunity to participate in summer-abroad programs or complete a full semester of their degree in an international location. These internships or study terms will open our students' minds to the global challenges that lie ahead, and more importantly create networks and a foundation for bringing solutions to these problems as the students complete their studies and begin contributing to our society.

Alberta also needs to be positioned as the destination for the best international undergraduate and graduate students through the establishment of the highly competitive global scholarships.

Creating international opportunities for Albertan students to travel outside of Canada as well as attract international students to the University of Alberta require targeted provincial investments.

**Funding envelopes of \$3 million for international opportunities and \$5 million for international student scholarships would be required to support these types of programs.**

To meet emerging labour market demands and address Alberta's low participation rates, under-privileged groups such as Aboriginal students, students from low-socio-economic backgrounds, new immigrants and Albertans whose parents do not have a university education must be given the opportunity and resources to participate in a university education.

**Access to scholarships and bursaries is necessary to removing economic barriers to underserved populations.**

### ***FLE vs Headcount***

The University has worked in partnership with Advanced Education and Technology to confirm the University's FLE count at 32,780. However, as it relates to service delivery, everything from registration to library services to support facilities, the University must

have the capacity to deal with the total number of actual, individual students, at a headcount of 38,000.

**In terms of cost drivers to the University, the most relevant number is head count which more accurately reflects the resource needs of the University.**

### **8.3. Resource Implications: Research**

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The University of Alberta is committed to discovery-driven research, scholarship and creative activity across the academy that will drive the next generation economy. Excellence in both translational and discovery-driven research, scholarship and creative activity is the responsibility of research-intensive teaching institutions in our society today, and is consistent with an institution and a province that must be positioned to compete on the global stage.

#### ***Canada Excellence Research Chairs***

The Canada Excellence Research Chairs (CERCs) program is just one example of key tools needed to advance our competitiveness and enhance our prosperity. It is also an excellent example of the power of leveraging of investments across government sectors. The recipient of four CERCs, the University of Alberta has brought \$40 million of federal investment dollars into the province that requires matching dollars at the provincial level. The recruitment of CERCs enables the University to form a critical mass of research expertise leading to the formation of a knowledge cluster. This ultimately facilitates the retention and attraction of researchers, post-doctoral fellows, graduate students and visiting professors. This critical mass or knowledge clusters also enable the University to leverage international partnerships.

**As outlined in the IRP, the University estimates it needs an additional \$22 million over seven years to meet the matching requirements, beyond what the provincial government may make available through related initiatives.**

#### ***Standard Research Funding***

There are additional resource requirements to support the University's research strategies for advancing diversified excellence. The University continues to be a beneficiary of federal government investments. However, many of these investments require matching dollars at the provincial and or institutional level to make funding applications more competitive.

**To fully leverage federal government investments, the University has identified a need for funding of \$500,000 per year to meet the growing matching-dollar requirements associated with Tri-Council, Genome Canada, and other federal programs.<sup>18</sup>**

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<sup>18</sup> These do not include the resources required to renew or expand research chairs, e.g., NSERC's Industrial Research Chair program.

### ***Undergraduate Internships***

The University has identified the alarmingly low number of Masters and PhD students in Alberta. A key strategy of increasing graduate student numbers is engaging undergraduate students in research early in their educational journey. This can be achieved through the establishment of undergraduate internships. These internships allow undergraduate students to work side by side with leading graduate students and internationally recognized professors, exposing them to the excitement and rewards of participating in world leading research.

**The University has targeted the creation of 400 undergraduate internship positions at \$8,000 per intern, a funding request of \$3.2 million.**

### ***Post-doctoral Fellowships***

Post-doctoral fellows are highly qualified academics training to enhance their teaching, research and mentorship skills. They represent a core element of any internationally competitive research intensive institution. Post-doctoral fellows bring a unique level of skill and expertise to an institution and add to the vibrancy and intellectual capacity of a University and its teaching and research teams. As with Masters and PhD students, the University lags behind in the number of post-doctoral fellows compared to peer institutions.

**The goal of the University is to establish 40 new post-doctoral fellow positions at \$45,000 each, for a total funding request of \$1.8 million.**

### ***International Consortia and Partnerships***

The University and the province must be able to compete in a global context. A key strategy associated with this is the establishment of global consortia and partnerships.

**Based on existing areas of research excellence and in support of the University's goal of internationalization, the University requires funding of \$3 million per year to develop new global consortia in the areas of water, infectious diseases, and energy and environment.**

These funds will match contributions put forward by potential international partners and agencies, for supporting joint research projects, graduate student and post-doctoral mobility, and shared credential programs.

### ***Research Infrastructure***

In support of both excellence and internationalization, there is a critical need for investment in infrastructure and associated operating costs. Alberta's continued participation in regional and national infrastructure initiatives, such as Westgrid,

TRIUMF, and future CFI Major Initiatives Competitions, will require additional investment.

**To leverage fully its CFI Leaders Opportunity Funding, the University has identified a need of between \$2 million and \$4 million per year from the Research Capacity Envelope.**

In addition, changes to provincial and federal funding programs may jeopardize the on-going operation of several units across the University that provide core research infrastructure such as NanoFab and the Alberta Centre for Surface Engineering and Science (ACSES). Funding shortfalls have been identified for NanoFab; Core CFI operating funding for ACSES will finish in 2011; and NanoAlberta funding for ACSES beyond 2012 is uncertain. Sustained support for these facilities and others would constitute an essential portion of Alberta's contribution to the partnership with the federal government and other agencies.

**The University has identified the need for a \$25 million investment to sustain these facilities.**

#### **8.4. Resource Implications: Information Technology Infrastructure**

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Earlier in this chapter the University identified IT resource implications associated with the classroom and the learning and research environment. In addition to these resource requirements for learning, the University has IT resource needs associated with the operation of its buildings as reflected in the capital chapter. The University has also identified resource needs in the rebuilding of its web presence to reflect an institution that is competing on a daily basis with world leading institutions of higher education.

##### ***Operational Information Technology***

Over the last several years, the provincial government has made a significant investment in buildings such as the Health Research Innovation Facilities, CCIS, ECHA, along with additional investments in functional renewal that have provided the University with a strategic advantage in the retention and recruitment of undergraduate and graduate students and the retention and recruitment of world leading researchers. These state of the art facilities have been designed with best-in-class facilities technology to maximize their functionality, minimize their environmental footprint and create the safest environment possible for the occupants.

Information technology systems are required to operate and sustain buildings once they are open. These systems are foundational in all modern buildings. It is critical to ensure maximum efficiency in the operation of buildings, maintenance of safety systems and minimization of operating costs. This IT infrastructure eventually wears out and needs

upgrading to continue to meet operational, teaching and research needs. This type of funding is currently not provided for following the initial installation of the IT equipment.

**The analysis of the annual base funding requirement to evergreen operational information technology systems and to ensure that our buildings continue to operate at maximum efficiency is currently being calculated.**

### ***Web Presence***

The web presence of an institution, particularly one that is competing internationally and targeting growth in its international student population, represents a critical piece of its outreach and communications strategy. The University of Alberta's web presence needs to be revitalized to present the look and feel of a modern, leading edge, internationally competitive research institution. It must be designed in such a way that the reader can easily navigate through the pages, quickly find the information they are looking for and seamlessly complete application, acceptance or payment processes.

**Development of an effective and efficient University of Alberta web presence will require an investment of \$3.5 million over three years.**

### ***Research Information Technology***

Information technology in support of our research mandate is another important resource need and one that can be leveraged across Campus Alberta. As an example, all institutions undertaking research must have an ethics review process for both human and animal studies. In today's environment, those processes must be supported by IT systems that can track all of the research projects requesting ethics approval, the status of the application and of approval. This represents an excellent opportunity for a province-wide approach to the funding of an IT system required by those universities involved in animal research. There is a role for Alberta Innovates Health Solutions in funding such IT solutions.

**Provincial funding to support province-wide research administration IT infrastructure is required.**

## **8.5. Resource Implications: Capital Plan**

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After people, the second most important element in being able to attract the best and the brightest in the way of students, faculty and staff is infrastructure. Infrastructure that is best in class and offers an environment that meets, even exceeds, the functional requirements of the user, is inviting, technologically advanced, and safe. Over the last several years, the provincial government has made significant investments in the University of Alberta's infrastructure as reflected in facilities such as CCIS and ECHA.



This has enabled the University to address its immediate space needs and allowed it to redirect its attention to the next pressing requirements of infrastructure renewal.

With the new space now available or coming on line, the University has the opportunity to not only renew its aging infrastructure, but also repurpose it to meet the evolving teaching, learning and research needs associated with our academic goals.

The programs being delivered and the buildings in which they are housed are causally linked and comprehensive planning is required to ensure that the day-to-day activities of learning and research are helped, not hindered. This requires the development of a long range integrated plan that will ensure cost effective and timely completion of the projects.

When potential faculty, staff and students are assessing an institution, the physical environment plays an essential role. Generally, they look for an interior and exterior environment that is inviting, offers common space for collaboration, study space that encourages interdisciplinary learning, and space and surroundings that are environmentally sustainable and safe. They also want to ensure that the space will provide them with the core services that they need and want, such as living accommodations, athletic facilities and daycare spaces. To retain and attract to our institution the best and brightest from down the street, across the province or around the world, the University of Alberta must create such an environment.

Driven by these core elements and the University's academic priorities, capital resources have been identified through a combination of new, expansion, renewal, and repurposing projects. The ultimate goal is to create a road map that provides a responsible and sustainable approach in attaining the required infrastructure to support the mission and vision of our institution.

The capital resource requirements identified by the University include:

- Envelope funding for pre-design services of \$4 million per year over the next five years for a total of \$20 million.
- Continued IMP funding of \$22.2 million per year, with an additional one-time only envelope funding of \$35-40 million per year to address a portion of the University's deferred maintenance program.
- Over the next ten years funding of our highest preservation and new/expansion priority projects, approximately totalling \$520 million and \$1,200 million respectively.
- Over the next ten years funding for additional priority projects, totalling approximately \$658 million.
- Base infrastructure at South Campus in advance of further development is becoming critical to ensure the Campus and the area around it can be developed with sustainability at the forefront. Additional study is required to

determine budget and how best to deliver the infrastructure through traditional or an alternate financing models.

Refer to the ten- year forecast of major capital requirements that fall from these activities, Chapter 6.7.1.

## **8.6. Risk Implications**

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Like all world-class research intensive universities, the University of Alberta must deal with a variety of risks that have the potential to hinder its growth and the realization of its vision, mission and strategic objectives. Many of these risks have been identified throughout this document.

1. In moving towards our vision of being one of the world's great public universities, our national and international profile will increase. A higher profile will be accompanied by an increased level of scrutiny and we will be held to a higher standard. A significant change in the economic status of an institution and its financial capacity to attract and retain the best and brightest students and faculty can impact the reputation of an institution.
2. The substantive changes in economic circumstances and the evolving fiscal positions of the provincial and federal governments present a series of funding risks to the University. Maintenance of adequate base funding in conjunction with targeted and strategic investments from both levels of governmentprovincial and federal governments to achieve targeted enrolment and professor to student ratios is critical.
3. Enrolment growth must be managed from the perspective of meeting the labour demands of a province on the road to recovery, while achieving the appropriate enrolment ratio targets that position the University as an internationally competitive research intensive institution.
4. The University must maintain the morale of its staff during uncertain economic times, while investing in key human resource systems and processes to ensure the effective operation of the University.
5. For the University to remain relevant to its students and meet the needs and expectations of its faculty to engage in world calibre research, it requires continuous investment in leading edge IT infrastructure and support.
6. The continuation of appropriate levels of funding to avoid a return to increasing levels of deferred maintenance is vital. In addition, limited or no funding of capital for new, expansion, and/or renewal projects will impact the capacity of the University to meet the strategic goals of the institution and negatively impact the economic goals of the province.

7. Uncertainty brings risk associated with retaining and attracting the best and the brightest students, academics and staff. Clarity in levels of government investment and confirmation of strategic investments greatly reduces the risks associated with uncertainty.
8. An institution that has aspirations of being among the top publicly funded research intensive universities in the world can only achieve that goal through the establishment of strategic collaborations and partnerships with an extensive range of stakeholders. These relationships must be managed in an integrated and strategic manner.
9. The University requires access to and flexibility in funding that would enable it to leverage tens of millions of research dollars from provincial, national and international sources. This type of leveraging strategy will advance the University in achieving internationally recognized research excellence while meeting the economic goals of both the provincial and federal governments.
10. While the University must assume risks in support of its mandate as an internationally recognized research intensive institution, it must also promote appropriate risk management plans and strategies that develop responsive attitudes and behaviours at all levels of the organization in order to maintain a healthy and safe environment for all.

Through its integrated ERM framework, the University will monitor, manage and mitigate these and other emerging risks in an effort to avoid substantial impact on the University's ability to fulfill its strategic objectives.

## 9. Tracking Our Performance

### 9.1. Introduction

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Top universities are typically recognized by a well-defined and competitive set of inputs. In large part their success is attributed to:

- Recruitment and retention of outstanding faculty and students.
- Numbers and quality of graduate students versus undergraduate students.
- Diverse mix of local, provincial, national, and international students.
- National and international research funding.
- Scholarship and bursary expenditures per undergraduate and graduate student.

In the last five years, the University's increased strength in many of these inputs has resulted in the achievement of some of the short-term and long-term objectives outlined in *Dare to Discover*. We now face a period of financial restraint and should anticipate that achievement of our goals may take longer and require imaginative rethinking of current practices and more effective use of resources.

Yet, over time, we should still expect significant advancement towards longer-term objectives, such as increased facilitation of both basic and applied research programs leading to breakthrough discoveries and technological innovations; a culture of lifelong learning among students, staff, and alumni; the expedition of the transfer of new knowledge into society; and the advancement of the University's international impact and reputation. In spite of financial challenges, the U of A continues to be healthy and vibrant, and we will continue to move forward with confidence.

Performance indicators are starting points for monitoring progress toward expected outcomes and goals (cornerstones). These indicators were chosen and developed on the basis of input from key University partners as well as the planning efforts that produced the University's Vision, *Dare to Discover*, the Academic Plan, *Dare to Deliver*, and the access and research plans. At the end of the chapter we have shown how these measures link to the Academic themes as outlined in Chapter 5.

In our annual report we intend to report progress with respect to these measures as well as more qualitative examples of success and progress with respect to the cornerstones and Chapter 5 academic themes. We also expect to review and refine these measures throughout the year to ensure we can effectively demonstrate achievement of intended results.

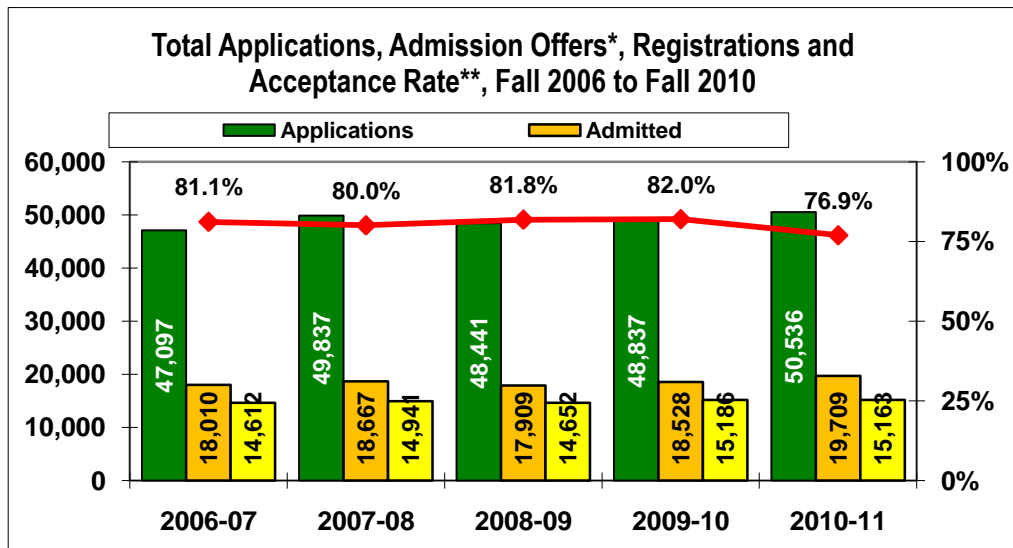
## 9.2. Cornerstone 1: Talented People

People are the common thread that helps define who we are and want to be as an outstanding institution. One of our strengths is the diversity of the talented people in every area of the University. Attracting talented academics, students and staff and providing them with highly competitive, enriched learning experiences are key priorities.

Achievement of these goals with respect to attracting students is indicated by a number of factors: admissions; student-to-faculty ratios; undergraduate-to-graduate student ratios; scholarship and bursaries expenditures per student; and on-campus student spaces are highlighted here.

### 9.2.1. Application, Admission, and Registration Yield Rates

The volume of applications and yield rates provides an indication of the success of our recruitment efforts and our attractiveness to students. The line in the chart below indicates the change over time in the number of students who registered in first-entry programs as a percentage of the number of offers that were made each year. The U of A has a high acceptance rate for those that qualify which we hope to continue.



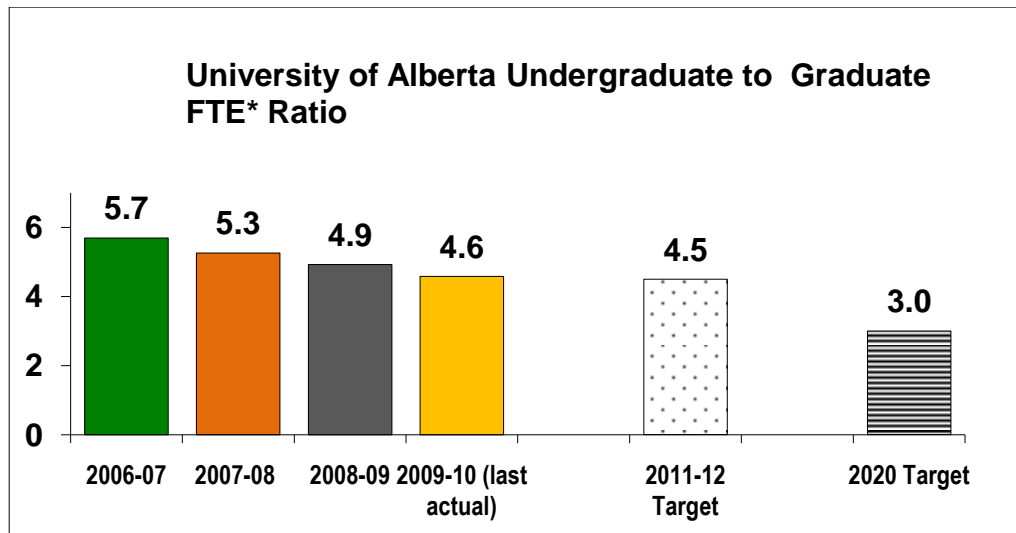
Fall 2010 undergraduate application and admission counts were impacted by the Apply Alberta process, resulting in a higher admission count.

### 9.2.2. *Student Ratios*

Student ratios at the institutional level provide a general indication of the deployment or available level of resources. A significant part of the student experience is predicated on access to faculty, e.g., opportunities for interaction or feedback on academic work. Most top-ranks institutions have relatively low undergraduate-to-graduate student and student-to-instructor ratios, indicative of a high-quality learning environment in which students have ample access to instructors and the learning opportunities they offer.

#### *Undergraduate to Graduate Student Ratio*

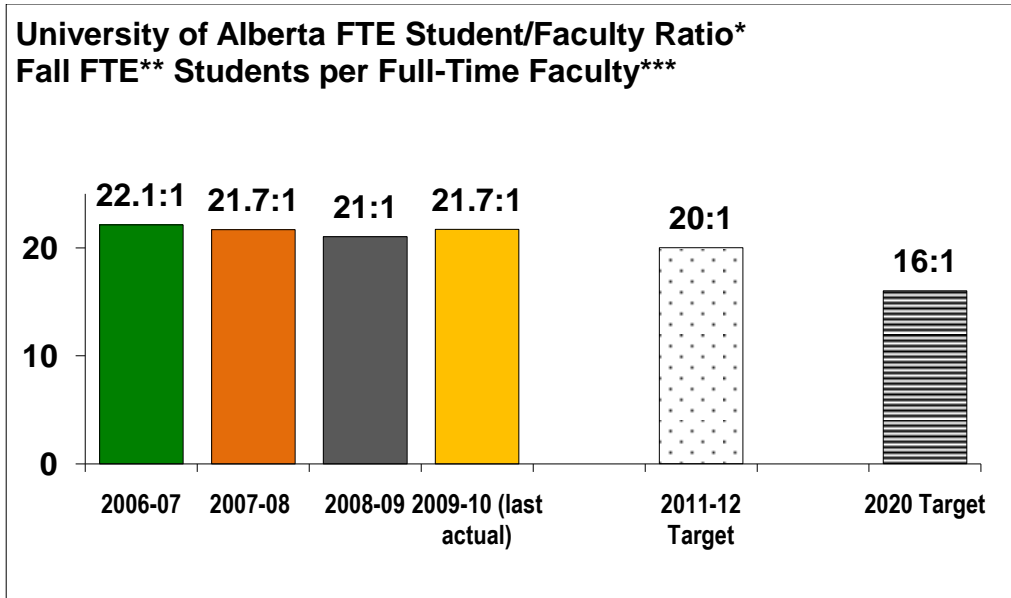
Many leading public research universities have a 3:1 ratio of undergraduate to graduate students that helps to foster a dynamic, discovery-based learning environment. Our goal is to reach a ratio of 3:1. The ratio of undergraduate students to graduate has significant financial implications. Hence, the mix should be assessed carefully for its overall financial impact as the cost of instruction and supervision for graduate students is much higher and the need for financial support significant.



\*FTE (full-time equivalent) is calculated by adding the number of all full-time students to one-third of the number of part-time students.

### ***Student to Faculty Ratios***

Student-faculty ratios at the institutional level provide a general indication of the available level of resources for the student learning experience (e.g., interaction or feedback on work). We focus on two: student to faculty ratio and the graduate student to faculty ratio.

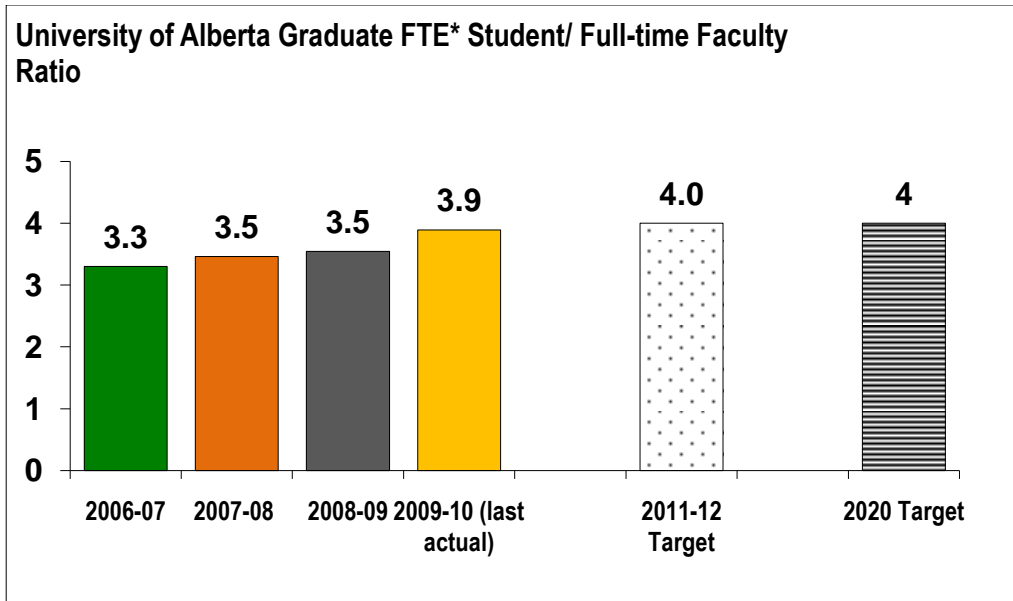


\*Ratio = Fall FTE Student / Full-time Faculty

\*\*FTE (Full-time Equivalent) is calculated by adding all full-time students to 1/3 of part-time students.

\*\*\*This includes all full-time teachers within faculties, academic staff in teaching hospitals, visiting academic staff in faculties and research staff who have an academic rank and salary similar to teaching staff. Administrative and support staff, librarians and Teaching and research assistants are excluded.

Source: University of Alberta Enrolment numbers (Dec. 1st data); faculty: Statistic Canada, Salaries and Salary Scale of full-time staff at Canadian Universities Reports



\* Ratio = Fall FTE Student / Full-time Faculty

\*\*FTE (full-time equivalent) is calculated by adding the number of all full-time students to one-third of the number of part-time students.

\*\*\*This includes all full-time teachers within faculties, academic staff in teaching hospitals, visiting academic staff in faculties and research staff who have an academic rank and salary similar to teaching staff. Administrative and support staff, librarians and teaching and research assistants are excluded.

Sources: University of Alberta enrolment numbers (Dec. 1 data) and Statistics Canada, salaries and salary scale of full-time staff at Canadian universities reports.

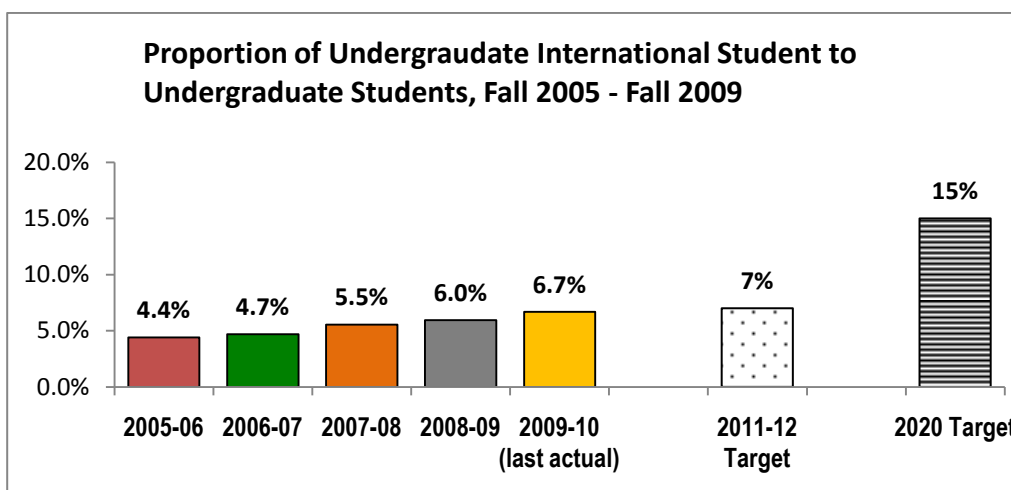


### **Student Mix**

In an age of globalization, universities around the world recognize the benefits of a diverse student population. The U of A’s approach to recruitment recognizes this diversity and includes strategies to reach international students while improving access for rural, Aboriginal and non-traditional students through partnership.

### **International Student Proportion**

While we have seen increases in the proportion of international students, our goal is to have 15 percent of the undergraduate student population being international students. Graduate student population with international visa enrolment was at 27.3 percent for 2009-10 (21.8 percent in 2007-08 and 22.9 percent in 2008-09). Undergraduate rates are understandably lower.



Source: fall undergraduate international student proportion to total fall undergraduate headcount, fall headcount

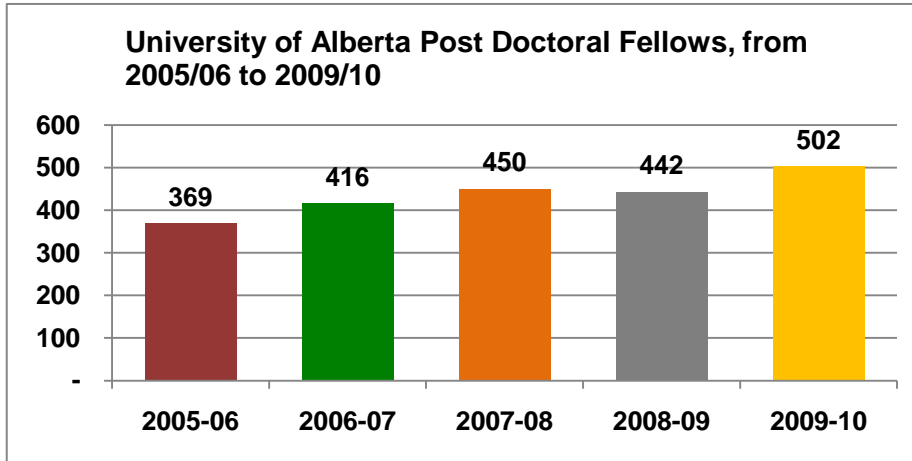
### **Rural and Aboriginal Student Proportions of Undergraduate Headcount**

Alberta’s rural and Aboriginal populations continue to be under-represented in post-secondary institutions. Our goal is to draw on the diversity within our province and increase the proportion of under-represented students attending the University.

Rural and aboriginal student proportions of undergraduate headcount					
	2005-06	2006-07	2007-08	2008-09	2009-10
undergraduates from rural areas	26.6%	22.6%	22.6%	21.7%	21.0%
Aboriginal undergraduates	2.5%	2.7%	2.8%	2.5%	2.6%

### ***Postdoctoral Fellows***

As post doctoral fellows are integral to the academic fabric of our research institutions, we have set a goal in our Academic Plan to increase the number of postdoctoral fellows contributing to our teaching, learning and research community.



Source: University of Alberta HR Data

## **9.3. Cornerstone 2: Learning, Discovery and Citizenship**

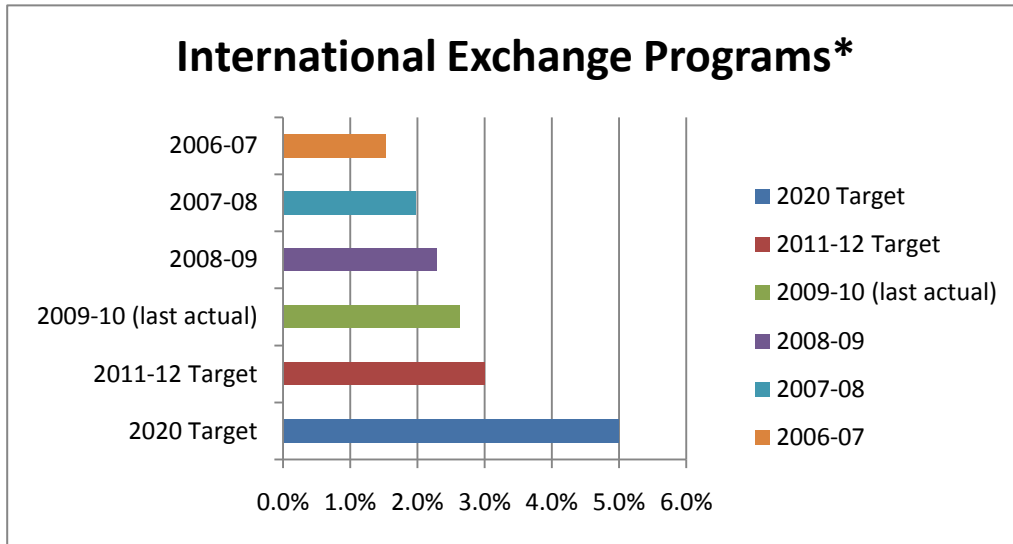
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Learning, discovery and citizenship encompass our essential work. Great universities stimulate learning and discovery that is cutting-edge, generating new knowledge, innovations, and discoveries that transform everyday life. The world-class university of tomorrow—which the University of Alberta aspires to be—will contribute to scientific, social, and cultural structures of global society in ways that will allow them to change and grow, creating and sustaining prosperity and well-being for future generations.

### **9.3.1. *Student Experiences***

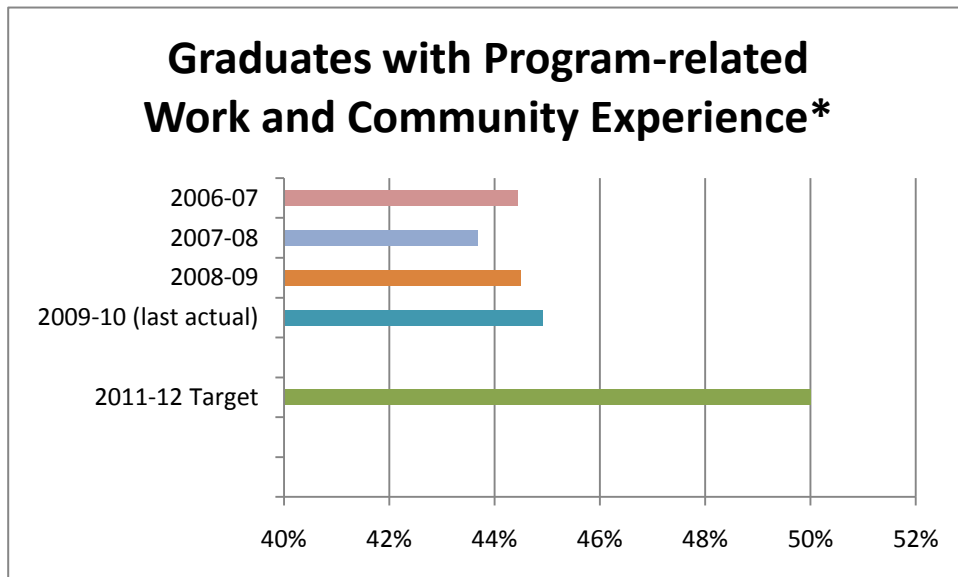
#### ***Innovative Learning***

The University is committed to providing students with the opportunity to participate in a variety of learning formats. Non-traditional approaches to learning are increasingly important elements of the academic environment at the University of Alberta. Program-related work, international and community experience, and discovery learning help tremendously to enrich the student experience. The University is expanding the number of programs that include international experience, discovery learning, work and community experience, and the trends are expected to increase in the coming years. We will be reviewing appropriate ways to encompass undergraduate research in the coming year.



\*Outgoing exchange and study abroad participants as a proportion of fall full-time enrolment  
 Fall full-time enrolment excludes Medical and Dental Residents.

Sources: fall full-time enrolment: Data Book 2009/10 table 2.1.1 outgoing exchange and Study Abroad participants: U of A International Office program-related work and community experience data.



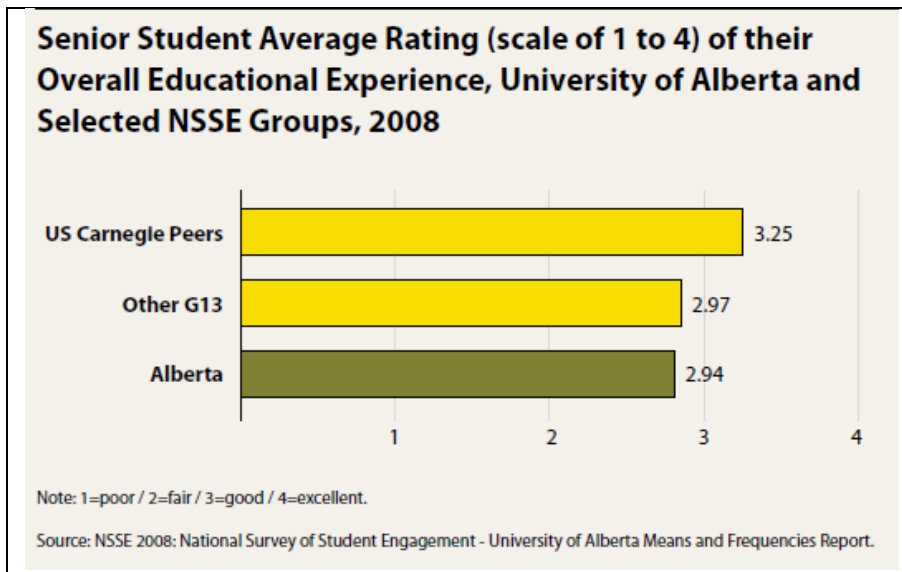
\*Proportion of graduates (excludes articling law students)

## ***Student Satisfaction***

### ***Undergraduate Students***

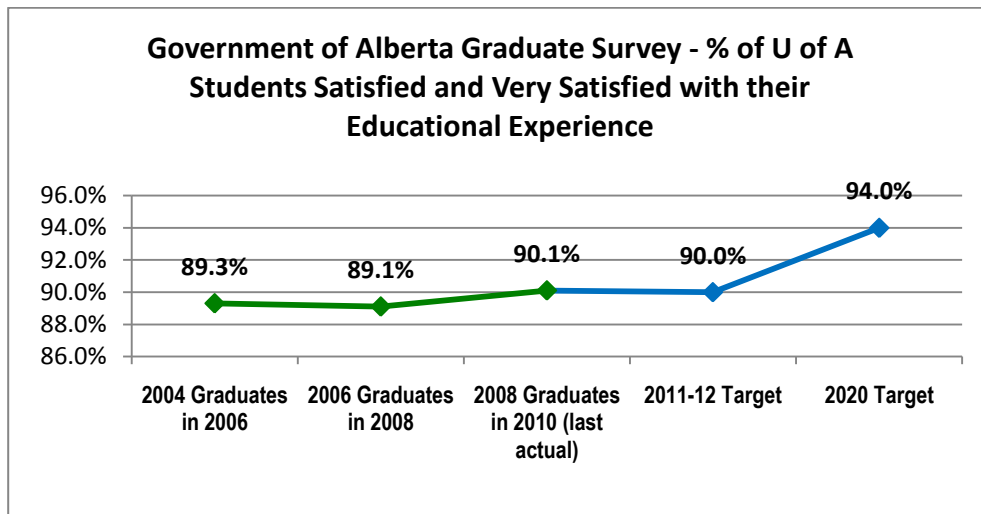
The National Survey of Student Engagement (NSSE) shows high levels of student satisfaction are rooted not just in social activities but also in the variety and quality of their learning and discovery activities. Students’ satisfaction with their educational experience and outcomes can lead to a productive, lifelong relationship with their university.

The goal is to improve our results to be in line with the comparative leading NSSE patterns for undergraduates among Canadian and U.S. research-intensive large public universities.



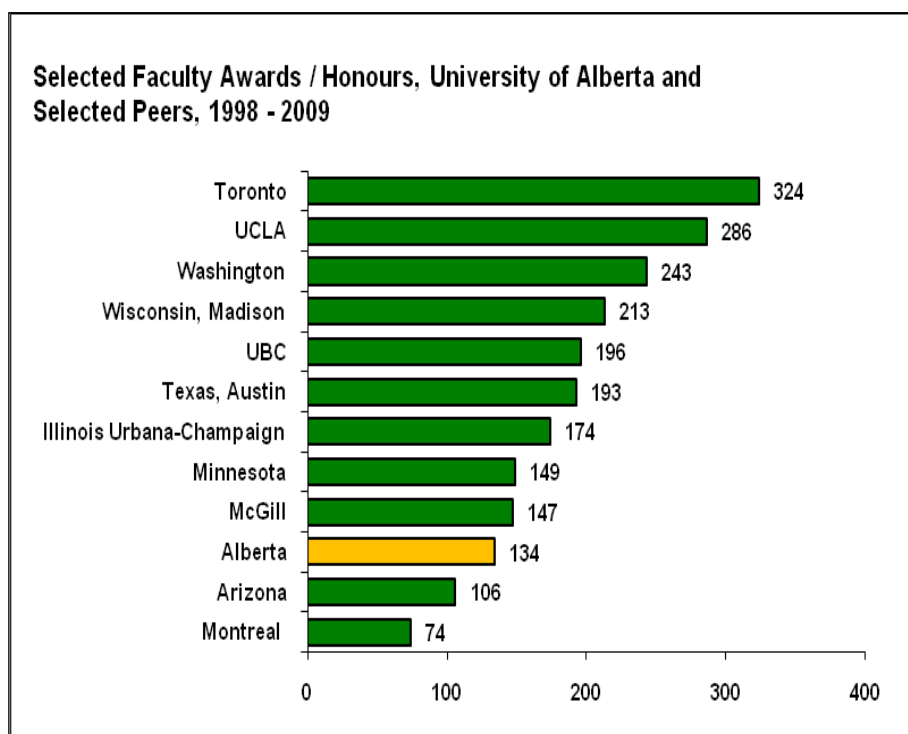
*Graduate Students*

Alberta Advanced Education and Technology measures student satisfaction with educational quality through its biennial *Graduate Outcomes Survey* of graduates two years after degree completion by asking them “Overall, how satisfied are you with the quality of your educational experience?” Improvements will take some time to record with graduates two years out.



### Select Faculty and Staff Honours

Recognition of excellence through awarded honours is an important measure of institutional quality. We track our external recognition from top national and international awards for teaching, research, and workplace contributions. Annual results can be volatile in the context of a relatively small number of awards available, but the University has done well, significantly exceeding the target values set for national and international faculty honours. Our intent is to reduce the gap with comparable institutions.

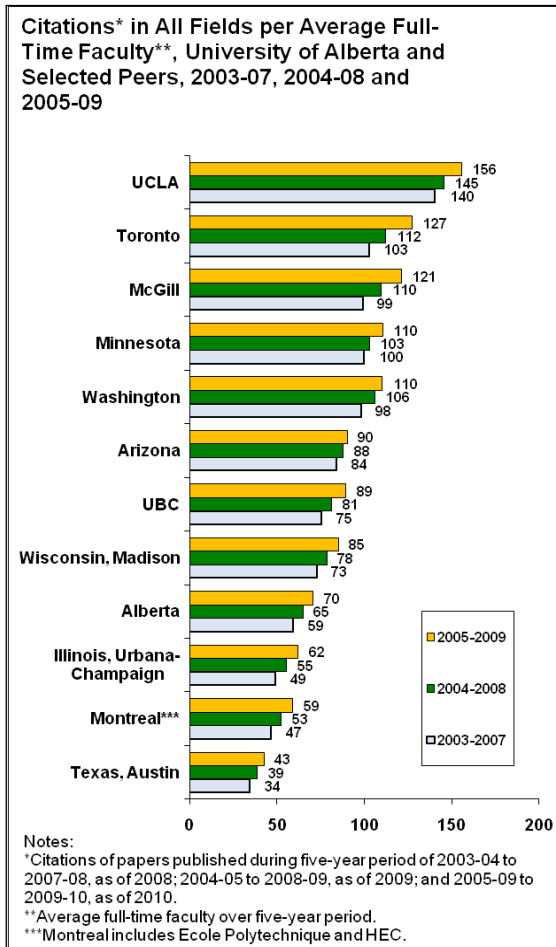


Sources: Individual award website, university websites

Sample of U.S. and international awards/honours	Sample of Canadian awards/honours
American Academy of Arts & Sciences (1998–2009)	3M National Teaching Fellowship (1998–2009)
Fulbright Scholars (1998–2009)	CIS Coach of the Year Award (1998–2009)
Guggenheim Fellowship Award (1998–2009)	Federal Tri-Council Highest Awards (1998–2009)
ISI Highly Cited Researchers (inception–2009)	Killam Research Fellowships (1998–2009)
National Academy of Engineering (1998–2009)	Molson Prize (1998–2009)
National Academy of Sciences (1998–2009)	Royal Society of Canada Fellowships (1998–2009)
Nobel Prize (inception–2009)	Royal Society of Canada Awards (1998–2009)
Royal Society of London (1998–2009)	Steacie Fellowships (1998–2009)
Sloan Research Fellowships (1998–2009)	

### Citations

The number of times a faculty member’s work is cited by peers is a strong validation of excellence. Top universities use citations as a key indicator of productivity, relevance and quality. Our goal is to increase the number of citations per full-time faculty at a rate in line with our selected peers.



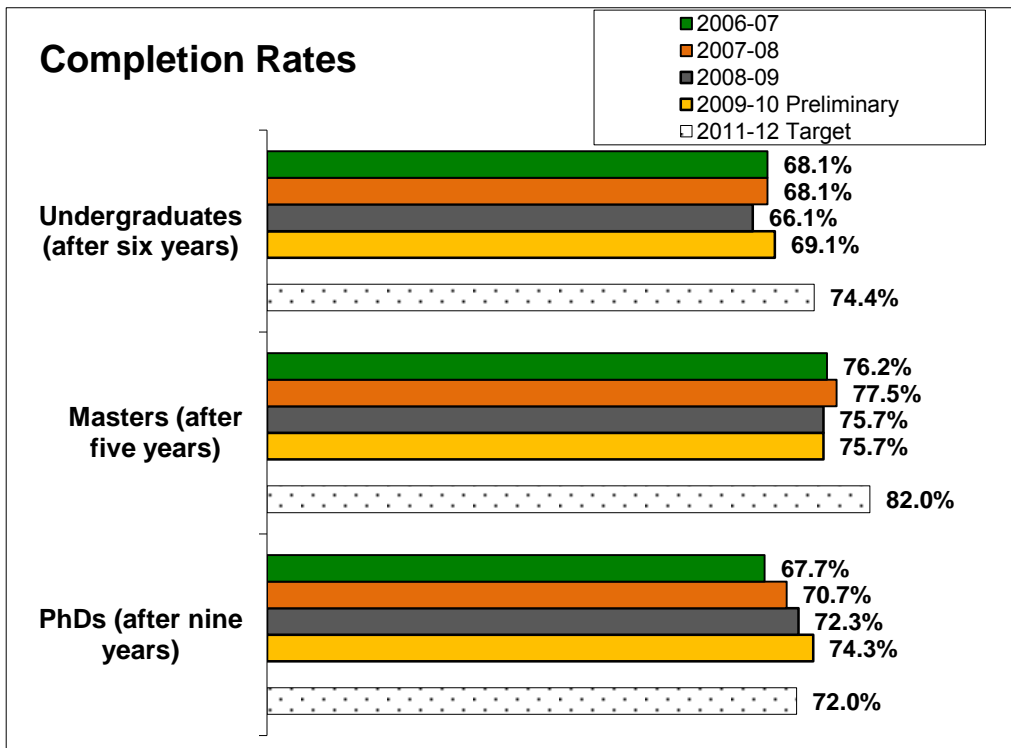
Sources:

Teaching faculty information for the U.S. universities comes from respective Common Data Sets Canada: UCASS report; G13 data exchange Thomson Reuters; U.S. universities websites; University of Alberta Data Book; Canadian Universities’ websites.



### 9.3.2. Undergraduate and Graduate Completion Rates

The rate at which students continue their studies and graduate in a timely fashion reflects the University’s ability to attract well-qualified students and provide the environment in which they can succeed. Accordingly, we have included measures of graduation. We measure completions for undergraduates within normal full-load period plus two years; for master’s students, within five years; for doctoral students, within nine years. The objective is to encourage greater rates and speeds of completion, to increase the contributions of graduates to society and the highly-skilled workforce. Such factors as funding levels for graduate students and transfer rates for undergraduate students can affect results.

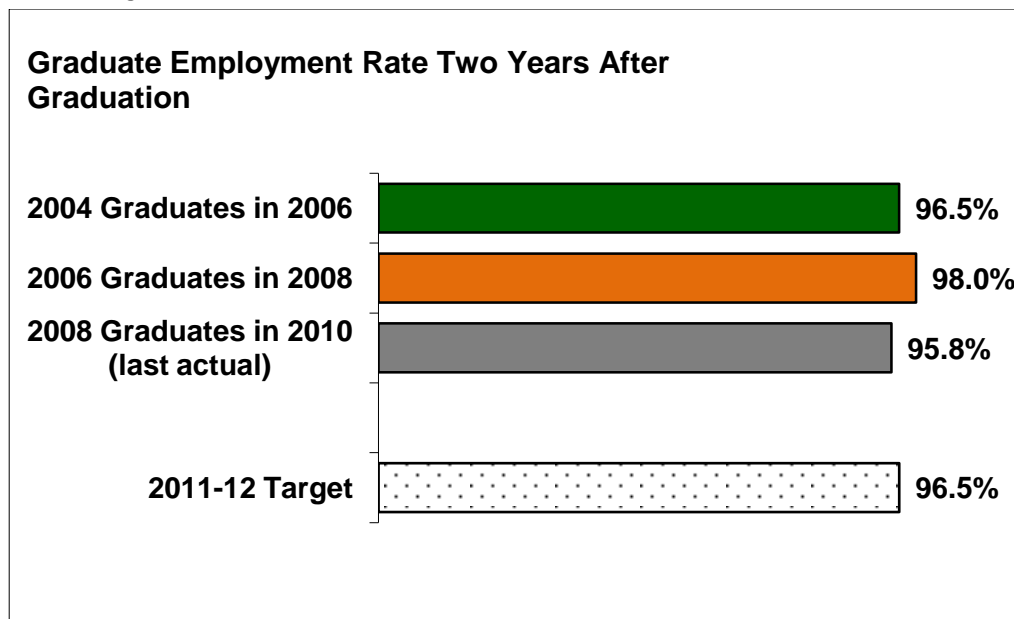


## 9.4. Cornerstone 3: Connecting Communities

A key objective in connecting communities is to foster partnerships and relationships with provincial organizations, other post-secondary institutions, businesses and other non-governmental groups. These relationships help the organizations advance mutual goals for supporting talented people by creating employment and internship opportunities for U of A students, by providing access to lifelong learning, by identifying research challenges, and by translating and disseminating our research outcomes.

### 9.4.1. Graduate Employment

One measure of success of a university education is the employability of graduates. Based on the outcomes of Alberta Advanced Education and Technology’s biennial survey, this measure shows the proportion of University of Alberta graduates (all levels) employed two years after graduation. The objective is to maintain or improve the current high standard.

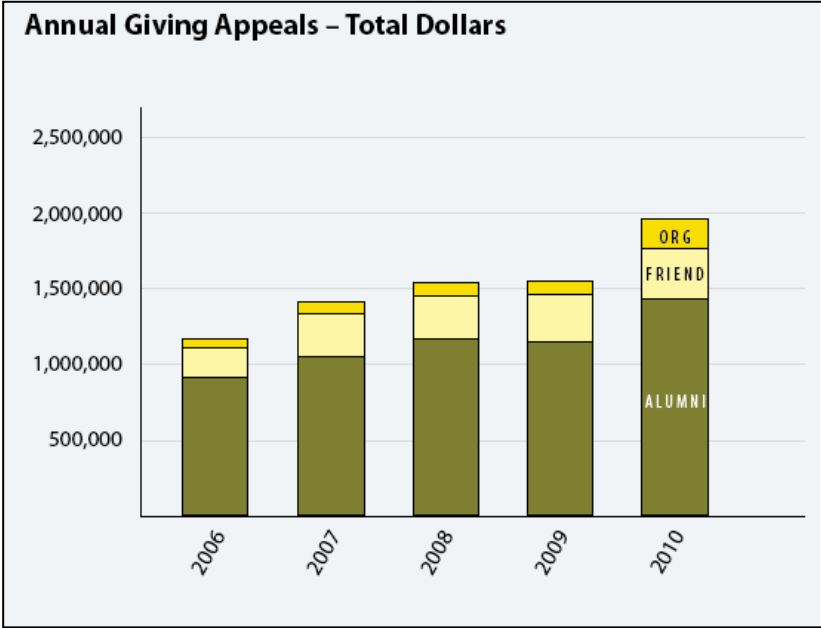


Source: Advanced Education and Technology requirement from biennial survey of graduates

### 9.4.2. *Engaging Alumni and Community Partnerships*

#### *Annual Giving Appeals*

Donations are an important aspect of fundraising at universities. In addition, many external postsecondary rankings consider the percentage of alumni who give to their university as an indicator of alumni satisfaction. Alumni giving, as well as regional support, may also be considered by other external funding agencies, such as corporations and foundations, when deciding whether or not to support a university.

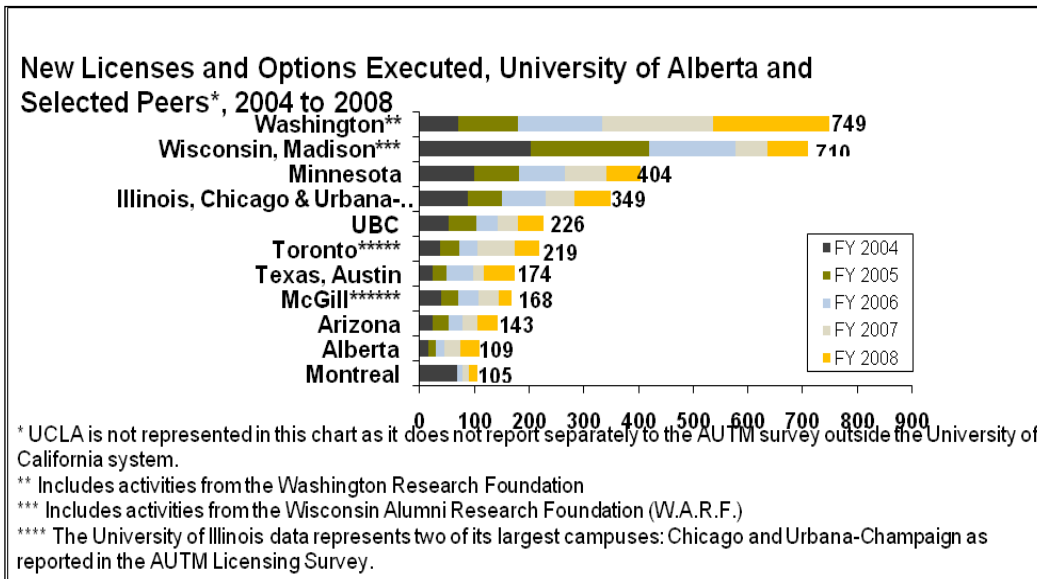


Source: University of Alberta Development Office

### 9.4.3. Commercialization Efforts

University-based research discoveries that have practical applications in modern society can have enormous positive impacts when successfully brought to market. They can change the quality of life for people in remarkable ways. They also can have a marked effect on local, national, and international economies. Because some agreements between companies and researchers can bypass the reporting processes used here, not all transfers to market are included.

#### *New Licenses and Options Executed*

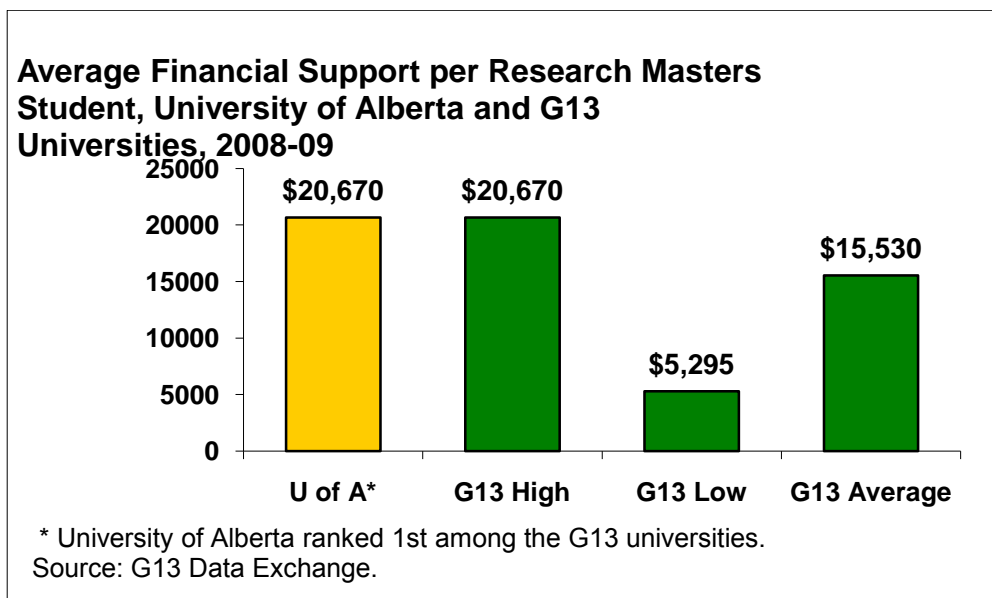
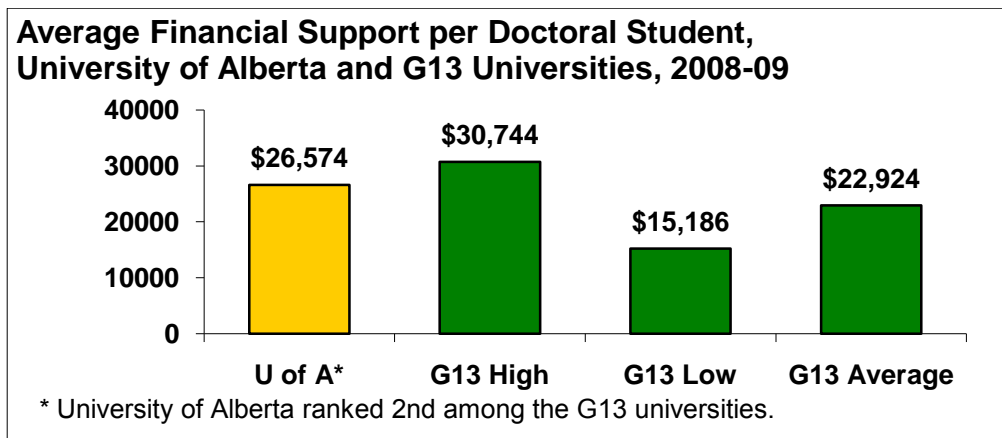


## 9.5. Cornerstone 4: Transformative Organization and Support

Our core work of teaching, research and creative activity, and service continues to evolve and we are well positioned to advance towards being a great public university despite the current financial constraints.

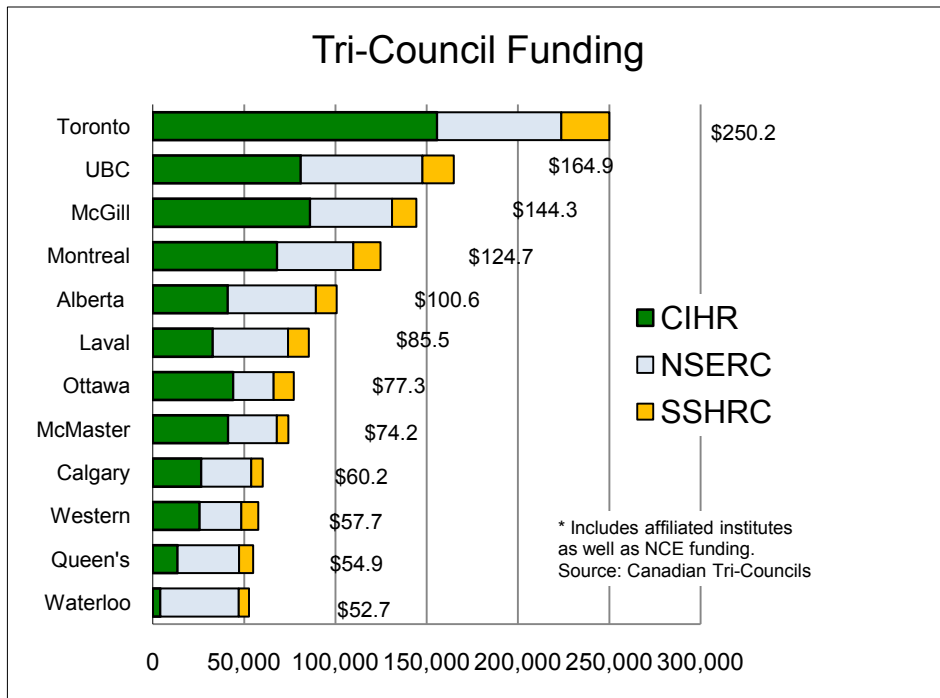
### 9.5.1. *Scholarships and Bursary Funding*

One factor that distinguishes a great university is the quality of its students. Scholarships, distributed on the basis of academic performance, are instrumental in a university’s ability to attract and retain the best applicants and students, while bursaries, usually distributed on the basis of a combination of academic performance and financial need, can be essential to a student’s ability to meet the financial obligations of tuition, fees, and other living expenses.



### 9.5.2. Research Funding

Research funding, including from the Tri-Councils, measures the share of funding received by a Canadian institution’s faculty members relative to its peers over time. Comparisons with peer institutions over time demonstrate success in attracting research funding from the granting councils and other international, regional and private sector partners. The U of A remains among the top five institutions in Canada in attracting research support from a range of Canadian and international sponsors.

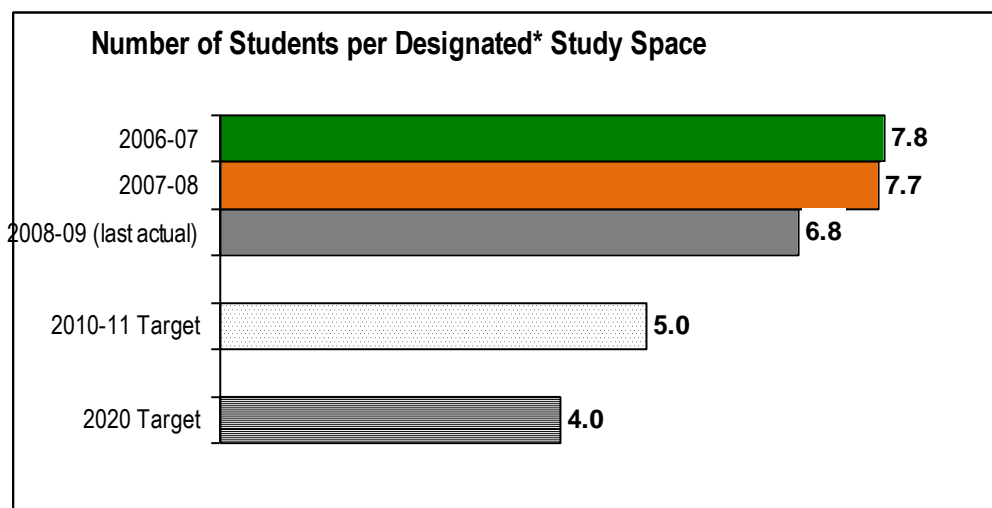


#### Overall Research funding

A comprehensive measure of the diversity of research funding is currently under development. For detailed information on sponsored research funding, see the University of Alberta Audited Financial Statements (<http://www.financial.ualberta.ca/AnnualFinancialStatements.aspx>).

### 9.5.3. *Formal and Informal Learning Spaces*

Study space available to students reflects a university’s commitment to learning, discovery and incubating scholarship. The preferred 4:1 ratio has been set as the standard by the Council of Ontario Universities. The University of Alberta strives to achieve that target; however, current measures and targets are being assessed.



\* Designated study space includes individual and group study spaces at University of Alberta libraries. It does not include casual, residence or computer lab study space.

*The above are measures as categorized by cornerstone. The following table demonstrate the linkage to the access and research themes as noted in Chapter 5*

Theme	Measure	Cornerstone reporting
Access and Programming  <b>Quality</b>	Total applications, admission offers, registrations and acceptance rate, fall 2006 to fall 2010	Talented People
	Proportion of undergraduates who are: <ul style="list-style-type: none"> <li>– International</li> <li>– Rural</li> <li>– Aboriginal</li> </ul>	Talented People
	Completion rates of undergraduate and graduate students	Learning Discovery & Citizenship
Access and Programming  <b>Learning environment</b>	Proportion of Students Participating in Innovative Learning Experiences	Learning Discovery & Citizenship
	University of Alberta scholarship and bursary expenditures per FTE student	Transformative Organization and Support
	Learning Spaces	Transformative Organization and Support
	<i>Progress regarding remainder of measures noted for this theme in Chapter 5 will be reported in Annual Report (e.g. number of</i>	

Theme	Measure	Cornerstone reporting
	<i>centrally scheduled classrooms equipped with IT infrastructure, implementation of the learning management system).</i>	
Access and Programming	Total applications, admission offers, registrations and acceptance rate, fall 2006 to fall 2010	Talented People
<b>Student experience and engagement</b>	Completion rates of undergraduate and graduate students	Learning Discovery & Citizenship
	Undergraduate Student Satisfaction - Senior student average rating of their overall educational experience, University of Alberta and selected NSSE groups, 2008	Learning Discovery & Citizenship
	Graduate Student Satisfaction - Government of Alberta graduate survey - % of U of A students satisfied and very satisfied with their educational experience	Learning Discovery & Citizenship
	University of Alberta undergraduate to graduate FTE ratio, student FTE to faculty ratio, and graduate FTE to faculty ratio	Talented people
Access and Programming	Total applications, admission offers, registrations and acceptance rate, fall 2006 to fall 2010	Talented People
<b>Innovative programming</b>	<i>Progress regarding the number of new programs approved by the Minister and enrolment rates will be reported in Annual Report.</i>	
Access and Programming	Annual Giving Appeals	Connecting Communities
<b>Connections and collaborations</b>	Graduate employment rate two years after graduation	Connecting Communities
	<i>Progress regarding the number of new collaborations will be reported in Annual Report.</i>	
Scholarship, research and Creative Activities	Tri-Council funding at top Canadian Universities, 2008-09 (University of Alberta in relation to our peer group)	Transformative Organization and Support
<b>Diversified excellence</b>	Total research funding relative to our selective peer group ( <i>measure under development</i> )	Transformative Organization and Support
	Select faculty and staff honours	Learning Discovery & Citizenship
	New Licenses and options executed, University of Alberta and selected peers, 2004 to 2008	Connecting Communities
	University of Alberta post-doctoral fellows, from 2005/06 to 2009/10	Talented People
	University of Alberta graduate FTE student to full-time faculty ratio	Talented People
	Citations in all fields per average full-time faculty, University of Alberta and selected peers, 2003 – 07, 2004 – 08 and 2005 - 09	Learning Discovery & Citizenship
Scholarship, research and Creative Activities	Level of international research investment ( <i>measure under development</i> )	Transformative Organization and Support
<b>Internationalization</b>	Percentage of International Graduate Students	Talented People



In addition to managing results to report against goals outlined in this Comprehensive Institutional Plan, the University has published other detailed accountability reports and makes available a large amount of annual statistical data. This information includes: the *Dare to Discover Report Card*, Annual Reports to Advanced Education and Technology, the National Survey on Student Engagement (NSSE) Report, and the Canadian Undergraduate Survey Consortia results. Information can be found at: <http://www.president.ualberta.ca/daretodiscover.cfm> and <http://www.uofaweb.ualberta.ca/uastatistics/>

## List of Acronyms

ACFA	Alberta Capital Finance Authority
AET	Advanced Education and Technology
AHFMR	Alberta Heritage Foundation for Medical Research
AHS	Alberta Health Services
AHW	Alberta Health and Wellness
ALES	Agriculture Life and Environmental Sciences
AARP	Academic Alternative Relationship Plans
ATEP	Aboriginal Teacher Education Program
BARD	Book and Record Depository
BFPC	Board Finance and Property Committee
BLDC	Board Learning and Discovery Committee
BLIMS	Buildings and Land Information Management System
BOMA	Building Owners and Managers Association
CAPES	Coordination of Improvement of Higher Education Personnel (Brazil)
CAQC	Campus Alberta Quality Control Audit Pilot Project
CCIS	Centennial Centre for Interdisciplinary Science
CERN	European Organization for Nuclear Research
CFI	Canada Foundation for Innovation
CIHR	Canadian Institutes of Health Research
CIP	Comprehensive Institutional Plan
CLIP	Cameron Library and Information Pavilions
CMA	Census Metropolitan Area
CMEB	Chemical Materials Engineering Building
CONACYT	National Commission of Science and Technology (Mexico)
CoSSS	Common Student Space, Sustainability and Services
CPI	Consumer Price Index
CPOC	Cooling Plant on Campus
CREATE	Collaborative Research and Training Experience Program (NSERC)
CSJ	Campus Saint-Jean
EAS	Earth and Atmospheric Sciences
ECHA	Edmonton Clinic Health Academy
ENCS	Environmental and Conservation Sciences
EPE	Enrolment Planning Envelope
FAR	Facility Alteration Request
FCI	Facility Condition Index
FDC	Facilities Development Committee
FLE	Full Load Equivalent
FoMD	Faculty of Medicine and Dentistry
GAAP	Generally Accepted Accounting Principles
GDP	Gross Domestic Product
GMU	Grant MacEwan University
HRIF	Health Research Innovation Facility
HSERC	Health Sciences Education and Research Commons

HUB	Housing Union Building
IAP	Institutional Access Plan
iCORE	iCORE Wireless Communications Laboratory
IMP	Infrastructure Maintenance Program
IRP	Institutional Research Plan
KIP	Knowledge Infrastructure Program (Industry Canada)
LEED	Leadership in Energy and Environmental Design
LRDP	Long-Range Development Plan
MEng	Master of Engineering
MITACS	Mathematics of Information Technology and Complex Systems
MOU	Memorandum of Understanding
NGOs	Non-Governmental Organization
NS	Native Studies
NSERC	Natural Sciences and Engineering Research Council of Canada
NSSE	National Survey on Student Engagement
OECD	Organisation for Economic Co-operation and Development
P3	Public Private Partnership
PAHO	Pan American Health Organizations
PAW	Physical Activity & Wellness Centre
PDF	Post-Doctoral Fellow
PER	Physical Education and Recreation
PSE	Post-Secondary Education
SSHRC	Social Sciences and Humanities Research Council of Canada
TDM	Travel Demand Management
TYP	Transition Year Program
UAI	University Alberta International
UAPP	Universities Academic Pension Plan
USRI	Universal Student Ratings of Instructors
VIGOUR	Virtual Coordinating Center for Global Collaborative Cardiovascular Research
WHO	World Health Organization
WUN	Worldwide Universities Network