



2003-04 Annual Report

Quality Investment in Alberta's Future

*Approved by Board of Governors
5 November 2004*



CELEBRATING 100 YEARS
EDMONTON 2004

Contents

MESSAGE FROM THE PRESIDENT	1
MESSAGE FROM THE BOARD OF GOVERNORS	3
2003-04 Board of Governors	4
EXECUTIVE SUMMARY	5
YEAR IN REVIEW	7
Perspective: Opportunities, Challenges and Risks	7
<i>The Evolving Global Context</i>	7
<i>The Challenge of Sustainable Resources</i>	7
<i>The Competitive Context for Internationally Recognized Faculty</i>	8
<i>Academic Programs Challenges</i>	9
<i>Capital Planning for Space, Infrastructure and Technology</i>	10
<i>The University's Impact and Potential in Alberta</i>	10
The University in 2003-2004	12
<i>Financial Report 2003-2004</i>	14
Sample of Achievements	16
<i>Well Prepared Students</i>	16
<i>Leading in Creativity and Knowledge</i>	19
<i>University Excellence</i>	23
<i>Contributing to Communities</i>	25
STRATEGIC PERFORMANCE	29
Goal 1: The University of Alberta will prepare our students for successful lives and careers as leaders of tomorrow	30
Goal 2: The University of Alberta will be a leader in the creation, integration, dissemination and application of knowledge.	38
Goal 3: The University of Alberta will achieve institutional excellence.	42
Goal 4: The University of Alberta will contribute to the needs of its communities.	48
CONCLUSION	50

University of Alberta

Goals and Key Strategic Initiatives

Goal 1: The University of Alberta will prepare our students for successful lives and careers as leaders of tomorrow.

- 1.1 Recruit and satisfy outstanding undergraduate and graduate students and students with outstanding potential
- 1.2 Provide the best possible learning experience for our undergraduate and graduate students' lives and careers
- 1.3 Create an improved learning environment inside and outside the classroom
- 1.4 Provide each undergraduate and graduate student with a significant international experience

Goal 2: The University of Alberta will be a leader in the creation, integration, dissemination and application of knowledge.

- 2.1 Achieve national and international leadership in research
- 2.2 Build productive partnerships to facilitate collaborative research and knowledge transfer.

Goal 3: The University of Alberta will achieve institutional excellence.

- 3.1 Attract and retain outstanding faculty, researchers and staff
- 3.2 Attract and allocate the necessary resources to achieve the University's mission
- 3.3 Renew and enhance the University's infrastructure and provide high-quality support services to meet the needs of the future.

Goal 4: The University of Alberta will contribute to the needs of its communities.

- 4.1 Enhance and build connections with our communities.

Message From The President

The University of Alberta is proud of the accomplishments of its alumni, students, staff, and faculty and of their wide and beneficial impacts locally, nationally, and internationally. Once again our report provides overwhelming evidence of the University's success in teaching, research, and community service over the past academic year. These successes are also evident in the contributions the University makes to the people, the cultural life, and the economy of Alberta.

As you review this report I'd like to encourage you to reflect on the wisdom of our first Premier, Alexander Cameron Rutherford, and his colleagues who, in spite of all the short run imperatives of the day, insisted that among the first acts of the new legislature would be an act to create the University of Alberta. In doing so our government set in motion the building of an institution that would yield lifelong benefits to all Albertans while educating our children - the leaders of tomorrow. With the vision of a province that not only recognized but valued access to post-secondary education for its citizens, Alberta's first government built an educational foundation that has proven itself integral in developing the knowledge-based economy that is critical to our province today.

This vision has been expanded and strengthened by Alberta's current government through its continued support of the Alberta Heritage Foundation for Medical Research and Alberta Ingenuity, through the creation of research infrastructure as championed by Alberta Innovation and Science, through its support for the Campus Alberta concept, and through its access funding programs – all of which have become part of the Alberta Advantage.

I am particularly heartened by the Alberta Speech from the Throne this past spring in which one of four key pillars for the future of our province is leading in learning, including having world class universities. I am encouraged by the increasingly strong partnership we have with our provincial government towards implementing this "leading in learning" vision.

It would be all too easy for the university to bask in its accomplishments. Reflecting on past glories is not what has made the University of Alberta the meaningful and indispensable institution it has become. We believe we can and should do more for the citizens of Alberta. We must create more leaders of tomorrow; we must contribute to the improvement of the quality of life of all Albertans; we must make Albertans proud of the Province's University.

The province of Alberta will celebrate its 100th anniversary in 2005. The vision our forebears had and the investments they made have provided a solid foundation for Alberta - a foundation our current government continues to build upon. We should not forget the simple wisdom of those times as we move towards the creation of a knowledge-based economy that will enable the province of Alberta to diversify and compete successfully in the global marketplace. A re-investment in the province's universities, including its longest serving, is without doubt the key to ensuring that Alberta's second century is as vibrant as its first.



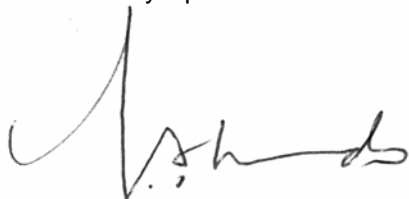
Roderick D. Fraser, PhD
President

Message From The Board of Governors

The University of Alberta has a proven track record in helping to build and shape a prosperous province. It is a successful builder of knowledge, educating those who become the leaders of tomorrow and those who have the essential skills needed in industry, business, health and education, in the arts and culture, and in communities. At the same time, it is meeting the challenge of building a university that is indisputably recognized as one of the best in the world. But building a future for Alberta where knowledge, ideas and innovation are keys to success, and making an international mark for Alberta, still require a visionary reinvestment and commitment to Alberta's universities. The University is facing significant challenges and constraints that require a commitment to long-term investment in return for the gains realized through university education and innovation.

The University of Alberta's annual report for the year ended March 31, 2004 has been prepared under the Board's direction in accordance with the Government Accountability Act and ministerial guidelines established pursuant to the Accountability Act. All material economic, environmental or fiscal implications of which we are aware have been considered in the preparation of this report.

Included in it is a summary financial report drawn from the University of Alberta's financial statements for the year ended March 31, 2004 as submitted earlier in a separate document. Samples of individual achievements over the year are also included, representing the tremendous diversity and scope of innovative contributions by students and faculty at the University. The report concludes with a progress report on the University's performance indicators set out in its Strategic Business Plan.



James S. Edwards, P.C.
Chair, University of Alberta Board of Governors

2003-04 BOARD OF GOVERNORS

Chair

James S. Edwards, P.C.

Statutory Members

Rod Fraser
President

John Ferguson
Chancellor

Members

Lynda Achtem
Support Staff Member (to July 2004)

Fred Barth
Public Member (to November 2003)

Mat Brechtel
Students' Union President (to April 2004)

Gurston Dacks
Academic Member (to January 2006)

Ross Grieve
Public Member (to June 2005)

Brian Heidecker
Public Member (to June 2006)

J.D. Hole
Public Member (to September 2006)

Mike Hudema
Students' Union President (to April 2003)

Reuben Kaufman
Academic Member (to February 2004)

Wendy Kinsella
Senate Member (to June 2005)

Roman Kotovych
Student Member (to April 2005))

Oryssia Lennie
Vice-Chair, Public Member ((to September 2004)

John Mah
Public Member (to July 2004)

Ove Minsos
Public Member (to July 2004)

Mike Reid
Student Member (to April 2003)

Catherine Roozen
Public Member (to November 2004)

Ivor Ruste
Alumni Member (to July 2005)

Lee Skallerup
Graduate Students' Association President (to April 2004)

Craighton Twa
Public Member (to May 2003)

Brad Wuetherick
Graduate Students' Association President (to April 2003)

Ralph Young
Alumni Member (to July 2004)

Executive Summary

In March 2004, the Government of Alberta released its 20-year strategic plan, *Today's Opportunities, Tomorrow's Promise*, identifying as its four pillars: Unleashing Innovation; Leading in Learning; Competing in the Global Marketplace; and Making Alberta the Best Place to Live, Work and Visit. The Government also gave special emphasis to certain components of the overall plan, working on a Value Added Strategy and releasing the report on *Rural Alberta: Land of Opportunity*. Most of the Government's priorities point clearly to the need for increased roles for the province's post-secondary institutions.

The University is already committed to supporting the 20-year goals through an extensive range of teaching and research programs. Its primary educational focus is on the development of whole persons and leaders of tomorrow who will contribute to the well-being of society and compete successfully with the world's best. Its research role is at the level of international excellence, with benefits both for Campus Alberta's global learning environment and for the transfer of new innovations to public and commercial applications. Recent SARS and BSE outbreaks revealed the depth and breadth of fundamental knowledge developed by University researchers for application as required to meet emerging challenges.

The pages of this annual report reveal strong success in most key performance areas and demonstrate the University's continuing commitment to the key strategic initiatives outlined in its strategic business plan. Classroom upgrades exceeded targets; faculty members maintained their first-place rank in accumulated national 3M teaching awards; the employment rate for recent graduates remained at the targeted 96 per cent, and sponsored revenue for research programs significantly exceeded the interim target.

This reporting period included an unprecedented building boom. Mary Schäffer Hall (residence), the Saville Sports Centre and the Windsor Carpark expansion were completed and work continued or began on nine other large-scale projects, with emphasis on agri-food, health, engineering and nanotechnology. The aggressive building program is evidence of indisputably recognized scholarship and productive partnering with private sector donors.

In its drive for outstanding quality, the University of Alberta continues to confront important challenges that need attention from governments and all Albertans: a structural deficit that has begun to erode the quality of teaching by forcing service reductions and the elimination of academic positions; demand for many programs that results in qualified applicants being turned away in a province with a university participation rate among the lowest in the nation, and a deteriorating infrastructure as University buildings age. These challenges are outlined, with potential solutions, in a Board of Governors paper entitled *Alberta's future starts with knowledge: A Case for Investment*. This document picks up on the principal assumptions of Alberta's 20-year plan, recognizing knowledge development as the key to virtually unlimited potential in a province that has essentially eliminated its public debt.

The University of Alberta's vision, in teaching, research and community service, is to be indisputably recognized, nationally and internationally, as one of Canada's finest universities and amongst a handful of the world's best. As Alberta relies more on its knowledge workers, as individual Albertans demand more access to advanced education, and as Alberta's government develops its investment priorities, the importance of commitment to the University's vision becomes urgent.

LIBRARY Resources and Services		
	Ranking	
	Canada	N. America
Toronto	1	4
ALBERTA	2	17
British Columbia	3	22
McGill	4	40

Source: Association of Research Libraries, *Volumes Held, 2002-03*

3M Fellowships for Teaching Excellence	
ALBERTA	24
Western Ontario	18
Guelph	12
British Columbia	8
McMaster	8
Toronto	8
York	8

Source: Society for Teaching & Learning in Canada, 1986-2004

SPONSORED Research Revenue (rank)	
British Columbia	1
Toronto	2
Montréal*	3
ALBERTA	4
McGill	5

Source: CAUBO, 2002-03: Exclusive of Research affiliates

NSERC Steacie Fellowships	
Toronto	10
ALBERTA	7
British Columbia	4
McGill	4
Waterloo	3

Source: NSERC, 1996 to 2004

FULL-TIME FACULTY (all ranks with Deans, excluding Medical/Dentistry faculty)	
Toronto	1,792
Montréal*	1,596
British Columbia	1,376
Laval	1,274
ALBERTA	1,216
McGill	1,158
York	1,118
Calgary	1,043

Source: Statistics Canada, "Salaries and Salary Scales of Full-Time Teaching Staff", 2001-2002: final report.

NETWORKS of Centres of Excellence (of 19)	
ALBERTA	18
British Columbia	18
Montréal*	18
Toronto	18
McGill	17
McMaster	17

Source: Networks of Centres of Excellence Annual Report 2002-03 (2003-04 NCE Annual Report is not yet available)

NSERC Industrial Research Chairs	
ALBERTA	12
Waterloo	12
British Columbia	9
Montréal*	8
Carleton	5

Source: NSERC, new awards 1995-96 to 2002-03

Federal Councils Operating Grants per Continuing Faculty (rolling average 1999-2002)	
McGill	8,945
Queen's	8,288
ALBERTA	7,971
UBC	6,749
McMaster	6,740

Source: Alberta Learning KPI calculations

CIS Academic All Canadians	
McGill	1,113
ALBERTA	1,101
Calgary	905
Queen's	892
Western Ontario	798

Source: Canadian Interuniversity Sport, 1990-2004

FTE Enrolment (Fall 2003)		
	Undergraduate	Graduate
Toronto (incl colleges)	49,526	10,601
York	36,777	3,629
Montréal*	30,856	10,840
ALBERTA	27,015	4,423
British Columbia	25,458	6,510

Source: Individual university statistics publications. FTE enrolment is calculated using "full-time students" plus "part-time undergraduate students divided by 4" and "part-time graduate students divided by 3".

* Montréal entries include École polytechnique and Hautes études commerciales

Year in Review

PERSPECTIVE: OPPORTUNITIES, CHALLENGES AND RISKS

In 2002, the University of Alberta developed a four-year strategic business plan to chart its future direction, with particular attention to key opportunities, challenges and risks. These were important considerations in setting out the University's key strategic initiatives. The following section revisits these earlier expectations to note consistency or change over the year 2003-04.

The Evolving Global Context

In a year in which world tensions continued to command attention to Alberta's global framework, other crises emphasized international connections in the realm of health (the SARS epidemic and the BSE scare). Not only Alberta's short-term energy resource-based prosperity and high energy prices for consumers, but also the devastating international embargo on Alberta beef heightened the importance of economic diversity for stability.

University of Alberta advances in teaching and research come together in several important ways to support the Alberta response. The University educates not only the researchers who will respond to new investment in knowledge-based industries, but also the post-secondary instructors to fill an increasing demand. The teaching and research synergy provides the best professional and undergraduate education for a knowledge-

based and internationally connected economy and society. Adaptable skills are required to deal with rapid change: independent and critical thinking, research and communication, creativity and enterprise, all with an international perspective.

The University continues to attract and retain outstanding undergraduate and graduate students with outstanding programs. Exceptional faculty and staff continue to conduct leading-edge research and teach from that position of leadership enhanced by international experience and collaboration. Enrolment grew somewhat beyond the existing targeted Access programs, but not nearly to the level of the demand. The University needs the capacity to offer a far greater proportion of Albertans the chance to participate at a rate that matches or surpasses opportunities in the rest of Canada and the world.

The Challenge of Sustainable Resources

Repeated reductions in core operating and maintenance resources over more than two decades have induced the University of Alberta to improve efficiencies in the course of improving productivity. During that period, enrolment increased by 50%; the annual number of graduates by more than 33%; and sponsored research funding by more than 300% (in constant dollars). At the same time, the Alberta government

grants per FTE student fell from \$15,452 to \$9,074 in constant 2003 dollars.

Creative solutions to resource problems have augmented a recently successful fundraising campaign with preparations for a new \$310 million Campaign 2008 to be launched in November 2004. A comprehensive and integrated long-term planning process most

recently added the innovation and implementation of revenue enhancement and cost reductions from an active Funding Solutions Task Force. Resource development and cost-saving initiatives do make a difference, but most have long-term effects in specifically targeted directions. The investments of governments and students continue to be most important, and of these, tuition increases cannot possibly do it alone.

At the core of the University's strategies has been a faculty renewal process, which has shifted from the first stage of early retirements into the late stages of attracting outstanding

replacements and the initial challenges of retaining them. This fundamental University resource requirement, the recruitment and retention of excellent faculty members, presupposes all the others:

- up-to-date technology for teaching and learning;
- improved class size and interaction opportunities (student/teacher ratio);
- effective support services for evolving technologies and teaching and research innovations;
- library acquisitions and services;
- scholarship and bursary programs.

The Competitive Context for Internationally Recognized Faculty

Competition for faculty members takes place in an international marketplace where salary scales and tax advantages in many cases far outstrip Canadian options. For example, the annual increase in US state government appropriations for higher education over six years to 2001-02 average six percent, creating a large head-start for years to come. During the current US downturn, universities have compensated with major tuition fee jumps. These increases helped US public universities deal not only with salary competition, but also with research infrastructure expectations. In the past year, of course, Ontario universities added to the competitive pressure in order to cope with enrolment growth associated with the "double cohort" of graduates from the old grade 13 and the new grade 12 high school programs.

University of Alberta teaching has attracted national award recognition, and University of Alberta research ranks with the best in Canada. But excellent research and the ability to attract top researchers require a continuous commitment to strengthen research infrastructure and operating support. In addition, the need for sustainable funding to maintain, develop and modernize infrastructure, both buildings and technology, remains an important issue. At its

core is a backlog of insufficient operating resources for much in the way of early preventive maintenance. Several government programs at both the federal and provincial levels have begun to have notable impact in recent years but these need to be sustained for lasting effect and to be matched with basic operating resources.

Three excellent Alberta programs attract outstanding senior and junior faculty members in key research areas: the Alberta Heritage Foundation for Medical Research (AHFMR), the new Alberta Heritage Foundation for Science and Engineering Research (Alberta Ingenuity), and the Informatics Circle of Research Excellence (iCORE). But severely reduced coverage of indirect costs has repercussions for the University's ability to cope with growing research programs funded for direct costs alone. Two major federal government programs also add research faculty and infrastructure: the Canada Research Chairs (CRC) program and the Canada Foundation for Innovation (CFI). But both of these require private and provincial matching funds for activation and a significant number of CFI awards (many supporting CRCs) are in abeyance pending commitment of the matching funds. Failure to address this pressing problem will jeopardize research and recruitment momentum.

Even with those advances, the University had 3.5% fewer continuing faculty in 2003 than in 1993 but 12.7% more students. Reduced faculty

strength presents a particular continuing barrier to high-priority growth in graduate enrolment.

Academic Programs Challenges

Within the context of the overall University goals and objectives, its faculties, schools and departments continued to pursue distinct sets of strategies to achieve the University's vision in their own areas. These covered everything from extra fund-raising to attract and retain faculty, through enhancements to learning environments, to new programs, with the effect of continuous improvements in detail. Professors in the Philosophy Department received an award from the Society for Teaching and Learning in Higher Education for their innovative "super section" approach. They augment regular lectures with small discussion groups and a course website that includes a forum in which students can discuss what they are learning.

An integrated approach is aimed at establishing the University of Alberta as a university of choice for aboriginal people in Canada and an international leader in indigenous knowledge programs. Cross-faculty initiatives like the interdisciplinary environmental and conservation programs augment those offered by the School of Native Studies itself. Programs focusing on aboriginal learning include those being expanded at the University's Canadian Indigenous Languages Literacy Development Institute and a new First Nations Governance and Public Administration diploma program offered by the Faculty of Extension.

Continued suspension of any new Access funding has inhibited major new initiatives for selective growth. This was, however, the year of

preparation for merger of Augustana University College with the University of Alberta, which will introduce an important new dimension in Campus Alberta. A small residential campus outside the large city will offer a University of Alberta degree and some prospects for offsetting enrolment pressures. This will add to the ongoing work with community colleges to establish up-to-date transfer credit agreements that ensure high quality, and the BEd degree programs available through the Faculty of Education at four outside campuses (Grande Prairie, Red Deer, St. Paul and Slave Lake).

It is at the faculty and especially the department levels that capacity pressures are really felt. Over time, one of the consequences of high demand and reduced resources has been a rise in the student-faculty ratio, from less than 14 in 1980-81 to 22 in 1996-97 and almost 23 in 2003-04, offset only partially by the addition of research-funded positions with limited teaching roles sponsored by the Alberta Heritage Foundation for Medical Research or the Canada Research Chairs program. A similar if not greater impact shows up in space use: some classes take place in inappropriate facilities and research funding success puts related pressure on inadequate space for graduate students, post-doctoral fellows and technical support. Major deficiencies in funding for the renewal and upgrading of physical, laboratory and communications facilities undermine efforts to provide up-to-date learning and research environments.

Capital Planning for Space, Infrastructure and Technology

Several major building projects were under construction or in planning stages during the past year and three were completed: the undergraduate student residence known as Mary Schäffer Hall, the Saville Sports Centre on the south campus and the Windsor Car Park expansion. The others all support major initiatives of significance, not only to the University but also to Alberta, in such areas as "agri-food", nanotechnology, health research, energy and natural resource engineering, and interdisciplinary science (see the list on page 13).

These new developments simply illustrate the fundamental ongoing needs for maintenance and renewal. New facilities frequently entail transfers from old spaces that require renewal and adjustments to prepare for replacement uses. Information technology infrastructure needs not only ongoing maintenance and renewal, but also effective response to modern innovations and

related capacity needs. To attend to the integration of ongoing requirements for renewal and upgrading and those for expansion and new initiatives, the University has a long-term capital plan in place. But with a deferred maintenance challenge approaching \$600 million and growing as long as no additional funding emerges, the University has been attempting to provide a reasonable level of care across the campus, directing portions of its capital grants to buildings of strategic importance or abnormally high maintenance costs. This strategic approach coordinates deferred maintenance, functional renewal and other programs like the development of "smart" classrooms to maximize the effect of limited funding. The high deferred maintenance presents direct challenges to academic and research operations. Continued support from provincial and federal government grants is required in this area to support University Goals.

The University's Impact and Potential in Alberta

"Successful knowledge economy clusters," according to David Strangway, President and CEO of the Canada Foundation for Innovation, "develop and are centred around universities that have the ability to provide outstanding opportunities for their researchers to perform at internationally competitive standards." This powerful productive impact is multi-dimensional, chiefly dispersed through graduates (more than 7,300 at the University of Alberta in 2003) and a tremendous range of research programs. The magnitude of the operation itself creates a major boost: at the University of Alberta, more than \$800 million of expenditure in 2003-04, principally in Alberta, employing 11,800 people in full-time and part-time jobs, with a combined spin-off effect supporting more than one in every 40 Alberta jobs.

But the productive impact through graduates and research results has many layers already effectively contributing to the four strategic directions of Alberta's 20-year plan. University of Alberta graduates manage over 30% of Alberta's top companies. At the end of March 2004 University innovation had generated 70 active spin-off companies. The challenge is to ensure that more Albertans receive the benefits of university education and research. Alberta's university participation rate by young people is one of the lowest in Canada, and Canada's average lags behind that of such countries as Korea, the United Kingdom, the United States, France, New Zealand, Australia and Finland.

Increased capacity at the University of Alberta (space and facilities as well as faculty and

programs) would accomplish two kinds of objectives critical to Alberta's 20-year plan: meet the demand for enrolment growth and propel Alberta into the forefront of the knowledge society, and focus unprecedented expert resources right onto Alberta priorities. A number of developments in the last few years have, for example, clearly identified very specific needs in rural Alberta. Some have to do with ensuring the

best educational opportunities. Others need the best application of socio-economic strategy. Still others await new scientific advances. The University of Alberta broke new boundaries of productivity in 2003-04 with the resources at hand, the sure sign that this is the place that will turn strategic investment into learning, innovation, and an internationally attractive Alberta economy and society.

THE UNIVERSITY IN 2003-2004

Opened in 1908, the University of Alberta is one of Canada's premier comprehensive research universities, committed to serving the Alberta and broader communities by the dissemination of knowledge through teaching and the discovery of knowledge through research, expressed in the following core activities:

- Teaching and offering internationally respected degree and professional development programs within 14 faculties and two schools;
- Delivering a wide range of courses through distance and cooperative education programs;
- Fostering, conducting and disseminating research and creative activity;
- Linking research and creative activity with teaching and with our community.

The University owns 733 hectares of land, including property outside of the City of Edmonton. In addition, the University uses approximately 22,700 hectares under various lease agreements. Building space occupied by the University totaled approximately 1.3million gross square metres in 2003-04. Within these totals, the main campus encompassed some 92 hectares (228 acres) of land and 141 buildings (89 academic and support, 48 residential, four car parks) covering about one million square metres of gross building area. The average age of the buildings on the main campus was 50 years, and the replacement value is estimated at \$2.2 billion. Some 12,154 full-time and part-time faculty and staff members (or 8,866 in full-time equivalent terms) worked for the University.

These facilities were occupied by some 11,823 part-time students during Spring and Summer terms and by some 34,367 full-time and part-time students during Fall and Winter terms, amounting to a preliminary estimate of 30,069 "full-load equivalent" students for the year. They chose from more than 200 undergraduate programs and 170 graduate programs. Depending on program and load, students paid a variety of tuition fees according to the fee schedule, which was set by the Board of Governors within the boundaries of Alberta Learning's tuition fee policy. The sample fall/winter assessment set out for the 2003-04 calendar year for a full-time Canadian undergraduate student taking five credit courses was \$4,537. The ratio of tuition fee revenue (\$129.1 million) to net operating expenditures (\$534.3 million), calculated according to Alberta Learning's tuition fee policy, was 24.16%.

On November 21, 2003, a letter of intent for the merger of Augustana University College and the University of Alberta was signed, representing a significant strategic opportunity and adding a new dimension to the system framework of Campus Alberta. From Augustana's perspective, it ensures the continuation of high quality educational programs and a Lutheran presence on campus. From the University of Alberta's and Campus Alberta perspectives, it develops a strategic link to rural Alberta in the shape of a smaller residential campus offering a University of Alberta degree and prospects for offsetting enrolment pressures. The merger takes place in 2004-05, creating the "Augustana Faculty" within the University of Alberta.

The University's capital program, valued at over one billion dollars over the next 10 years, continued in 2003-04 with unprecedented building and upgrading to reduce the critical shortage of research, teaching and administration facilities. Major construction projects completed in 2003-04 included:

- Mary Schäffer Hall – a new student residence and University Conference Centre in the Lister Hall complex (opened Fall 2003)
- Saville Sports Centre – a sports centre on the University's south campus (opened Winter 2003)
- Windsor Car Park Expansion – adding 600 additional stalls to this parking facility (completed Fall 2003)
- Utilities expansion – Phase 1a – boiler and stack (completed Winter 2003)

New projects included:

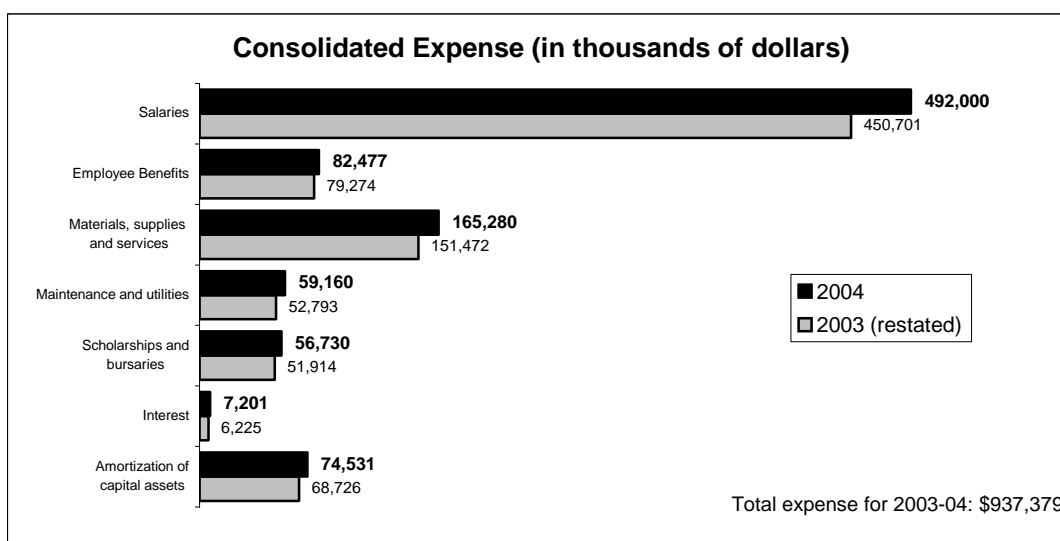
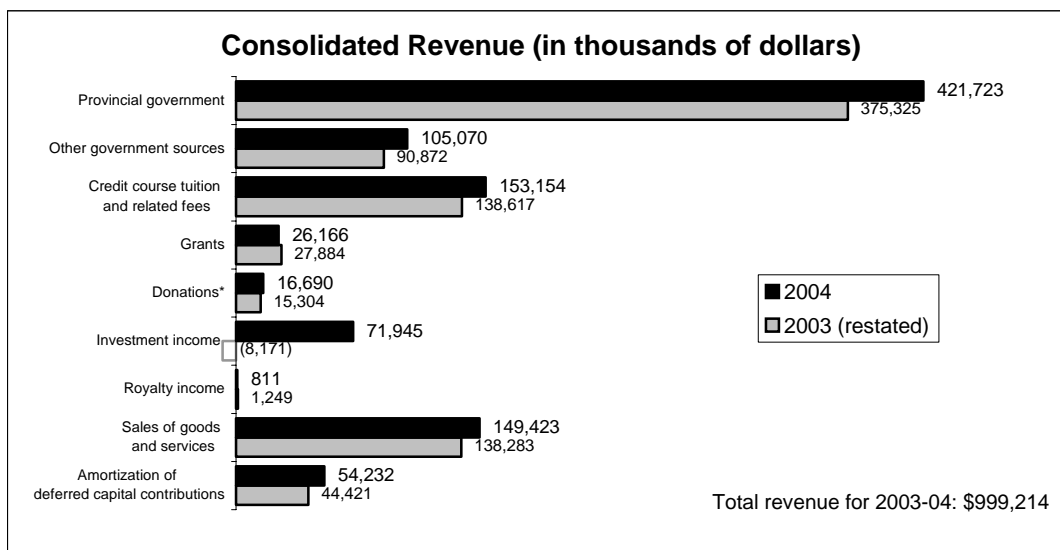
- Agri-Food Discovery Place – a centre for meat safety processing and crops utilization (expected completion December 2005)
- Centennial Centre for Interdisciplinary Science – consolidation of key research initiatives and new space for offices/research (Phase 1 completion July 2005)
- International House (formerly East Campus Village) – student residence (completion August 2004)
- Health Research Innovation Facility (HRIF) – a medical health research centre (completion HRIF East fall 2006; HRIF West spring 2007)
- Markin/CNRL Natural Resources Engineering Facility (NREF) – an engineering research centre for the energy and natural resources sectors (completion December 2004)
- National Institute of Nanotechnology (NINT) – a leading centre for research in this emerging technology (completion November 2005)
- Utilities Upgrades – to provide services for new facilities (completion December 2006)
- University of Alberta Heart and Stroke Research Centre, *now known as Alberta Cardiovascular & Stroke Research Centre (ABACUS)* – a human imaging and vascular biology research facility being developed in conjunction with the Alberta Heart Institute (completion May 2005)
- Zeidler Family Gastrointestinal Health and Research Centre – consolidation of the Department of Gastroenterology and development of new clinical training facilities for the health sciences (completion January 2005)

In 2002-03 the University developed a Long Range Development Plan (LRDP) to provide direction for growth on the University of Alberta's North Campus, South Campus, Faculté Saint-Jean and Michener Park sites. In order to address the capital requirements associated with the merger of Augustana University College and the University of Alberta, and the Capital Grant approval requirements, a series of studies have been undertaken. These include a site hazardous material assessment, a site survey and a Site and Facilities Master Plan. In addition, a standardized facilities audit will be completed and a Strategic Approach to deferred maintenance developed.

Financial Report 2003-2004

The following summary is included for information only. A complete discussion of the revenue and expense of the University is contained in the audited University of Alberta Financial Statements.

The University ended the 2004 year with a \$61.8 million excess of revenue over expense (2003 - \$37.3 million deficiency of revenue over expense) and a \$4.0 million deficit (2003 - \$45.5 million deficit). The increase of \$99.1 million, from a deficiency to an excess of revenue over expense, is primarily due to increased investment income of \$80.1 million. In addition, in 2004 the federal government provided new program funding of \$13.4 million for indirect costs associated with research activity. The funding followed the announcement of the federal government's new Indirect Cost Grant Program in its 2004 budget. Federal funding for indirect costs of research had been received in the past (\$11.9 million), but only on a one-time basis for 2002 and prior years.



* For a broader representation of charitable received gifts see Item 27, page 44.

Sponsored Research Funding (before deferrals)¹	(in thousands of dollars)	
	2004	2003
Government of Alberta	\$119,467	\$83,606
Government of Canada	150,508	118,076
Municipalities, other provincial governments and hospitals	9,265	10,005
Canadian associations, foundations, institutes, individuals, etc.	15,494	18,362
Total Canadian Government and Non-government Organizations	294,734	230,049
Foreign government and public institutions	4,228	4,202
Foreign associations, foundations, institutes, etc.	8,642	10,487
Total Foreign Government and Non-Government Organizations	12,870	14,689
Canadian business	18,674	16,121
Foreign business	2,783	3,091
Total Business	21,457	19,212
Endowment earnings allocated to research ²	24,082	2,802
Other Revenue	6,866	6,101
Total Endowment and Other Earnings	30,948	8,903
TOTAL SPONSORED RESEARCH FUNDING	\$360,009	\$272,853

Notes:

¹ Figures here do not include an estimated \$17.2 million in clinical trials and related research funding with Capital Health and the Alberta Cancer Board. **Total sponsored research funding at the University was \$377.2 million in 2003-04.**

² The market value of endowments increased in 2004.

SAMPLE OF ACHIEVEMENTS

The following section contains examples of the stories that have made news at the University of Alberta in 2003-04. They indicate the scope of the University's activities and provide a sample of achievements on campus.

Well Prepared Students

Innovative Work Experience

Students in the University's Department of Occupational Therapy are required to do an eight-week work placement in the field, under the supervision of a qualified Occupational Therapy professional. Normally, Occupational Therapy students spend that placement in a clinic or hospital in the public health system. At the request of one of its students, however, the department had a trial field placement within industry.

Dana Robinson was working for the summer at Sunterra Meats in Trochu, Alberta when she concluded she could do the most good right there, in Trochu. Her department agreed to allow her to do her placement with the private company, and everyone is reaping the rewards: Dana is earning practical experience in an unorthodox manner; the company is benefiting from their placement student's insights and suggestions, and the employees themselves are benefiting from a safer and healthier work environment.

For example, Robinson made the simple suggestion of cutting notches into a plastic disc that workers have to rotate to move products along the plant floor. By cutting notches into the disc, it became remarkably easier to turn, lessening the pressure on shoulder, back and arm joints.

As a result of the success of this placement, the University will continue to work with industry to develop more field placements for its Occupational Therapy students. Industry placements are an expansion of the University's innovative new program to place students at work in the community.

Community Service-Learning

Historically, through its various agencies, the city addressed social problems independent of the theoretical research and teaching conducted by the University. But a new Community Service-Learning (CSL) initiative is changing that by connecting community groups and University programs. In 2003 the Faculty of Arts set up a new set of linkages that allow the University to make a real contribution to local social services agencies while advancing its core teaching and research mandate.

Led by sociology professor Dr. Sara Dorow, the CSL program works by pooling resources and providing a place that community agencies and faculty and students can contact when they want to set up programs and create links. CSL is more than a work experience program. It is a new way of thinking about university learning. Community voluntarism and activism become an important aspect of students' learning, not merely an add-on to their studies.

A pilot project of this initiative was started in September. Students in Dr. Satoshi Ikeda's Sociology 260 class (inequality and social stratification), Dr. Sourayan Mookerjee's Sociology 345 class (cultural studies), and Dr. Serra Tinic's Sociology 365 class (media and cultural globalization) were able to complete assignments based on volunteer work in an area related to their courses. CSL was an option in each course; students were not required to undertake community service in order to earn course credit.

For example, some students from the Sociology 260 class chose to work with ArtStart, a program of the Edmonton City Centre Church Corporation that offers after school arts classes (visual art, and dance) for inner city children. CSL students worked with the kids on their art projects and in the promotion of ArtStart. As one participant noted in the evaluation of the program: "I was able to understand the concepts to a greater level. In class you don't see the actual effects, whereas CSL allows one to see effects in society."

The community participants also felt that the program was a success and all eight are interested in future participation.

Doctoral Programs - Provost's Entrance Awards

Long recognizing that top-quality graduate students are one of the keys to the success of a world-class research university, in October 2003 the University of Alberta announced the investment of a further \$1.6M in doctoral students.

Called the Provost's Entrance Award, the new program grants 160 awards to incoming doctoral students and 140 awards to doctoral students entering their second year of studies, starting in September 2004. Valued from \$4,000 to \$8,000, the awards will be granted based on academic merit and student financial need.

Competition is stiff for the very best graduate students from across Canada and around the world. This is the second part of the university's plan to enhance the environment for graduate students. The first step, a thesis-only fee introduced in September, makes tuition for graduate students at the University among the lowest in Canada. Together, these initiatives make the University of Alberta more attractive to prospective students.

Just as importantly, the financial security the awards bring allows students to concentrate on

their studies instead of worrying about living expenses. Studies have shown that PhD students do much better and accomplish their goals much faster if finances aren't a worry.

Funding for the awards comes from the Provost's budget, the Faculty of Graduate Studies and Research, and through restructuring of other scholarship funding.

International Recognition of Students

The University's industrial design program continues to increase in stature, attracting students from around the globe and bringing student artists and designers national and international attention.

In the spring of 2004 about 20 industrial design students from the University's design program turned heads at the Toronto Interior Design Show. Their work greatly impressed the organizers, who described the work as strong and on par with that of the larger urban schools.

The vision and talent of three University of Alberta students reached Chicago with an art show featuring their work. Among just 12 artists selected for the international *Juventus 2003* exhibition, Aimee Brown, Tonia Bonnell and Erik Waterkotte all showed print-based work. Produced by the Ukrainian Institute of Modern Art, the *Juventus* show presented work selected from submissions by art students and recent art graduates from all across the U.S. and Canada. It was designed to highlight the diverse ideas currently engaging art-based academics.

Several University of Alberta senior undergraduate and graduate students in the University's printmaking program provided a large part of an exhibit in Bielefeld, Germany. Approximately 30 pieces of work were displayed as part of an exhibit entitled *Young Artists in Focus*, at the initiation of Wolfgang Troschke, a renowned professor of design at the University of Applied Sciences in Muenster, Germany. After meeting printmaking professor Liz Ingram

and visiting the University of Alberta, Troschke was struck by the graduate-student quality of the senior undergraduate students. The exhibition provided international exposure for both the students and the University, and a further link between the University and Troschke's university in Muenster.

The innovative creations of a trio of University of Alberta students, who combined rustic Canadiana with some creativity, won them a berth in a prestigious New York trade fair, an event that showcases the best and brightest ideas in North America for home decoration. The three featured pieces were based on a pre-set cabin theme. Using the concept of backwoods nature, each student created organic, craft-based, and functional pieces addressing the issues of sustainability and eco-design and connecting the industrial process with craftsmanship.

Alberta Bound

As part of his "Alberta Bound" program, President Rod Fraser traveled to smaller centres across the province in 2003 to meet face to face with high school students and tell them about the University of Alberta and some of its successful graduates from rural Alberta.

"We want you at the University of Alberta," he told the students, urging them to keep striving for excellence both within and outside the classroom. At the University of Alberta, he informed them, they would find the doors of opportunity and the chance to create friendships that last a lifetime.

President Fraser also wanted to hear what residents and students outside of Alberta's major cities had to say about the University. In meetings with mayors, community leaders, schools board trustees, parents and alumni to talk about, among other things, he noted that students from rural areas participate in university at half the rate of their urban counterparts.

He spoke about the issues around government funding and addressed some of the misconceptions about the actual costs of attending university – which are frequently overestimated. President Fraser heard that many students from smaller centres are intimidated by the prospect of moving to Edmonton and its large campus. Fraser told them about the many activities that help to make the university more accessible, including its orientation programs that help with the transition from home to university life.

The benefit of a university, Fraser told his audiences, is that it is a vibrant intellectual community with students and professors from all over Alberta, Canada, and the world. It is a place where researchers are on the cutting edge of new knowledge and students have the chance to work with them. His audiences got the message: "Knowing that he wants us to come makes me feel better," said one grade 10 student from Namao.

The University also reaches a potential audience of 50,000 in rural Alberta through the airwaves, thanks to the efforts of the Faculty of Agriculture, Forestry and Home Economics. *Along the Fenceline* is a "bite-sized" radio show that runs at 12:25 p.m. on weekdays on several Alberta radio stations to raise awareness of the faculty and encourage more students to study in a sector of great importance to the province.

"The spirit of the show is to break down the ivory tower image of the university within rural Alberta," says Cynthia Strawson, the faculty communications officer, who got the show on the air. "What we're doing in our faculty is meant to be applied to everyday life." Various experts within the faculty are interviewed on issues ranging from the cancer-fighting qualities of cow's milk to care networks for rural seniors, to the economic impact of drought.

Leading in Creativity and Knowledge

“Cluster Bomb” Drug Delivery

Interdisciplinary research has proven itself as a major innovative force in the continuing explosion of new scientific knowledge. Three University of Alberta researchers showed this with their creation of a novel way to deliver a new lung cancer drug. The new system, which uses “nanoparticle cluster bombs,” has proven effective in treating cancerous lung cells in vitro (in a petri dish).

The three researchers—Dr. Raimar Loebenberg; a professor of pharmacy, Dr. Warren Finlay, a mechanical engineering professor; and Dr. Wilson Roa, a professor of oncology - have applied for a patent on the lung cancer nanoparticle drug delivery system.

The drug sits in powder form in the inhaler, which is similar to the device that asthmatics use. The difference between regular drugs and “nanoparticle cluster bombs” comes when the powder arrives in the lungs, where it dissolves into nanoparticles upon contact with moisture in the lung.

Each grain of drug powder contains a few thousand nanoparticles. Once the nanoparticles are active in the lung they have a tremendous advantage over regular drugs, because they are better able to do what they are designed to do.

The idea is that the nanoparticles can be programmed to seek out and attack cancer cells, while leaving healthy cells alone.

“This was not the result of one brain, but three,” said Dr. Loebenberg. “At first, when we started working together we didn’t understand each other very well, but now I think we make a pretty good team, and I think we’ve created something that has good potential for a solution to lung cancer.”

New Way to Generate Electricity

In 2003 two University of Alberta engineering professors discovered a new way to generate electricity – the first new method discovered in more than 150 years.

The University of Alberta research, published by the Institute of Physics *Journal of Micro-mechanics and Microengineering*, involves a new method of generating electric power by exploiting the natural electrokinetic properties of a liquid such as ordinary tap water, by pumping fluids through tiny microchannels. A team of researchers and students, led by engineering professors Dr. Daniel Kwok and Dr. Larry Kostiuk, created a new source of clean, non-polluting electric power with a variety of possible uses, ranging from powering small electronic devices such as cell phones to contributing to a national power grid.

The project took off soon after Kostiuk was appointed chair of the University’s Department of Mechanical Engineering. When Kostiuk made his rounds to learn what his colleagues were studying, he listened to Kwok describe his work with electrokinetics - the science of electrical charges in moving substances, such as water.

Kwok explained how, when water travels over a surface, the ions that it is made up of “rub” against the solid, leaving the surface slightly charged. Kostiuk commented that it sounded like a battery – that was all it took to spark a whole new project. Before long their discovery was being reported in the world media.

The discovery shows the dramatic results that can happen when basic research intersects with creative thinking and an interdisciplinary approach. The inventors are now exploring how their research can be developed into a battery for commercial use.

Aboriginal Research

The University has a long history of aboriginal research. In early 2004, Dr. Carl Urion, professor emeritus in the University's Department of Anthropology, received a national Aboriginal Achievement Award for a lifetime of education, research and advocacy around native issues. Urion was one of 14 people receiving the Canadian aboriginal community's highest honour. Created in 1993, the awards are meant to celebrate the career contributions of First Nations people in diverse occupations. Urion is described by the jury as "one of the first role models in a university setting, who through his teaching and research set a new standard for Aboriginal students," helping two generations of them to "advance and excel."

Urion earned his B.Ed. degree at the University of Alberta in the late 1960s, became a sessional instructor in the early 1970s and received a PhD in anthropology in 1978. A faculty member between 1975 and 1997, he was instrumental in establishing Native Student Services on campus. He has promoted the value of aboriginal education and high research standards in First Nations communities throughout his career.

The University continued to expand its research in aboriginal initiatives with a \$1 million grant from the Social Sciences and Humanities Research Council of Canada (SSHRC). Dr. Frank Tough and the University's School of Native Studies received a Community-University Research Alliance (CURA) grant to work towards addressing cultural, social and land-use concerns of the Metis in northwest Saskatchewan. The allotment is part of \$6 million being distributed by SSHRC to fund six community-based projects in Alberta, British Columbia, Saskatchewan and Quebec to promote and improve the sustainability of Canada's aboriginal communities.

The five-year project focuses on archival, community and policy issues. The University will partner with the Metis community in northwestern Saskatchewan to glean and record

the knowledge of elders and other residents.

The partners will document, through maps, lands traditionally used by the Metis and will also draw up a cartographic history of the region and assess natural resource policies in the area. The area, about one-sixth of the province in size, encompasses 19 Metis communities.

Several University experts are collaborating on the project, including Dr. Naomi Krogman, a professor in the Department of Rural Economy. Krogman helped design the policy component of the study, which will gather information on Metis land-use priorities. "It's a way to be more informed about what they do care about, so they can negotiate better with the province over research development," she said.

Lifetime Achievement

József Tóth, a professor emeritus from the University's Department of Earth and Atmospheric Sciences, received one of the most prestigious awards in his field from the National Ground Water Association (NGWA), an organization with more than 20,000 members.

Dr. Tóth's work has become part of the basic theoretical tool kit used in groundwater exploration, agriculture, forestry, soil science, petroleum exploration and wetland management. His biggest breakthrough, devised in the early '60s before he received his doctorate, is a mathematical formula used to explain how groundwater moves under the influence of gravity. It is used to predict the location of drinking water, the migration of hydrocarbons and the generation of various ore deposits, and to understand the distribution of vegetation and the origin of soil salinity.

Tóth began his study of geophysics in Hungary in the early 1950s, but after the Hungarian Revolution and just shy of graduation, he fled to the University of Utrecht in the Netherlands in 1956. There he completed the equivalent of a doctorate in geophysics without a thesis, and immigrated to Canada, where he joined the

Alberta Research Council in 1960. He first published his basic theory in two papers in the *Journal of Geophysical Research*, the most prestigious journal in the field, in 1962 and 1963.

He is credited with introducing the study of hydrogeology and petroleum hydrogeology to the Universities of Alberta and Calgary. Tóth has received two other major awards in recent years: the President's Award from the International Association of Hydrogeologists in 1999, and the 2002 Prix R.N. Farvolden Award from the Hydrogeology Division of the Canadian Geotechnical Society.

New Artificial Intelligence Program

Dr. Richard Sutton represents the top human intelligence researching artificial intelligence, and he was appointed the iCORE Chair in Reinforcement Learning in the University of Alberta's Department of Computing Science. Reinforcement Learning is learning from interaction with an environment, from the consequences of action, rather than from explicit teaching. Sutton's research program will be the cornerstone of the Alberta Ingenuity Centre for Machine Learning.

Sutton, who came to the University from private industry and the University of Massachusetts in Amherst, has authored seminal papers in his field; he also co-wrote *Reinforcement Learning: An Introduction*, an artificial intelligence textbook.

Sutton says he came to the University of Alberta because the people, scientists, and researchers in artificial intelligence at the University are top notch and in some cases among the best in the world.

The University also celebrated the announcement that Dr. Jan Bosch, a software variability management researcher from the University of Groningen in the Netherlands, and Dr. Kamil Zigangirov, an algorithmic error control coding researcher from Lund University in Sweden, were both named iCORE visiting professors at the University.

Research Chair in Mining

Clayton Deutsch uses statistical analysis and risk assessment techniques to make predictions about what oil, gas, and mineral resources lie beneath the Earth's surface. His work can help mining companies work more efficiently and effectively, allowing them to save money and reduce their impact on the environment.

In 2003 the professor in the University's School of Mining and Petroleum Engineering was appointed to the new Alberta Chamber of Resources Industry Chair in Mining Engineering. Deutsch already held the Canada Research Chair in Natural Resources Uncertainty Assessment.

A consortium of corporations in the resource and technology sector banded together to invest a total of \$1.4 million in the chair. Additional funds of \$2.25 million came from the Canada Research Chairs Program and the Canada Foundation for Innovation, as well as other sources. Total investment in the chair will exceed \$5.3 million – and the partnership came together around Deutsch and his reputation as a researcher and leader.

President Fraser highlighted the value of a unique partnership. "Public and private interests have joined in this partnership to improve the quality of life for all Canadians."

Breast Cancer Prevention

Dr. Kerry Courneya, a specialist in behavioural medicine and a Canada Research Chair in Physical Activity and Cancer, studies the effects of exercise after cancer has been diagnosed. He is director of the Faculty of Physical Education and Recreation's Behavioral Medicine Fitness Center, established in 1999 with funding from AHFMR and the National Cancer Institute of Canada.

"The primary things we've looked at are the links between exercise and quality of life," says Courneya. One study shows that breast cancer survivors who exercise soon after their

treatments say they have more energy to shop, garden or play with their grandchildren – simple joys that make a patient's life worth living. Another looks at the effects of a 12-week weight-training program for prostate cancer survivors who had been on anti-testosterone therapy, a treatment that can cause fatigue and affect a patient's body image.

For this multi-disciplinary approach, Dr. Courneya is able to call on the resources of world-renowned oncology experts at the Cross Cancer Institute as well as the University's exceptional pool of talent.

Dr. Courneya's next project is a joint study at the Universities of Alberta and Calgary. Funded by the Canadian Breast Cancer Research Alliance, the "Alberta Physical Activity for Breast Cancer Prevention Trial" will examine what biologic mechanisms may be at work in reducing breast cancer risk. Only the second study of its kind in the world, the research seeks to provide evidence-based data for guidelines on physical activity for breast cancer risk reduction.

Northern Studies and Research

In 2003 the University of Alberta's historic focus on northern issues gained special recognition and set the stage for international growth. Home to the Canadian Circumpolar Institute and the Library, the University is known for northern research in almost all disciplines, including the humanities, medicine, engineering, forestry, nursing, the environment, biology, and basic science. Dr. Nancy Gibson, the new science director of the Canadian Circumpolar Institute, works with the University's Northern Researchers Advisory Committee to create the pre-eminent northern research institute in the world.

In addition, Dr. David Malcolm, the former director of the Canadian Circumpolar Institute, now leads the Mid-Canada Research Institute, a new project bringing together researchers from Canada, the UK and Russia. The institute will facilitate community-driven research initiatives

throughout the mid-Canada region, which extends as far north as the Yukon and Northwest Territories. Research projects in areas such as health care, housing, and self-governance will be selected through community consultation to focus on community needs and the transfer of knowledge and training from researchers to community members. Dr. Malcolm's achievements have earned him membership in the Arctic Club, a prestigious international organization devoted to arctic studies.

After 40 years of research, the Department of Biological Science's Dr. Ian Stirling received the Northern Science Award, a lifetime achievement honour from the Ministry of Indian and Northern Affairs. Dr. Stirling's research and mentoring has provided groundbreaking opportunities for graduate students – and in particular female graduate students – to work in the area of marine mammal biology.

Students at the University are also raising awareness of northern issues. A conference held in the fall of 2003 marked the first time international researchers joined the annual conference of the Association of Canadian Universities for Northern Studies. The student-run conference provides an opportunity for students and professors to develop relationships across disciplines, share research and develop multidisciplinary approaches to northern research.

These initiatives are putting the University of Alberta at the forefront of northern research with an expanding international reputation. The University will host the Canadian International Polar Year Secretariat, providing leadership and support for Canada's participation in the next International Polar Year in 2007-08, which will involve 100 countries with an estimated research budget of more than \$1 billion.

University Excellence

Rhodes Scholar

A graduate student from the Faculty of Physical Education and Recreation is the University of Alberta's first Rhodes scholar in ten years. Marcia Reinhart is one of 11 students across Canada and one of three from the Prairie Provinces selected to study at Oxford University in 2004. She is supported by the most well-known and highly regarded scholarship in the world, worth \$26,000 U.S. per year for up to three years.

Working under the supervision of Dr. Ted Putman of the Faculty of Physical Education and Recreation at the time of her selection, Reinhart was completing her master's program in physiology, studying muscle cell metabolism and structure under different conditions, such as physical activity. She planned to pursue doctoral work at Oxford in a related field.

Open to students from across the Commonwealth and United States who have earned a first degree, the Rhodes Scholarship is the oldest international award of its kind. It is traditionally awarded to those who demonstrate leadership ability, community service and athletic achievement in addition to academic excellence.

Reinhart is also a successful biathlete, training six days a week and serving on the provincial executive of Biathlon Alberta. Last year she began volunteering for WIN House, an Edmonton shelter for women who have suffered physical, emotional, economic or spiritual abuse.

The last time the University produced a Rhodes scholar was 1993, when two were named: former Students' Union President Randy Boissonnault, who went on to become a founding partner of Xenex Venture Catalysts and board chair of the Centre for Family Literacy; and Jasmine El-Nahas, now a corporate lawyer in New York City. There have

been 17 Rhodes scholars from the University of Alberta since the award was established.

Growing Institute in Nanotechnology

The University is home to what is rapidly becoming one of the world's leading institutes of nanotechnology – and in 2003 two of its cornerstones fell into place with the recruitment of two top chemists. Dr. Jillian Buriak and Dr. Hicham Fenniri, a wife and husband team from Purdue University, took up their positions in June of 2003.

Nanotechnology is a science that develops new materials and processes that are measured on scales of billionths of metres, or 1/80,000 the diameter of a human hair.

Despite their young ages - Buriak is 35 and Fenniri 36 - these two are expected to play a leading role in NINT. Buriak, born and raised in and around Toronto, does research on nano-scale properties of surfaces, particularly of silicon.

Buriak won the 2003 Pure Chemistry Award of the American Chemical Society. The award is given each year to the young researcher who has done the best work in pure chemistry across America. "If you look down through the list of winners for this award," said Dr. Martin Cowie, Chair of the University's Department of Chemistry, "it's a who's who of American chemists. I know at least four people on that list have gone on to win Nobel prizes."

Fenniri also works in nanotechnology, but in a different area - supramolecular chemistry, in which small molecules are designed to assemble into nanoscale structures for applications from drug discovery to molecular electronics. Fenniri actually makes the nanostructures.

“The National Institute of Nanotechnology offers us facilities that are unequaled almost anywhere in the world,” he said. “We have everything here to succeed and be competitive nationally and internationally.”

Research Expertise in Water Quality

University of Alberta researchers are world-recognized leaders in water quality management. In the area of drinking water quality, Dr. Mike Belosevic’s research and techniques for the purification of drinking water are used in treatment plants the world over. Specifically dealing with the public health threat caused by protozoans - persistent and potentially harmful organisms - Belosevic’s work spans a range of solutions, from detecting the parasites in water to studying ways in which animal immune systems deal with infections.

The culmination of this work is an inexpensive, automated, laser-based technique for assessing the presence of protozoan parasites in drinking water, which is ideal for use by drinking water providers. Though patenting was an option, Belosevic felt the technique was so important for the protection of public health that it should be placed in the public domain.

He has recently collaborated with Dr. Daniel Smith, the University’s Canada Research Chair in Environmental Engineering, following up on research he did with the late Dr. Gordon Finch to develop a comprehensive data set for chemical inactivation of protozoa in drinking water. He has also worked with Drs. Jim Bolton and Steve Craik on UV inactivation of Giardia and Cryptosporidium. These data sets are currently being used by the Environmental Protection Agency for the development of drinking water standards in the United States.

Dr. David Schindler, one of the University’s best-known scientists and Killam Memorial Professor of Ecology, earned the 2003 Killam Prize, a national award that recognizes outstanding career achievements. Schindler planned to use

the money to supplement the grants he receives to study in his area of expertise: fresh water. Schindler has previously received numerous international awards, including the Gerhard Herzberg Gold Medal for Science and Engineering (2001), the highest honour bestowed by the Natural Sciences and Engineering Research Council (NSERC). He is the only Canadian to receive both the Stockholm Water Prize (1991) and the Volvo International Environment Prize (1998).

Schindler has been internationally recognized for his research on the harmful effects that acid rain and phosphorous-rich detergents have on fresh water. His work has led to important public policy changes, including restrictions on acid emissions and legislation controlling phosphorous in soaps and detergents. Aside from leading his research teams, Schindler is a popular figure on the public and academic speaking circuits and is a tireless advocate and worker to preserve the world’s fresh water supply. In response to the concerns of Lakeland County, including commercial fishermen and environmentalists, Schindler and his research team are trying to address water quality problems in Lac La Biche.

Agricultural Research and Education Partnership

A memorandum of understanding, signed in May of 2003, marked the first step toward the creation of the Institute for Food, Agri-Industrial, and Agricultural Sciences, Alberta (IFAASA). The three founding members of the institute – the University of Alberta, Alberta’s Ministry of Agriculture, Food and Rural Development (AFRD) and the Alberta Research Council – will pool resources, staff and facilities valued at more than \$750 million to collaborate in managing and delivering agriculture, agri-food and agri-industrial research and education programs.

This agreement is the first of its kind in Canada, “a quantum leap forward in research and

teaching integration in Alberta,” said President Rod Fraser. “The sharing of intellectual, financial and human resources can only spell good things for Alberta.” It also means far less duplication of efforts and will lead to the emergence of several centres of excellence.

Research will focus on the discovery of new technologies and knowledge, while product development and commercialization will focus on the application of those discoveries. The institute will also develop and deliver training and education programs to increase significantly

the number of graduates from agriculture-related university, college and industry programs.

As the institute develops its research and education capacity, it is expected other established Alberta research organizations will join, including the Olds College Centre for Innovation and the University of Lethbridge. The Institute also plans to develop short-term partnerships with national and international public and private sector investors, contributing to Alberta’s future economic development.

Contributing to Communities

Rural Learning

One of the major challenges to rural communities in Alberta is to provide high quality education for their inhabitants. With the evolution of broadband networks, it is now possible to facilitate even more effective learning for distanced students. The Rural Advanced Community of Learners Project (RACOL) is developing a model of teaching and learning that exploits the potential of broadband networks and advanced digital technologies. Rather than falling into either of the synchronous or asynchronous distance learning camps, RACOL exploits the best of each. Capabilities such as broadcast quality digital video, streaming media, electronic whiteboards and educational objects will aid in the facilitation of effective learning and address the needs of students in rural and remote school districts.

The Fort Vermilion School Division (FVSD), the focal point of the RACOL project, is located in the northwestern corner of Alberta. Its most serious educational challenge is the delivery of a quality and equitable high school program in six small high schools, some with only twelve students. The schools are so geographically separated that there is no opportunity to combine them into one or two larger facilities. The use of audio graphics to deliver eight

academic courses to all high schools synchronously has been fairly successful, but teachers and students have indicated some dissatisfaction with this learning environment.

Each high school is being equipped with a Virtual Presence Learning Environment (VPLE) that can originate and receive broadcast-quality video and audio. Students or teachers at each location see the teacher/presenter on one large monitor and the students on a second large monitor in “split screen” mode. Two smaller monitors also display these images at the back of each room. Each location also has a SMART Board™ 3000i electronic whiteboard, a visualizer and CD-ROM/DVD/videotape player. Anything displayed at one location is automatically displayed at all.

RACOL project leader, Craig Montgomerie, is a professor in instructional technology at the University of Alberta. “Through this project,” he says, “we want to provide the best possible learning experience for students. We are starting with students in northern Alberta and hope to eventually expand to students in remote schools across Canada and abroad. We expect this project will set a new standard for distance education.”

Community Medical Residency Program

It is the job of the chief medical officer of health to look out for the population as a whole – that means keeping an eye on everything from SARS to AIDS to flu shots, emergency response, to seatbelt use and smoking cessation.

It's an important job – but over the years too few new medical school graduates have made it a career choice. The result is a shortage that threatens much of Alberta and Canada. But the University has launched a new Community Medicine Residency Program that will help meet the demand for these public health specialists, especially in Northern Alberta.

Traditionally, community health medicine has had a “low profile,” according to Dr. Gerry Predy, medical health officer for Capital Health and a professor in the University's Department of Public Health Sciences. Medical students didn't know much about it and tended to choose other specialties, he said, “although that's changing somewhat with SARS.”

“Without training in Northern Alberta, it's difficult to attract people. People tend to stay where they have trained. We're hopeful that the program will help fill the need in Northern Alberta.”

The program, designed with help from Dr. Nicola Cherry of the University's Department of Public Health Sciences and Dr. George Elleker, associate dean of postgraduate medical education for the University's Faculty of Medicine and Dentistry, requires five years of academic and clinical training after completion of a medical degree. It contains academic course work as well as practical experience doing clinical rotations in communicable disease control, environmental health and health promotion.

Towards the end of the program, students take on more complex areas of specialty such as health policy, management of public health

programs and inner-city health. They are also given an opportunity to experience rural and First Nations settings.

Working with Young Albertans

The University of Alberta, through several programs and initiatives, reaches out to youth in many novel and important ways.

The Youth Restorative Action Project (YRAP) is a program that allows the sentences of young offenders to be decided by a panel of youths. The first project of its kind in the world, YRAP was formed in March of 2001 with the support of Alberta's Youth Criminal Defence Office (YCDO), Edmonton's Human Youth Society, and University of Alberta campus radio station CJSR. YRAP deals with minor offences to serious issues like sexual assault, armed robbery, break and enter, arson, child prostitution, and severe addictions. Although the sentences devised by the panels have to be ratified by a judge, they're rarely changed. Many of the sentences devised at YRAP are directly related to the crime. One young man had to write a hip hop song on racism for CJSR, and a 13-year-old girl, convicted of sexual assault, had to work with Alberta Hospital to develop an information pamphlet on issues surrounding sexual abuse. Often, offenders will get the chance to interact with the victim of their crime, to foster emotional and personal understanding.

In early 2004 more than 450 Grade 8 students from 24 schools joined with the University of Alberta in a city-wide competition to celebrate the City of Edmonton's 100th anniversary. The City of the Future program was a joint project of the University's Senate, the city and local school boards. Students were invited to develop their vision of Edmonton in 50 years - their City of the Future. Grade 8 students were selected because they will be eligible to enter university in 2008 - the University's 100th anniversary. Winners in the six City of the Future categories (physical education, health and life skills; mathematics and science; social studies and

languages; ethics, environmental and outdoor education; fine and performing arts; and career and technology studies) were invited to display their projects during the city's centennial celebrations.

Pair big kids with little kids in a University of Alberta computer lab, throw in a dash of imagination and the results are out of this world. Students in the University's Industrial Design classes partnered with students in a grade three class who played the part of client in the relationship. Their role was to bring their ideas for furniture that would perform "far-out" functions. "We use it as a way of driving professional client relationships," said art and design professor Robert Lederer. The light-hearted exercise also let his students forget about traditional constraints on their work. "Designers need to think irrationally every so often to clear the cobwebs," Lederer said.

Grade three teacher Shannon Gentilini saw equally profound benefits for her students. "Not only have they gained a friendship, but their ideas matter. That type of collaboration is unique." As well, the youngsters are no longer anxious about using computers in class, and many are considering a future in design.

Bringing Dentistry to the Community

For 25 years the University of Alberta's Department of Dentistry has been sending students to Northern Alberta to provide care in areas without dentists. Continuing to combine community service with teaching, a pilot project was introduced in 2003 to help low income seniors.

A one-year, \$300,000 pilot project between Alberta seniors and the Department of Dentistry provided dental services to low-income seniors who are eligible for financial assistance under the Special Needs Assistance for Seniors program. Eligible seniors could have 100 per cent of their dental costs covered to a maximum of \$5,000 over a lifetime. As the Department of

Dentistry charges only 50 per cent of average dental fees, seniors accessing this project could double the maximum value. The program offered a full slate of typical dental care options, including regular dental work like extractions and fillings, dental hygiene, denture replacement and repair, and oral surgery. More than 70 students in their third and fourth years of study gained experience through providing care to the participating seniors.

"This project resulted from a visit to the department last spring with our Premier, Ralph Klein, and myself, where we discussed the possibility of providing dental care to low-income seniors," said Stan Woloshyn, Alberta Minister of Seniors. "I am pleased that my ministry and the University of Alberta could collaborate to develop this pilot project and provide eligible, low-income seniors with access to quality, affordable dental services." The pilot project ran until Spring 2004 and the Alberta Ministry of Seniors and the University were subsequently evaluating the pilot project.

Employee Wellness

Throughout 2003, the concept of "wellness" received increased attention at the University, furthering a cultural shift many years in the works. In 2002, the University of Alberta Senate had struck a Task Force on Wellness to study the current status of health and wellness initiatives at the University of Alberta. The Task Force released its Final Report on July 21, 2003.

The recommendations of the task force were passed to the University's administration following Board acceptance of the Senate report. Broadly, the recommendations included developing a campus-wide vision, enhancing the commitment of stakeholders promoting a healthy lifestyle and developing opportunities for participation.

Health Promotion and WorkLife Services (or HPaWS), a unit within Human Resources, offers and promotes numerous programs to further

wellness at the University. These include: recognition programs; individual coaching and programs; trend analysis and reporting (e.g. Health Report/HR Report Card); lunch series workshops; tobacco cessation, weight management and more. HPaWS also helps administer the very successful “U of A on the Move” program, developed in the Faculty of Agriculture, Forestry and Home Economics, which is designed to promote physical activity and provide objective feedback to individuals as they become more active.

In 2003 HPaWS worked with senior administration and stakeholders across the University to create a campus-wide wellness committee. Comprising representatives of faculties and central units, the committee is charged with evaluating all the recommendations of the Senate report and recommending to administration how they can be implemented.

Strategic Performance

The University of Alberta has adopted performance measures to gauge the success of initiatives outlined in its Strategic Business Plan 2002-2006. Appropriate performance measures and realistic targets accompany each of the University's four goals and the associated key strategic initiatives. The following tables provide an indication to students, faculty and staff, the Board of Governors, governments and the community of the University's progress through 2003-04 in achieving its goals and objectives set for the end of its strategic business cycle in 2005-06. They also enable the University to gauge the effectiveness of its strategies and make appropriate adjustments in its annual updates to the 2002-06 Strategic Business Plan.

Key Performance Indicators are updated in the following progress tables:

- | | |
|--|--|
| 1) Quality of Entering Students | 20) New Spin-off Companies (3-year annual average) |
| 2) Satisfaction with Educational Quality | 21) Federal Councils Operating Grants per Continuing Faculty |
| 3) Undergraduate and Graduate Enrolment | 22) Competitive Faculty Salaries |
| 4) Quality of Teaching | 23) Faculty and Staff Job Satisfaction |
| 5) Graduate Employment Success | 24) 3M Teaching Awards since 1986 |
| 6) Student Satisfaction with Relevance of Programs | 25) Awards to Faculty |
| 7) CIS Academic All-Canadians since 1990-91 | 26) Comparative Operating Revenue per Student |
| 8) Classroom Technology | 27) Charitable Gifts |
| 9) Year One Classes Taught by Continuing Faculty | 28) Alumni Support |
| 10) WebCT Learning Support Development | 29) Net Assets Deficit |
| 11) Work Experience Programs | 30) Administrative Expenditures |
| 12) International Exchange Students | 31) Accessible Policies and Procedures |
| 13) International Undergraduate Student Enrolment | 32) Facilities Condition Index |
| 14) Sponsored Research Revenue | 33) Stakeholder Satisfaction with Services |
| 15) Federal Research Granting Councils Funding | 34) Association of Research Libraries Index |
| 16) NSERC Steacie Fellowships | 35) National Media Exposure |
| 17) Networks of Centres of Excellence | 36) Public Awareness of Excellence |
| 18) NSERC Industrial Research Chairs | 37) Increase in Life-long Learning Opportunities |
| 19) Gross Licensing Revenue (Cdn\$, 3-year annual average) | |

GOAL 1: THE UNIVERSITY OF ALBERTA WILL PREPARE OUR STUDENTS FOR SUCCESSFUL LIVES AND CAREERS AS LEADERS OF TOMORROW.

The University has four key strategic initiatives that are associated with achieving this goal:

- 1.1 Recruit and satisfy outstanding undergraduate and graduate students and students with outstanding potential
- 1.2 Provide the best possible learning experience for our undergraduate and graduate students' lives and careers
- 1.3 Create an improved learning environment inside and outside the classroom
- 1.4 Provide each undergraduate and graduate student with a significant international experience

The measurement of our success is based on the quality of our students, their satisfaction and success, and the evidence of innovation in our programs.

Key Strategic Initiative 1.1 Recruit and satisfy outstanding students and students with outstanding potential.	The University's strategy is to recruit outstanding students even as its programs remain accessible to the majority of those who will graduate with Alberta degrees. Recent improvements to University scholarship programs have contributed to accountability.
---	---

1) Quality of Entering Students

The proportion of first year students who have achieved 80% or better in their high school programs has been increasing, despite recent enrolment increases. In 2003-04, the university again passed its goal of having 72% of first year students with entering grades of 80% or better. This large jump has two kinds of explanation. One is technical: as entering averages rise even modestly toward upper levels, the proportion over 80% rises much faster. But the second is a cause for concern about accessibility: in the fall of 2003, entering averages in some programs were raised significantly in response to very high demand beyond capacity.

U of Alberta 1st Year Students: Entering Grades from High School Averaging 80% or Better								
History							Actual	Target
1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2005-06
not avail.	58.9%	61.6%	65.3%	67.9%	70.8%	72.6%	81.9%	72.0%

2) Satisfaction with Educational Quality

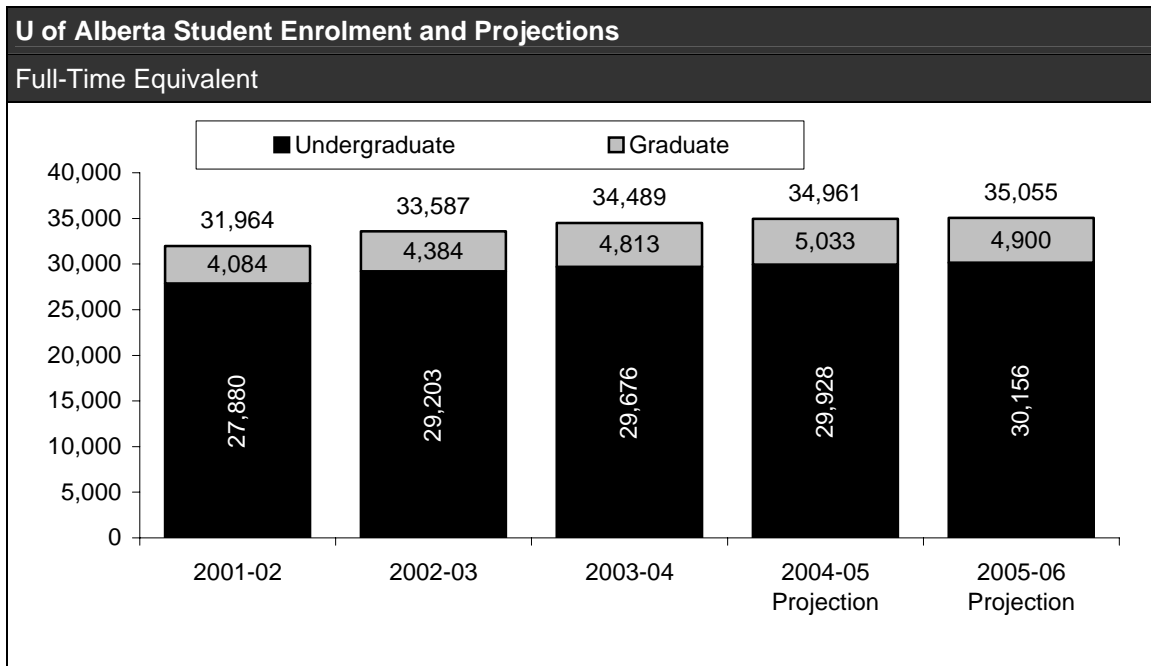
Alberta Learning has historically measured student satisfaction with educational quality through its *Student Satisfaction Survey*. In 2004, this survey was combined with Alberta Learning's *Graduate Employment Survey*. The new survey (*2004 Graduate Outcomes Survey of 2001-2002 Graduates*) measures student satisfaction by asking them "Overall, how satisfied are you with the quality of your educational experience?"

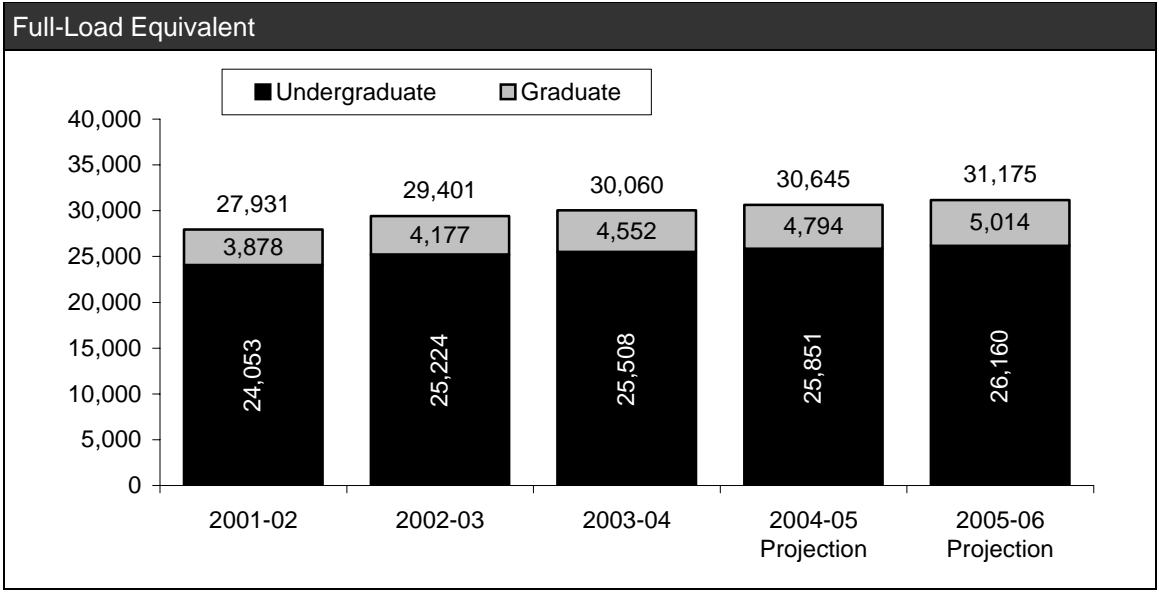
Proportion of students satisfied or very satisfied (biennial survey)								
History							Actual	Target
	1996	1999	2000	2001	2002	2003	2004	2006
Student Satisfaction Survey (discontinued)	83%	77%	No survey completed	79%	No survey completed	No survey completed		
Graduate Employment Survey (discontinued)		No survey completed	76%	No survey completed	81%	No survey completed		
Graduate Outcomes Survey (NEW 2004)							77%	80.0%

Source: Alberta Learning Biennial Graduate Outcomes Survey – biennial cycle starting in 2004

3) Undergraduate and Graduate Enrolment

Enrolment in undergraduate and graduate programs is carefully managed through the admission process. Each Faculty has been assigned an enrolment target based on several factors including quotas established by Alberta Learning, student demand, capacity and market issues. The University has projected enrolment growth based on increased student spaces provided through the ACCESS program and the very high demand that has been demonstrated by applications for admission from both high school graduates and transfer students. At this time, due to issues of capacity, the decision has been taken to maintain undergraduate enrolment at current levels unless funding growth is provided through ACCESS Programs. Faculties have, however, been encouraged to continue to increase graduate student enrolment to the extent possible with current resources. Undergraduate student demand for places at the University has grown dramatically over the past few years and the grades that are required for admission have been increased each year in order to maintain enrolment at acceptable levels. The projection for 2005-06 will only be met if increased funding is provided to support the required capacity.





Key Strategic Initiative 1.2
Provide the best possible learning experience for our students' lives and careers.

The success of a university education is also measured by the students' satisfaction with their educational programs and by their success in future employment. Measures of teaching quality and the relevance of programs for students may be available from Alberta Learning's combined graduate satisfaction and employment survey (*Graduate Outcomes Survey*) and from a new *National Survey of Student Engagement*, both completed in 2004.

4) Quality of Teaching

Selection and implementation of a performance measure will take place with attention to the adjusted Alberta Learning Biennial *Graduate Outcomes Survey* and to a new *National Survey of Student Engagement*, both completed in 2004. A target will not be identified within the current planning cycle. Research is required to ensure appropriate benchmarking against peers with the correct measures. The University will revisit this indicator for the next four-year planning cycle.

5) Graduate Employment Success

Alberta Learning has historically measured student employment success through its *Graduate Employment Survey*, completed 2-years after graduation. In 2004, this survey was combined with Alberta Learning's *Student Satisfaction Survey*. The new survey (*2004 Graduate Outcomes Survey of 2001-2002 Graduates*) is also conducted 2-years after graduation. Preliminary results from this new survey are consistent with results from previous surveys.

Proportion of graduates employed 2-years out									
History							Target	Actual	Target
1997	1998	1999	2000	2001	2002	2003	2004		2006
96%	no survey	no survey	96%	no survey	96%	no survey	96%	96% preliminary	96%

Source: Alberta Learning Biennial Graduate Outcomes Survey – biennial cycle starting in 2004

6) Student Satisfaction with Relevance of Programs

A broader measure of success in developing suitable skill sets for life and career requires survey questions and design will be developed with attention to an adjusted Alberta Learning Biennial *Graduate Outcomes Survey* and to a new *National Survey of Student Engagement*, both completed in 2004. A target will not be identified within the current planning cycle. Research is required to ensure appropriate benchmarking against peers with the correct measures. The University will revisit this indicator for the next four-year planning cycle.

7) CIS Academic All-Canadians since 1990-91

The CIS Academic All-Canadians are students at Canadian universities who have combined sports participation with academic excellence in their degree programs. Since 1990-91, 1,101 of the University's students have been recognized in this way, second among Canadian universities. For 2003-04, the University passed its target of 1,092 All-Canadians. Its goal is to maintain the lead by having at least 100 students recognized as CIS Academic All-Canadians each year, while remaining a leading winner of national athletic championships. The University has maintained its targeted balance of academic and athletic excellence, but McGill has recently had exceptionally high numbers of academic all-Canadians, which accounts for the University of Alberta's drop to second place.

CIS Academic All-Canadians National Awards to University of Alberta since 1990									
History							Target	Actual	Target
1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04		2005-06
429 (1 st)	508 (1 st)	590 (1 st)	686 (1 st)	792 (1 st)	901 (1 st)	1,000 (1 st)	1,092 (1 st)	1,101 (2 nd)	1,292 (1 st)

Source: *Canadian Interuniversity Sport* (announcements are made in September of each year).

Key Strategic Initiative 1.3
Create an improved learning environment inside and outside the classroom.

As the nature of teaching and the resources available change, the University must be flexible. This involves not only adjusting the actual classroom experience but also the transition of the student from high school to the university and from the university to employment. To facilitate this, the University has developed several programs.

8) Classroom Technology

The tracking of technology renewals and upgrades is a way to ensure that the University keeps pace with changing technology. Upgrading classroom technology must be followed by yearly renewal. Targets have been established based on realistic assessments of resources that might be available: financial and need constraints may well moderate progress rates in both upgrading and renewal of the upgrades. While this prevents forecasting as far ahead as 2005-06, nevertheless, the University has an aggressive program that accomplished 14 enhancements and 37 renewals in 2004-05. Currently a minimum of 13 classrooms are scheduled for renewal and the number that will be scheduled for enhancement in 2005-06 is still to be determined.

Classroom Technology (renewals and upgrades – including new installations)					
	History		Target	Actual	Target
	2001-02	2002-03	2003-04		2005-06
Renewals	5	25	28	37	13, minimum
Upgrades	1	5	16	14	Not yet set

9) Year One Classes Taught by Continuing Faculty

The quality of instruction is a vital part of the learning experience. Since funding cuts of the mid-90's, the trend had been reversed to a gradual climb in the direction of the target. But recently adjustments to two years of significant enrolment growth without equivalent funding increases have required a balance between reasonable class sizes and first-year exposure to continuing faculty. It should also be noted that a large proportion of first-year classes taught by non-continuing instructors provide technical skills in such areas as languages, the various fine arts, and physical activity.

Percentage of Year One Classes Taught by Continuing Faculty								
History							Actual	Target
1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2005-06
47.7%	43.5%	43.4%	43.3%	44.5%	46.9%	50.3%	45.9%	54%

10) WebCT Learning Support Development

The use of technology and web-enabled learning in classrooms is one of the most significant innovations introduced into teaching in the last decade. One limited measure of the broader information innovation at the University is the rate at which instructors develop the WebCT integrated suite of web-based course development and delivery tools. The number of courses with WebCT support has increased significantly in the last 5 years. New initiatives such as the electronic grade book project, advanced placement testing, and research ethics for all graduate students, will continue this trend. Other technologies, both centrally-supported and department/program specific, are also being used to enhance the teaching and learning

environment on campus. The School of Business has turned to Blackboard, another content and learning management system, for similar services.

WebCT Learning Support Development and Use (Average % over both terms each year) *								
History							Actual	Target
1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2005-06
0	0	5.4%	12.7%	18.3%	27.6%	30.5%	33.8%	50%

*This measure is currently based on a per-course figure; a per-section measure is under review.

11) Work Experience Programs

An increasingly important element of the learning environment at the University is the use of work experience programs. These internship, cooperative, field and clinical programs provide students with a learning opportunity and the vital experience needed in the job market. The University is expanding the number of programs that include work experience and there has been a consistent increase in the percentage of graduates who have participated in these programs.

Proportion of First Degree and Professional Graduates with Program Work Experience (excludes articling Law students)								
History							Actual	Target
1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2005-06
not avail.	not avail.	41.7%	43.4%	43.4%	45.7%	46.7%	46.8%	50%

Key Strategic Initiative 1.4
Provide each student with a significant international experience.

One more strategy in preparing students for successful lives and careers is to provide international experiences and exposure. Two approaches that help are encouraging students to participate in international exchange programs and increasing the number of international students and professors here.

12) International Exchange Students

A selected measure is the number of students going abroad for a term or terms in official exchange programs from the University. Participation in 2003-04 was lower than previous years due to SARS, which resulted in travel restrictions to some of the Asian partner universities, and the war in Iraq. While the number of students is expected to increase in 2004-05, in the aftermath of September 11, 2001 and with continued concerns about terrorism, it will be a major challenge to progress towards the 2005-06 goal of doubling the 2000-01 level of involvement in international exchanges.

It should be noted that in addition to those taking part in official exchange programs, University students study and work abroad under a variety of other types of arrangements that are not included in this measure. These include practicum programs, volunteer work programs and research projects.

Official International Exchange Students Going Abroad from the University of Alberta								
History							Actual	Target
1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2005-06
102	121	126	136	117	127	129	134	234

13) International Undergraduate Student Enrolment

A second measure of the University's success in providing international experiences to its students is through the presence of international students on campus. International students enrich the learning environment and raise the international profile of the University while paying their own way without diminishing access for Alberta students. This measure has been refined to include only those undergraduates who hold visas, and there is evidence of progress toward the target of five percent by 2005-06. Many other students bring international residence experience to the University: for example, recent arrivals classified as "permanent residents".

International Undergraduate Student Enrolment (as % of head-count winter-session enrolment)					
History				Actual	Target
1999-00	2000-01	2001-02*	2002-03*	2003-04	2005-06
2.3%	2.6%	2.8%	3.1%	3.7%	5.0%
*Data in previous reports has been updated.					

GOAL 2: THE UNIVERSITY OF ALBERTA WILL BE A LEADER IN THE CREATION, INTEGRATION, DISSEMINATION AND APPLICATION OF KNOWLEDGE.

The University has two key strategic initiatives that are associated with achieving this goal:

- 2.1 Achieve national and international leadership in research
- 2.2 Build productive partnerships to facilitate collaborative research and knowledge transfer.

The measurement of our success is based on the University's research excellence, its success in attracting research funding and its development of research partnerships.

Key Strategic Initiative 2.1 Achieve national and international leadership in research.	Leading-edge research is a key element of the University's strategy to be a leader in the creation of knowledge. The University will continue to build on its research base by attracting new resources through initiatives involving government programs, matching opportunities, and strategic partnerships and alliances.
--	--

14) Sponsored Research Revenue

A measure of the quality of its research is the comparative amount of sponsored revenue the University receives for research projects awarded following peer review. The University exceeded its target for 2003-04 by \$37 million, and indeed exceeded the target of \$374.1 million previously set for 2004-05. Keeping in mind the irregular timetable of the federal indirect cost of research payments and the highly volatile nature of capital funding, which can cause significant annual swings (as experienced in 2002-03), it is expected that the University will exceed its target of \$400M in annual sponsored research funding by 2005-06, although that figure may not leave it ranked as one of the top two Canadian universities. The sixth rank in 2002-03 reflected a number of complications: volatility in revenue flow (see the University's rebound in 2003-04), similar volatility for some other universities (reporting huge additions in 2002-03), and inclusion by others of large clinical trials funding to affiliated hospitals and institutes. Excluding those revenues to affiliates, which the University of Alberta does not report, the University of Alberta ranked fourth.

Sponsored Research Revenue (in \$ millions)									
History							Target	Actual	Target
1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04		2005-06
\$121.3 (4 th)	\$135.4 (4 th)	\$174.3 (4 th)	\$213.9 (4 th)	\$255.5 (4 th)	\$304.2 (3 rd)	\$295.9 (6 th)	\$340.1	\$377.2	\$400.0

Ranking Source: CAUBO

15) Federal Research Granting Councils Funding

Federal research council funding includes support from the Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council (NSERC) and the Social Sciences and Humanities Research Council (SSHRC). This peer-reviewed funding serves as a measure of the academic quality of the University's researchers and their programs. The University has consistently ranked in the top five Canadian universities over the last several years;

however, its goal is to rank in the top four universities for every Council and in the top two for at least one Council*.

Federal Research Granting Councils Funding (national ranking)									
	History							Actual	Target
	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2005-06
CIHR	5 th	5 th	5 th	5 th	5 th	5 th	5 th	5 th	2 nd to 4 th
NSERC	4 th	3 rd	3 rd	3 rd	2 nd	3 rd	3 rd	3 rd	2 nd to 4 th
SSHRC	4 th	3 rd	5 th	5 th	5 th	4 th	4 th	4 th	2 nd to 4 th

*Also, see "21) Federal Councils Operating Grants per Continuing Faculty" showing the University of Alberta ranking in individual operating grant funding per continuing faculty member.

Ranking Source: CIHR, NSERC and SSHRC.

16) NSERC Steacie Fellowships

The University's objective of attaining national recognition for its research programs is measured in part through the awards received by its faculty members. Up to six E.W.R. Steacie Fellowships are awarded nationally to recognize highly promising science and engineering faculty members at Canadian universities and to provide resources to enhance their career development. The University has an ambitious target of having at least one faculty member named as a Steacie Fellow in each year, a rate well above its share of Canadian university faculty in the Natural Sciences and Engineering Research Council disciplines.

NSERC Steacie Fellowships (4 to 6 awarded nationally per year)									
History							Target	Actual	Target
1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04		2005-06
0	1	1	2	1	1	0	1	0	1

Source: NSERC

Key Strategic Initiative 2.2
Build productive partnerships to facilitate collaborative research and knowledge transfer.

In a global, knowledge-based environment, collaboration is key to the success of research and knowledge transfer. Strategies include the development of national and international interdisciplinary research initiatives, and participation in collaborative research with industry and public institutions and organizations. In addition, the transfer of knowledge to communities is the one of the primary results of research.

17) Networks of Centres of Excellence

Networks of Centres of Excellence (NCE) are coordinated by the federal government and bring together researchers from universities, the public sector and industry. In 2002-03 the University participated in 18 of the 19 active NCE's, tied with Toronto, British Columbia and Montréal for the lead. It currently participates in 20 of the 21 active NCE's.

Networks of Centres of Excellence (Participation Rate and Rank in Canada)									
History							Target	Actual	Target
1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04		2005-06
1 st (tie)	1 st (tie)	2 nd	2 nd (tie)	1 st (tie)	1 st (tie)	1 st (tie)	Top 2	Not available	Top 2

Source: NCE, Annual Reports

18) NSERC Industrial Research Chairs

The attraction of NSERC Industrial Research Chairs represents another measure of the quality of the University's research collaboration with public and private institutions and organizations. Industrial Research Chairs are awarded for excellent research of great industrial promise and are co-funded between the federal government and industry. The University goal of attaining two chairs per year represents a highly ambitious proportion of the 10 or so chairs annually made available.

NSERC Industrial Research Chairs (approximately 10 awarded nationally per year)									
History							Target	Actual	Target
1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04		2005-06
3	2	2	2	2	1	1	2	Not available	2

Source: NSERC

19) Gross Licensing Revenue (Cdn\$, 3-year annual average)

The licensing revenue received by the University is one measure of the success of technology, providing an indicator of the much greater activity and revenue flowing to the company licensing the technology. The University has been a top revenue generator in the country in what is a highly volatile measure, and would like to be consistently in the top two.

Gross Licensing Revenue (Cdn\$, 3-year annual average)					
History				Actual	Target
1996-98	1997-99	1998-2000	1999-2001	2000-2002	2004-06
1 st (4.22M)	1 st (4.03M)	4 th (3.15M)	4 th (4.28M)	5 th (3.78M)	Top 2

Source: Association of University Technology Managers (AUTM)

20) New Spin-off Companies (3-year annual average)

The rate at which technology is being transferred to the community is also demonstrated by the formation of spin-off companies. Between 2000-2002, the University announced, on average, more than six spin-off companies annually, placing it fourth among Canadian universities. The University has consciously decided to wait to announce spin-off companies until each has moved beyond its initial start-up phase. The average number of spin-off companies announced has, therefore, slowed.

In early 2004, the University's Technology Transfer Group moved to the Research Transition Facility to be closer to the spin-off companies and researchers that the team helps evolve from campus to the marketplace. At the same time, a joint venture with Edmonton Economic Development Corporation was launched, creating TEC Edmonton: Technology, Entrepreneur & Company Development.

New Spin-off Companies (3-year annual average)			
History		Actual	Target
1998-2000	1999-2001	2000-2002	2004-06
6.0 (4 th)	5.3 (6 th)	5.7 (4 th)	Top 2

Source: Association of University Technology Managers (AUTM)

GOAL 3: THE UNIVERSITY OF ALBERTA WILL ACHIEVE INSTITUTIONAL EXCELLENCE.

The University has three key strategic initiatives that are associated with achieving this goal:

- 3.1 Attract and retain outstanding faculty, researchers and staff
- 3.2 Attract and allocate the necessary resources to achieve the University's mission
- 3.3 Renew and enhance the University's infrastructure and provide high-quality support services to meet the needs of the future.

The measurement of success is based on the University's ability to maintain the quality of educational programming, improved staff performance and satisfaction, successful research support services, and effective allocation and management of resources.

Key Strategic Initiative 3.1 Attract and retain outstanding faculty, researchers and staff.	The University must attract and retain outstanding faculty in order to achieve institutional excellence. As faculty hired in the 1960's and 70's begin to retire, there is fierce competition in attracting new faculty compounded by challenges in retaining those who are being drawn to other universities by factors such as higher compensation and additional research resources.
--	---

21) Federal Councils Operating Grants per Continuing Faculty

Research funding by the federal granting councils indicates peer recognition of research programs. The sample is restricted to funding programs primarily for individual researchers (rather than groups). Updates to this measure (as calculated for the Alberta Learning Key Performance Indicators) are delayed by gaps in Statistics Canada data on full-time faculty for some key universities.

Federal Councils Operating Grants per Continuing Faculty (3-year average, ranked among Canadian medical/doctoral universities)							
History						Actual	Target
1994-96	1995-97	1996-98	1997-99	1998-00	1999-01*	2000-02	2004-06
\$4,716 (2 nd)	\$4,882 (2 nd)	\$5,186 (2 nd)	\$5,940 (2 nd)	\$6,120 (3 rd)	Not Available	\$7,971 (3 rd)	1 st

*No Performance Envelope funds were awarded in this year therefore the figure is not available.

Source: Alberta Learning KPI calculations, based on federal councils individual operating grants and Statistics Canada full-time faculty data, ranking Canadian medical/doctoral universities

22) Competitive Faculty Salaries

Competitive salary levels are needed to ensure that outstanding faculty will come to or remain at the University. Although salary increases at the University have risen significantly in the last five years, they have often been similar to or less than salary increases at other Canadian and American universities. The University's rank among reporting G10 universities has remained unchanged, assuming that average salaries at non-reported universities (McGill, Laval and Montreal) remain lower.

Average Salaries of Full-Time Faculty Rank in Group of 10 Universities								
History							Actual	Target
1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2005-06
74,326	\$74,242 (7)	\$76,421 (7)	\$81,881 (6)	\$84,141 (6)	\$87,637 (7)	\$91,457 (est. 5)	\$96,442 (est. 5)	3 rd

Source: Statistics Canada: non-medical/dental full-time faculty down to Assistant Professors, including Deans and Chairs

23) Faculty and Staff Job Satisfaction

Job satisfaction often ranks above pay in the reasons given by employees for remaining in a position. The design and implementation of a valid measure of the satisfaction of faculty and staff is under development.

A target will not be identified within the current planning cycle. Research is required to ensure appropriate benchmarking against peers with the correct measures. In the meantime, the University continues to develop an HR Report Card that will measure and report on a number of performance metrics. The University will revisit this indicator for the next four-year planning cycle.

24) 3M Teaching Awards since 1986

The recognition of outstanding teaching by 3M is a measure that highlights the quality of undergraduate teaching. Despite a recent hiatus, the University of Alberta has still received more awards than any other Canadian university. To meet the 2006 target of 28 awards would require an accelerated award rate in the next two years.

Teaching Awards: National 3M Awards to University of Alberta since 1986									
History							Target	Actual	Target
1997	1998	1999	2000	2001	2002	2003	2004		2005-06
17 (1 st)	18 (1 st)	22(1 st)	22 (1 st)	23 (1 st)	23 (1 st)	23 (1 st)	26 (1 st)	24 (1 st)	28 (1 st)

Source: The Society for Teaching and Learning in Higher Education

25) Awards to Faculty

Selection and implementation of a performance measure is under consideration. A target will not be identified within the current planning cycle. Research is required to ensure appropriate benchmarking against peers with the correct measures. The University will revisit this indicator for the next four-year planning cycle.

Key Strategic Initiative 3.2
Attract and allocate the necessary resources to achieve the University's mission.

In order to achieve its goals the University must have access to the resources needed to carry out its initiatives. The composition of the University's funding sources is changing: increases in recent years have been primarily associated with sponsored research, infrastructure and specific academic programs.

26) Comparative Operating Revenue per Student

Operating revenue per student provides a measure by which the University can benchmark its performance against other Canadian universities. Operating revenues must be competitive to support the University's initiatives as one of Canada's top teaching and research institutions.

Operating Revenue per Winter Student FTE (Rank in Group of Ten Universities)							
History						Actual	Target
1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2005-06
\$12,248	\$12,208	\$12,640	\$14,431	\$15,466 (5 th)	\$15,730 (4 th)	\$14,775 (6 th)	Under review

Source: CAUBO Financial Statistics; AUCC fall enrolment figures: FTE (full-time equivalent) means full-time students plus part-time students divided by 3.5.

27) Charitable Gifts

Strong fund-raising results achieved in the late 1990s as part of the "...it makes sense..." campaign (1995 - 2000) continue to be maintained and momentum is building as the University moved toward the official launch of its Campaign 2008 ("Celebrate One Century – Build the Next") in November 2004. A new annual record of \$49 million was achieved in 2003-04. This result included significant gifts-in-kind totaling 35% of the donations figure (approximately \$17 million). A number of major, multi-year pledge commitments have been secured over the last number of years and several large, one-time gifts-in-kind are currently being processed for 2004-05 and 2005-06.

Charitable Gifts (for fiscal year*, in current \$ millions)								
History							Actual	Target
1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2005-06
\$19.5 M	\$23.6 M	\$24.4 M	\$39.3 M	\$35.2 M	\$42.7 M	\$29.9M	\$49M	\$55M

*Data in previous reports has been revised to correspond with the University's fiscal year (ending March).

Charitable gifts refer to philanthropic contributions and include general donations, donations to endowments, certain deferred contributions, gifts in kind, and gifts of securities. Charitable gifts may be for immediate or future use.

28) Alumni Support

Alumni are particularly important in developing community support, including financial support, for the University's initiatives. There has been growth in the percentage of alumni making gifts and this figure is expected to increase during Campaign 2008 – the University's new campaign launched in November 2004.

Alumni Support (proportion making gifts to the University of Alberta)								
History							Current	Target
1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2005-06
12.6%	12.7%	14.0%	13.7%	14.3%	16.9%	14.7%	14.0%	17.3%

29) Net Assets Deficit

The Net Assets Deficit is a new measure of the University's success in eliminating its structural deficit. The University has a target of reducing the deficit to 0.5% of net assets by 2005-06. The ultimate goal is to return to a positive position by 2007-08.

Net Assets Deficit (proportion of net assets)			
History		Current	Target
2001-02	2002-03	2003-04	2005-06
surplus	6.4%	0.5%	0.5%

30) Administrative Expenditures

The University seeks a high level of administrative efficiency in its operations, remaining at the top level in Alberta Learning's Key Performance Indicator (five percent or less of expenditures for administration) and is aiming to improve on that. The measure presented here conforms to Alberta Learning's KPI detailed specifications. Additions to the definition of entries deemed "administration" are among the factors affecting the trend over time.

Administrative Expenditures Proportion (proportion of total less ancillaries, over two fiscal years)								
History							Current	Target
1995-97	1996-98	1997-99	1998-2000	1999-2001	2000-02	2001-03	2002-04	2004-06
3.9%	3.8%	3.8%	4.3%	4.6%	4.9%	4.9%*	5.1%	4.0%

* 2001-03 figure updated

Key Strategic Initiative 3.3
Renew and enhance the University's infrastructure and provide high quality support services to meet the needs of the future.

While new construction and expanded services are important to meet the needs of faculty, staff and students as the University grows, the existing infrastructure and services must also be maintained.

31) Accessible Policies and Procedures

This is a new measure that tracks the availability of up-to-date policies and procedures for access by all faculty, staff and students. The "University of Alberta Policies and Procedures On-Line" (UAPPOL) project will review and update the University's policies and make them accessible through the internet. At the end of 2003-04, this project was approximately 40% complete as additional resources were allocated to this project to ensure that all targets are being met. The process of regular review and update of policy and procedure is inherent within the workflow of the UAPPOL application.

Accessible Policies and Procedures (project completion level)				
History		Target	Actual	Target
2001-02	2002-03	2003-04		2005-06
10%	20%	40%	40%	90%

32) Facilities Condition Index

This measure, introduced through the 2002-03 business planning process, reflects the University's multi-year management strategy to address deferred maintenance issues. On an annual basis the strategic facilities and facilities with high emerging deferred maintenance issues are reviewed and reassigned. Facility Condition Index reductions are targeted based on Alberta Infrastructure's 2000-01 audit and are continually updated. This index is an indicator of relative building condition; it is a ratio of the deferred maintenance cost, divided by the current replacement value. A higher rating indicates poorer condition of the facilities at the University. Despite exceeding its targeted reductions in identified facilities, the overall facility condition index continues to increase.

As part of its ongoing review of grants, Alberta Infrastructure monitors the expenditure of Infrastructure Maintenance Program funds against safety issues that were identified in the 2000-01 audit. In 2003-04 \$2.062 million (or 17.64% of the Infrastructure Maintenance Program funds) were spent to address these safety issues.

Facilities Condition Index (for key strategic and high maintenance buildings in the Capital Plan)					
	History	Target	Actual	Targets	
	2002-03	2003-04		2004-05	2005-06
Reduction in facilities condition index	2.0%	2.90%	3.40%	0.7%	Not Set
Expenditures on safety issues (\$million)	\$1.974M	\$0.92M	\$2.062M	\$1.345M	Not Set

33) Stakeholder Satisfaction with Services

A target will not be identified within the current planning cycle. Research is required to ensure appropriate benchmarking against peers with the correct measures. The University will revisit this indicator for the next four-year planning cycle.

34) Association of Research Libraries Index

The Association of Research Libraries Index Rank for Canadian universities takes into account the number of volumes held, the number of volumes added during the previous fiscal year, the number of current serials, the total operating expenditures, and the size of “permanent” staff including professional and support workers but not students. The University consistently receives an index score that is between the top two Canadian universities. The 2005-06 target for this measure is under development.

Association of Research Libraries Index Rank in Canada (composite of five indicators)							
History						Current	Target
1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2005-06
3 rd	2 nd	2 nd	2 nd	2 nd	2 nd	2 nd	To be determined

Source: Association of Research Libraries (ARL)

GOAL 4: THE UNIVERSITY OF ALBERTA WILL CONTRIBUTE TO THE NEEDS OF ITS COMMUNITIES.

The University's key strategic initiative associated with achieving this goal is the enhancement and building of connections with our communities. Evidence of the success of this initiative is measured by the University's profile within the community.

Key Strategic Initiative 4.1 Enhance and build connections with our communities.	The University plays an integral role in the community through the services it provides and in the development of partnerships with its neighbours, the business community, multicultural communities and the government.
---	---

35) National Media Exposure

A key measure of the University's research and academic excellence is the amount of national news coverage featuring the University of Alberta as a source for information on key issues facing Albertans and Canadians. The measure also reflects the attention to University issues and the national perception of the importance of these issues. The amount of media exposure can be influenced by national and world events, the relevance of issues to the University, as well as the proximity of spokespersons to national media sources. In 2003-04, the University national media exposure overall continued to be relatively strong, registering the fourth largest share of national print coverage of major Canadian universities. The University's exposure in both the print and television media shows improvement, but for print media lags behind the ambitious target.

National Media Exposure (proportion of university news covering the University of Alberta)						
	History			Target	Actual	Target
	2000-01	2001-02	2002-03	2003-04		2005-06
TV	9%	6%	10.3%	11%	12.5%	15%
Print Media	8%	6%	6%	12%	8.5%	16%

Source: Professional media analysis commissioned by the University of Alberta

36) Public Awareness of Excellence

The University commissions a national public opinion poll every 2 years to determine awareness of the University of Alberta and its research and academic excellence. A telephone survey of 1,799 respondents across Canada was conducted in November 2003. The survey found that since 2001, general awareness of the University has increased 10% in Alberta and 11% nationally. Furthermore, 91% of Alberta respondents agreed or strongly agreed that the University conducts high quality research. And, 75% of Alberta respondents surveyed said they would recommend the University of Alberta as one of the top universities in Canada while nearly one-in-three respondents nationally rated the University in the top 3.

The next survey will be conducted in 2005-06.

Public Awareness of Excellence at the University of Alberta (proportion rating academic excellence above average or outstanding)					
	History		Target	Actual	Target
	2001-02	2002-03	2003-04		2005-06
Within Alberta	76%	No poll conducted	78%	72%	80%
Within Canada	21%		25%	14%	27%

Source: National poll commissioned by the University of Alberta

37) Increase in Life-long Learning Opportunities

A target will not be identified within the current planning cycle. Research is required to ensure appropriate benchmarking against peers with the correct measures. The University will revisit this indicator for the next four-year planning cycle.

Conclusion

The University of Alberta has continued to drive for the top in teaching, research and community service, responding to the challenges of modern society and the Government of Alberta's goals. Notable accomplishment coupled with mountain-top targets will help to direct University of Alberta activities through the term of the 2002-2006 Strategic Business Plan.

Given the opportunities, challenges and risks faced by the University in pursuit of its long-term vision, the Government of Alberta's 20-year plan provides an exciting context for the future. It is a long-term blueprint for directing and managing strategic investments to add value to the proceeds of a strong but not endless resource base. And it recognizes the multiple roles and rewards of investment in universities: increasing capacity for the advanced education of growing proportions of Albertans; productive partnerships for injecting the very best from university scholarship into Alberta's society and economy. The University of Alberta welcomes the ambitious agenda.