



Planning for a Third Century of Excellence  
at the University of Toronto

June 12, 2007



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## President's Foreword

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Members of the University of Toronto community have the privilege of participating in the evolving history of an institution that makes a difference in the lives of Canadians and people all over the world. Founded in 1827, the University today moves towards its second centenary with a global reputation. Over 400,000 Toronto alumni can be found in 130 different nations. Our graduates are the University's most important ambassadors, and their prominence in so many fields of endeavour around the world underscores the enduring value of a University of Toronto degree. Our faculty, staff and students dominate Canadian indices of research performance. Indeed, when the Canadian winners of various international prizes are tallied for the last two decades, U of T professors appear up to eight times more often than would be expected on the basis of our size alone. Our students are also a dynamic mirror of the Greater Toronto Area – one of the world's most diverse and creative urban regions.

While the University of Toronto family has much to celebrate, we have also reached a point where there are some difficult strategic choices ahead. For the last fifteen years, we have worked on five-year planning cycles. We are progressing steadily and successfully through the most recent academic plan, *Stepping Up* and the continuation of medium-term planning is logical. However, as President of the University, I have often asked and heard many others ask: Where is the University headed in the longer-term? What is our twenty- or thirty-year strategy from a broad institutional perspective?

We are already one of the largest public universities in North America. We have embraced the double cohort and face new demographic challenges over the next decade. Should we keep growing and evolve into a full-blown regional system of federated universities? Should we aim instead for stable overall enrolments, and concentrate on optimizing the mix of students across our three existing campuses? Or is there some middle path between those two options?

Conversations with alumni, staff and students move quickly from size to scope, and they ask: At what point does our remarkable breadth become unsustainable, necessitating a sharper focus on specific programs of education and research? A period of major graduate expansion is underway even as the University is striving to enhance the

undergraduate student experience. Now is an excellent time to ask deep questions about our mission, our size and our balance.

Other strategic questions follow. The University continues to face major financial pressures. Those pressures are constraining our ability to compete with the great universities of the world. Despite provincial commitments to invest in higher education, Ontario remains dead last among provinces in per-capita funding of higher education. Do we temper our ambitions and re-consider our core mission? Or should we explore new financial strategies?

No discussion of scope or finance can occur on an institution-wide basis without considering the complex federal structure of our University and our situation within the community. Today U of T operates not only across three campuses, but also through multiple divisions, including several constituent colleges and three federated universities on the St. George campus. We are affiliated with a host of partner institutions ranging from ten world-class research hospitals to the Toronto School of Theology. What is the best long-term configuration of academic roles and administrative responsibilities for these different elements of the University? How do we relate most effectively with the broader local, regional, national and international communities?

Our evolving administrative federation must be accountably governed. We must therefore also ask: Do the current divisional and University-wide governance mechanisms function effectively and efficiently? Are the structures and processes optimal for the future of the institution?

Recurring as connecting themes are three overarching questions: How do we attract the very best and brightest students from the Greater Toronto Area, across Ontario and Canada, and around the world? How do we ensure that they have a transformative educational experience in their years at the University of Toronto? And how do we ensure that the University of Toronto reaches new levels of excellence in the years ahead?

These are not easy questions. Some are being addressed implicitly at the divisional level or by the central administration. However, it is timely for the University community to examine these issues on a more explicit basis. Towards 2030 is accordingly an initiative launched to engage the University community in deliberations about our longer-term strategic directions.

This initial document serves only to open the dialogue. It offers a preliminary frame around what we believe are many of the key issues confronting the University for the next 25 years or so. That some issues are excluded is indicative of their immediacy, not their relative importance. Alumni relations, for example, are being steadily overhauled and that process will continue apace as a new Vice President – Advancement takes office in the fall of 2007. Perspectives from these already-active areas will be incorporated into the final synthesis report. Accordingly, in reviewing the document and framing both their own questions and potential responses, I urge readers to focus primarily on the long term and the ‘big picture’.

Over the next few months, this dialogue must unfold through divisional consultations, town hall meetings, electronic forums and conversations with students, faculty and staff. In a few cases, task forces will be established to undertake further in-depth analysis and generate recommendations for action.

Our timeline is unapologetically short. It is not realistic to demand unanimity among all stakeholders on all issues, nor is it practical for Towards 2030 to generate detailed blueprints or deal with micro- and meso-level issues. What is desirable, instead, is for these deliberations variously to confirm or clarify the broad strategic directions for the University’s second centenary in 2027 and beyond. I therefore strongly encourage all the members of the extended University of Toronto community, along with our many friends and supporters, to offer their thoughts as the process unfolds.

Best wishes

David Naylor, President

# Introduction

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From its proud beginnings as King's College in 1827, the University of Toronto has grown into Canada's largest academic enterprise, with 72,000 full- and part-time students and over 11,000 employees. Situated in Canada's biggest urban centre and economic hub, the University now occupies three campuses: Scarborough and Mississauga and the historic St. George campus. The University of Toronto is among world leaders in disciplines ranging from medieval studies to neurosurgery, and offers the widest range of programs of any Canadian university. One of 18 universities in Ontario, we educate approximately 17% of all students attending Ontario universities, and more than one-quarter of Ontario's graduate students. Our 76 doctoral programs serve 38% of all doctoral students in Ontario and 14% in all of Canada. These research-intensive programs in turn reflect our leadership position in attracting research support from Canada's major research councils and the Canada Foundation for Innovation. Toronto leads all Canadian universities in the number of scholarly honours awarded to its faculty members, and produces more indexed publications in the science fields than any other public university in North America .

Two decades ago, the University's then President, George E. Connell, outlined several key directions for change in Renewal 1987. Renewal 1987 advocated improvements in undergraduate education, increased numbers of graduate students, closer attention to graduate funding support, new approaches to research funding, renewed planning for the tri-campus structure, and governance reforms. Renewal 1987 raised important questions for the University and catalyzed new strategic directions. The University's progress has also been shaped by three medium-term planning exercises led from the Provost's Office: Planning for 2000 in 1994, Raising our Sights in 1999 and Stepping Up in 2003.

Today, in pursuing our vision to be among the world's best public universities, our Stepping Up priorities include: enhancing the student experience; promoting interdisciplinary, interdepartmental and interdivisional collaborations; linking education and scholarship; being an employer of choice for outstanding faculty and staff; embracing and fostering excellence through equity and diversity; and extending our reach and our impact on public policy. These priorities are widely supported and eminently defensible. But they are being advanced in a rapidly-changing context for higher education.

## The changing landscape of higher education

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While the University of Toronto has gained an enviable reputation in North America and beyond, the global competition among universities is intensifying. Universities in most nations are seen as vital contributors to social and economic development. Around the world, a university degree consistently spells a lifetime of better job prospects, higher income, and better health status. A growing proportion of jobs require higher education qualifications. Not surprisingly, student participation in higher education is rising across scores of jurisdictions. Demand is also growing for more advanced and specialized education beyond the undergraduate level.

Developing countries are moving quickly to expand higher education capacity as a catalyst for economic growth and prosperity. China plans to build 100 new universities over the next decade. More than 5 million new students enrolled in Chinese higher education institutions last year, up almost five-fold over the enrolments in 1998. In 2004-05, almost 10.5 million students were enrolled in higher education institutions in India, an increase of 44% over 1998.

Governments across the industrialized world have also recognized the importance of university-based research as an engine for innovation and economic and social transformation. Public investment in university research and development has expanded in most jurisdictions in the last quarter-century. As research enterprises have expanded, competition for research talent and funding has escalated within and between jurisdictions, and relationships with knowledge-based industries have become more important, more common and more complex.

Research funding has served another purpose: institutional differentiation. Few governments are willing to distinguish among public universities in the level of per-student grants for similar undergraduate or graduate programs. Peer-reviewed research funding accordingly gives governments an arm's-length mechanism to encourage institutional specialization. Some jurisdictions have nonetheless recognized that, without explicit earmarking, they will never have research-intensive universities capable of competing globally. California is exemplary in this regard. The California State system has a large range of four-year baccalaureate programs on 23 different campuses. The University of California system, in contrast, includes 10 campuses with a particular emphasis on research and graduate education. In Germany, explicitly galvanized by the growing global competition in higher education, the federal government conducted a competition leading to the designation of three universities from among 102 as elite schools. These elite schools will each qualify for more than \$100 million of additional funding over the next five years. The German government plans additional designations in the future. For their part, more universities are recognizing that they cannot be all things to all people, and are narrowing their missions. The London School of Economics, for one, has focused its niche and now draws more than 60% of its enrolment from countries outside of the UK.

Internationalization is a recurring theme in modern higher education. The view that Universities can achieve excellence only through internationalization, by deliberately engaging the rest of the world in scholarship and education, is compelling. Accordingly, Universities are seeking to increase their international student enrolments, promoting domestic student exchanges and study-abroad opportunities, and expanding international research collaborations. Some universities are developing satellite campuses in other countries, or developmental relationships with international university partners. Faculty and students now cross countries and continents with greater ease and frequency than ever before. The Bologna Accord is a bellwether for these trans-national trends in higher education. It embodies the commitment by forty-five European countries to reform their higher education systems so as to remove the obstacles to student mobility, enhance the attractiveness of European higher education worldwide, and establish a common structure of higher education systems across Europe.

Local partnerships, too, are a prominent feature of contemporary universities. Some are time-honoured. Across the industrialized world, universities with health science programs have long built partnerships with academic hospitals and other clinical enterprises. For decades, large-scale government-sponsored science facilities have also been tied to universities in synergistic relationships. However, in recent years there have been more partnerships with investor-owned enterprises and non-profit agencies. These relationships can sometimes be challenging, given the inevitable cultural differences; but prominent and successful examples of productive partnerships with industry and non-profit agencies can be drawn from virtually every continent.

The drive towards internationalization and the development of partnerships have been motivated in part by financial pressures, an observation that underscores the ongoing international debate about the fiscal framework for higher education. In the USA, private universities, such as Harvard and Stanford, have widened the financial gap over their public competitors, building massive endowments and charging annual tuition fees in excess of C\$25,000. Critics argue that these institutions are increasingly inaccessible to those from lower-income families. However, the failure of state funding of public universities to keep pace with inflation and enrolment growth, let alone with the private US universities, has led to greater tuition flexibility and rising fees for public institutions in several states. Some European jurisdictions are also reconsidering the wisdom of the zero-tuition policies that had such currency in the 1960s. Many universities have tapped into partnerships with industry to further their research mandates. And virtually all universities in North America, Europe and Australia are busily engaged in the pursuit of philanthropic support.

Another widespread trend in higher education is increased demand for accountability and transparency in the use of public funds. Some American states have actually scaled back their direct control of their flagship public universities, but have maintained or expanded reporting requirements. Among the manifestations of this culture change are 'value for money' audits, detailed performance contracts for incremental revenues, and matching requirements for research operating grants and infrastructure funding. University administrations and governing bodies accordingly face new pressures for accountability, even as the pace of change in higher education has accelerated. It is no surprise that universities in some jurisdictions are re-considering their traditional governance and administrative structures.

Last, and far from least, there has been ferment about the core mission of modern universities. The North American higher education sector has seen critical commentary from opinion leaders about an over-emphasis of scholarship at the expense of education in major universities, the decline of liberal arts relative to 'vocational training', and the growth of luxury amenities for students at elite institutions even as state universities struggle to balance their budgets. There are renewed debates about the core competencies that should accompany the conferring of a university degree – debates that are also currently underway at the University of Toronto. Canadian academics sometimes lament the uneven preparedness of secondary school graduates, while Europeans worry that American universities have secured a near-monopoly on Nobel prizes. Even as this soul-searching proceeds, the positive reality is that students in unprecedented numbers are graduating and going on to make successful lives for themselves.



In short, this is a fascinating era of challenges and opportunities for major universities world-wide, including the University of Toronto. One suspects it was ever thus, and that the global nature of the emerging trends and the pace of contextual change are among the principal features distinguishing today's debates from those that occurred centuries ago in medieval European universities.

# 1. The University's Future Role

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The University of Toronto's mandate includes two different but complementary roles – education and scholarship. Ours is a research-intensive university, where both mandates are equally important. These two elements of our mission align most fully when students pursue research-stream masters or doctoral degrees or in post-doctoral training. Professional masters degrees are clearly enriched by the participation of educators who are not only experts in a field of study, but actively shaping its evolution. At the undergraduate level, a distinctive feature of our institution has been the opportunity for students to be exposed, early in their programs, to world-class scholars. This in turn underpins the principle that all full-time faculty members should be engaged in undergraduate teaching. However, there has also been debate about the relative roles of colleagues in the research-intensive or tenure stream, in the teaching stream, and on sessional or short-term contracts. As a corollary, the University also faces strategic questions about the mix of students and the relative emphasis that we place on pedagogy and research activities.

## Education

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The University of Toronto is first and foremost a public university with a mandate to provide education to Ontario residents. Overall, the University of Toronto enrolls approximately 16% of all Ontario undergraduate students. As illustrated in Table 1, the University also plays a significant role in graduate education, providing the home for graduate education for 28% of the province's graduate students.

Our enrolment is by far the largest in Canada, at approximately 72,000 full- and part-time students in 2006-07. While student numbers at the Mississauga and Scarborough campuses were expanded strategically to reach a level commensurate with other undergraduate campuses, the growth in student numbers at the St. George campus has been guided less by a strategic direction to a specified target and more by response to student demand and revenue needs.

### Undergraduate education

The University of Toronto has a large and diverse undergraduate student body of 59,000 students across the three campuses. The first entry programs include Arts & Science, Applied Science & Engineering, Music, and Physical Education and Health. Second entry programs include Dentistry, Education, Law, Medicine, Nursing, and Pharmacy. A large majority of our undergraduate students are from the Greater Toronto Area (GTA) and commute to campus. The University has accommodated significant growth across its undergraduate programs (37 %) over the past ten years, addressing enrolment demands driven by demographic changes (growth in the population 18 to 24 years of age in the GTA and Ontario) and increasing university participation rates. We will return to the subject of enrolment growth in more detail in the next section.

With respect to the quality of our undergraduate programming, the University can point to some positive indicators, viz:

- » The University of Toronto draws an increasing share of the pool of all Ontario secondary school students as entering averages rise. For example, in 2005, the University attracted 13.9% of the students from Ontario secondary schools with an average of 80% compared with 25.8% of the students with an average of 95%.
- » The proportion of first-year students continuing to their second year is high at 90%.
- » The overall six-year graduation rate was 70% for the 1999 cohort, which compares very favourably with the rates at other public institutions.

At the same time, concerns have been raised about the quality of our undergraduate student experience. Results of the National Survey of Student Engagement (NSSE) indicate that the University of Toronto provides a level of academic challenge commensurate with our peer institutions. However, on other benchmarks related to educational experience and campus environment, we could do much better.

Enhancing the student experience is accordingly the University of Toronto's number one priority. Across all three campuses, efforts are being made to enhance student activity spaces for the large population of commuting students, to improve extra-curricular facilities and to create more opportunities for small-group and hands-on learning experiences. As one example, the Faculty of Arts and Science on the St. George campus has introduced First-Year Learning Communities in which first-year students who commute to campus meet weekly with a senior student and faculty mentor in college-based groups of no more than 24. Other small group initiatives include the Trinity One and Vic One seminar courses for selected undergraduates.

With the research breadth and strength of the University, one of our goals is to “link all our undergraduate, graduate, and professional academic programs to strong research experiences”. Progress towards this goal in the undergraduate arena is reflected in the integration of teaching and research through seminar and research courses or research-related work experience. This integration has accelerated for various of the second-entry undergraduate programs. These programs also frequently offer summer research opportunities to students. The 199 program, introduced by the Faculty of Arts and Science in 1994, provides a research seminar learning environment for approximately 40% of the first-year class. Overall, student enrolment in undergraduate seminar and research courses has increased by 42% since 2000-01. Further, approximately 2,000 students (2006) were reported to have been engaged in formal research experience programs or research work. The University is strongly committed to creating additional research experiences for undergraduate students. Local work experience and exchange programs are growing as well: in 2006, 1500 undergraduate students on the Scarborough campus participated in their distinctive co-operative program.

Overall, the University of Toronto offers exceptional diversity and unparalleled depth in undergraduate education. Our students are privileged to have access to some of the most remarkable university teachers on the planet. Our faculty routinely receive good to excellent student evaluations, often regardless of class size. Various second-entry undergraduate programs and many of the smaller direct-entry programs are highly rated by our students. However, general satisfaction with undergraduate programs varies. When surveyed, a significant proportion of our undergraduates give low scores to their overall experience, highlighting heavy workloads and limited personal interaction with instructors. Development of e-learning tools has been inconsistent, and enhancement of educational infrastructure has lagged behind improvements to our research infrastructure (there is no educational equivalent of the Canada Foundation for Innovation). From the perspective of undergraduate education, therefore, we look towards 2030 from an uneven landscape – our goal will be to build on our tremendous achievements and to address our weaknesses.

## Graduate education

The University of Toronto is widely recognized for the strength and diversity of its graduate programs. Its 12,000 full-time and part-time graduate students constitute about 28 % of Ontario's graduate students and 9 % of graduate students across Canada. In 2005, 16% of our graduate students were international.

The success of the University's graduate programs is closely linked to the breadth and strength of our scholarship. We offer 76 doctoral programs, 30 unique in Ontario and 13 unique in Canada. Our 50 professional master's programs attract approximately one-third of all graduate students. Many again are unique to Ontario or Canada. Moreover, in the last five years, the University has developed a number of new graduate programs.

In addition to degree programs, our graduate departments, centres, and institutes, also offer unique, collaborative programs. These innovative programs emerge from cooperation between two or more graduate units, providing students with a broad base from which to explore a novel interdisciplinary area or a special development in a particular discipline, to complement their

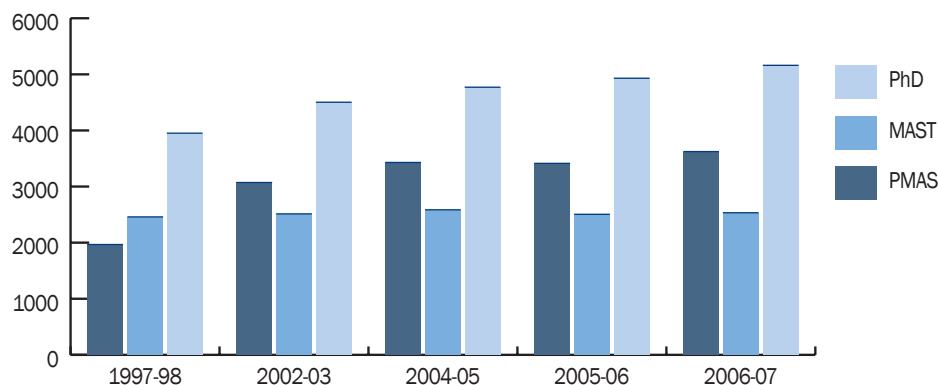
### Examples of new doctoral and masters programs

- » PhD in Rehabilitation Science
- » PhD in Planning
- » Master of Finance
- » Master of Public Policy
- » Master of Cinema Studies
- » Master of Visual Studies
- » Master of Environmental Science
- » Master of Management of Innovation

### Graduate Student Satisfaction

In the 2005 Graduate and Professional Student Survey (GPSS), 90% of graduate students rated their 'academic experience' positively (excellent, very good and good), while 76% rated their 'student life experience' similarly. As with undergraduate students, the University must give greater emphasis to improving areas of 'student life'.

Figure 1 : Enrollment Graduate Programs

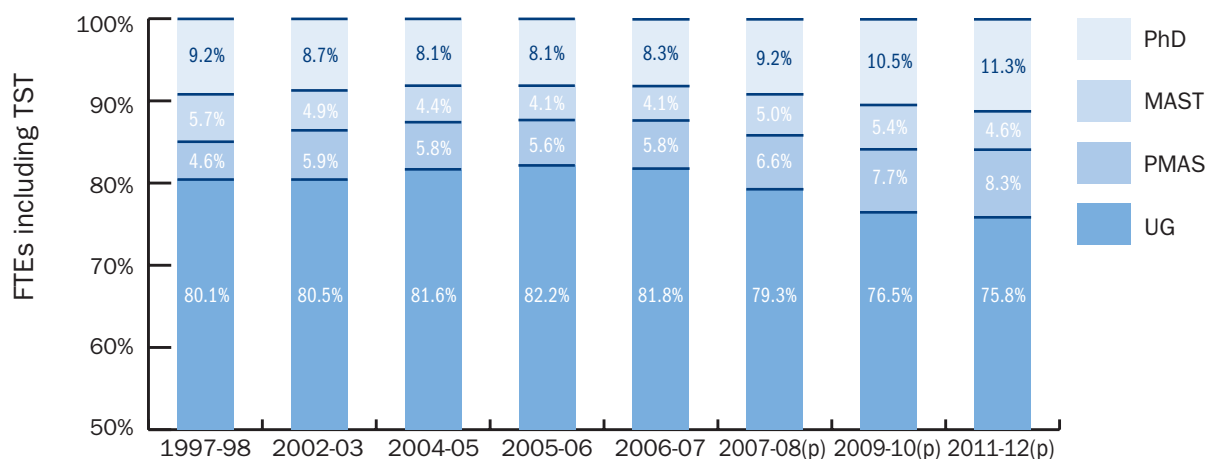


degree studies. The University of Toronto is home to 34 collaborative graduate programs, including, for example, Biomedical Engineering, Environmental Studies, Genome Biology and Bioinformatics, International Relations, and Women's and Gender Studies.

Approximately 18% of U of T students were enrolled in graduate programs in 2005/06. This is a lower proportion than one finds at other Canadian research-intensive universities, including McGill, UBC, Montreal and Laval.

Figure 2 illustrates how the changes in enrolment, past and future, affect the enrolment balance among undergraduate, professional and research stream programs. In 1997-98, undergraduate enrolment represented about 80% of the total student body, rising slowly as Ontario eliminated grade 13 and assimilated the double cohort to 82% in 2005-06. As a result of graduate expansion, this percentage is expected to drop to 79% in 2007-08. If the funding environment enables graduate expansion to continue as projected, graduate students would increase to about a quarter of the student population over the next five or six years.

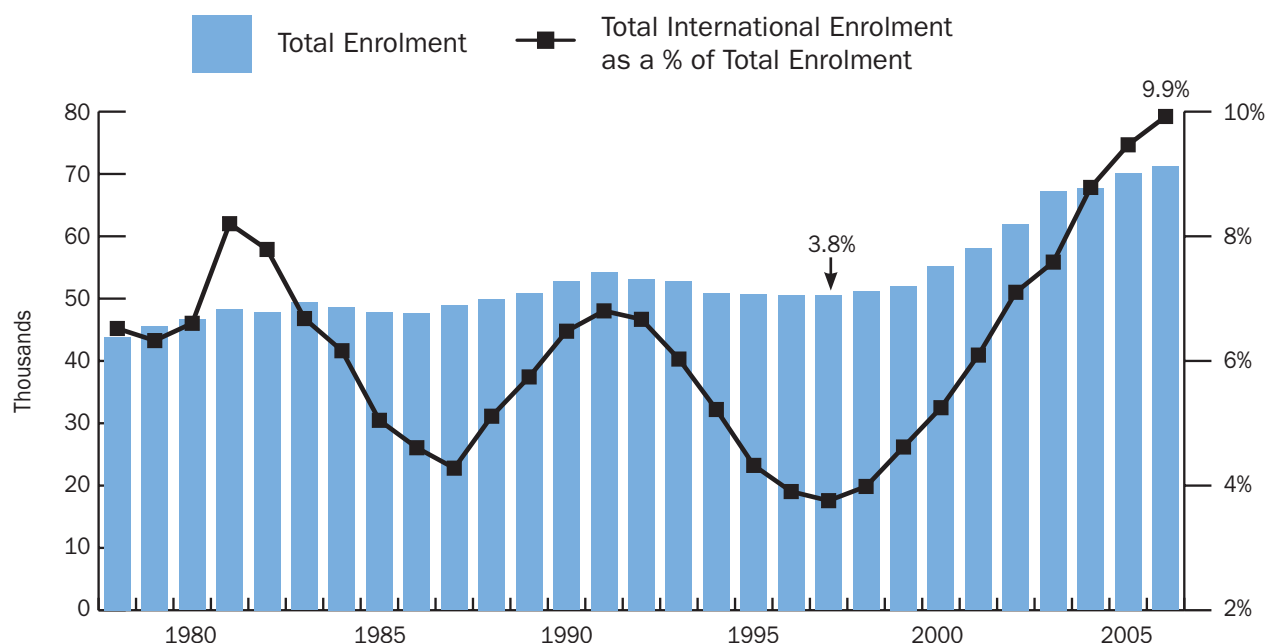
Figure 2: Enrolment Balance 1997-98 TO 2011-12



## International students

From 2001 to 2005, the numbers of international students increased 87.8% to 6,641. In 1997-98 international students represented only 3.8% of the total student population. Today, 9.9 % (6,641) of the University of Toronto's students come from outside Canada. We draw most of our international students from Asia and the United States. The top three countries of origin for undergraduate students are China (including SAR Hong Kong) at 29%, South Korea at 13%, and the United States at 8%. For graduate students, the top countries are the United States (20%), China & Hong Kong (18%), and India (7%).

Figure 3: Total Enrolment and Proportion International Enrolment: 1978-79 to 2006-07



As noted earlier, many universities are emphasizing international experiences for undergraduate students, whether through student exchange programs, study-abroad programs, international work co-op placements, brief courses conducted abroad, or modules taught by international visitors. These experiences deepen students' educations and create employment and career pathways for them upon graduation.

At U of T, the number of students involved in study abroad, exchange and summer abroad programs has grown dramatically since 1996-97. In 2005-06, 1,080 students participated in these programs in 37 locations. In the same year, undergraduate Arts and Science students could select from active exchange partnerships involving over 90 universities in more than 35 countries.

Universities are the only sector to perform research for all other sectors (private, federal government, provincial government, not-for-profit), across a wide range of disciplines and with a significant presence in all regions of the country.

*AUCC, Momentum 2005*

The University continues to work towards augmentation of existing international programs and expansion of the number of exchange and scholarship programs for its students. Similarly, U of T is aggressively pursuing a higher profile in international student recruitment. These efforts are not without significant challenges and there are financial and logistical barriers to be overcome. In that regard, the University is actively advocating for government support on matters ranging from attracting international graduate students to assistance with visas. Particularly when one considers the view from 2030, it is apparent that investment in internationalization is investment in our students, our university and, without hyperbole, in the country itself.

## Scholarship

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The University of Toronto has been Canada's research powerhouse for many years. In the last five to ten years, new federal funding has permitted considerable expansion of the University's research enterprise. This expansion has enabled us to attract stronger scholars than ever before, even as it strengthens our capacity for graduate studies and postdoctoral training. It has also altered the education-research balance and, somewhat paradoxically, squeezed the core operating budget for undergraduate education, a phenomenon we will consider in more detail below.

### Canada's Changing R&D Landscape

The federal government has invested substantially in knowledge creation since 1997 through increased funding to the federal research granting agencies and by establishing several key programs such as the Canada Foundation for Innovation, the Canada Research Chairs, a permanent program to fund the indirect costs of research, and increased financial support to graduate students. Annual expenditures on R&D in Canada totalled \$24.5 billion in 2004 and the three largest investors in Canadian R&D remain the private sector, the federal government and universities.\* The university sector, the third largest investor on Canadian R&D, accounts for about 18% of the country's R&D funding, currently contributing \$4.3 billion per annum.

#### The University of Toronto leads in the three common measures of research performance

- » The level of research funding obtained from Canadian public sources;
- » The number of publications – and citations of those publications by other researchers – reported by ISI Thomson Scientific; and,
- » The number of research-related awards and honours received.

The Canadian Institutes of Health Research (CIHR) was created in 2000, transitioning from the Medical Research Council. Since the final year of the Medical Research Council (1999), the CIHR base budget grew from \$289 million in 1999-2000 to \$723 million in 2006-07. This growth has

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\* AUCC. Momentum – the 2005 report on university research and knowledge transfer. AUCC: Ottawa, 2005.

been reflected in increased grants, more investigators funded and greater support for training awards. Growth in the Natural Sciences and Engineering Research Council (NSERC) has tracked almost parallel to CIHR. Although the Social Sciences and Humanities Research Council (SSHRC) budget has also grown, it remains about half the level of the other two councils.

After several years of rapid expansion of federal research funding, we anticipate slower growth in the next few years. There are more researchers in the system applying for grants than ever before, and success rates in open grant competitions are falling. In Budget 2007, the federal government provided 1,000 new graduate scholarships through the granting councils, but the core budgets of the three councils grew only slightly more than general inflation. The government has signalled, however, its willingness to invest directly in specific centres and initiatives. It has also set aside more funding for industrial partnerships and commercialization, underlining its growing focus on applied and sector-specific research.

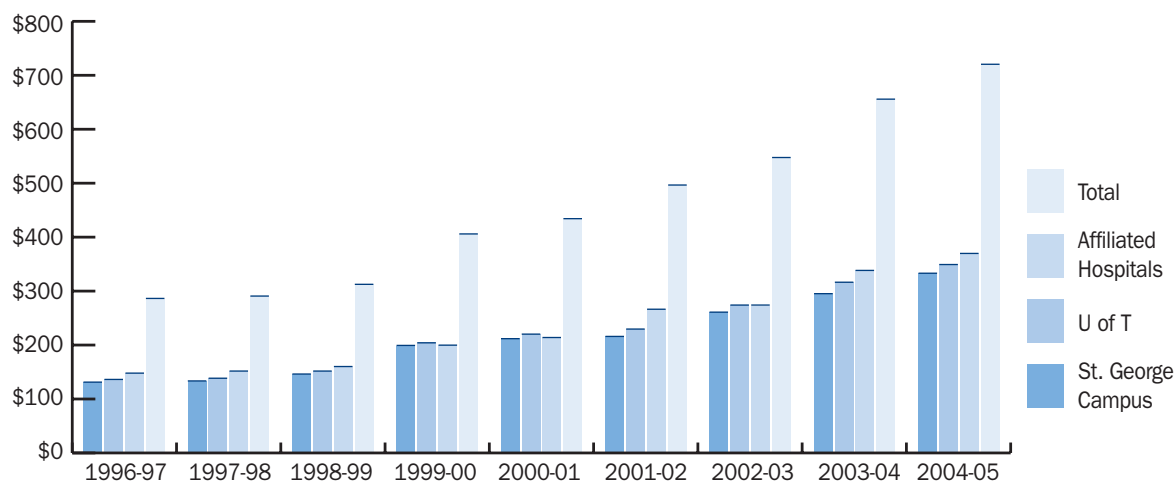
### Scholarship at the University of Toronto

For many years, U of T has received more funding from the three federal granting councils than any other Canadian university. We also bring in the most infra-structure funding from the Canada Foundation for Innovation – over \$350 million, or about \$100 million more than UBC, our nearest competitor.

The University has further benefited from the Canada Research Chairs program with 253 chairs appointed. On the provincial front, the University has been the largest single recipient of funds provided through the various government programs. Together with our research hospital partners, U of T is the largest research entity in Canada and the third-largest in North America.<sup>†</sup>

The strength of the University's research enterprise may be further characterized by its performance

Figure 4: Research Funding 1996-97 to 2004-05 in millions of dollars



<sup>†</sup> Measured by direct and indirect dollar volume invested.



in publications. From 2000 to 2004, U of T professors produced a greater number of publications in the fields indexed by Thomson Scientific than faculty at any other public research university worldwide. Including the leading private American universities, the University of Toronto stands second only to Harvard in publications among all private and public universities. The University's prominence in publications reflects its excellent per-faculty member productivity, not simply its size. Moreover, it should be noted that the Thomson indices offer a limited window on the University's considerable strength in the humanities.

University of Toronto faculty members have also been honoured with a disproportionately large share of the nation's most prestigious academic awards. Since 1980, University faculty members, who constitute from 7% to 8% of the faculty at all Canadian universities, have won at least 25% of Steacie, Killam and Molson prizes. They have also won 29% of the highest awards given out by the federal research councils. Toronto's dominance is even greater in international prizes and awards where competitions are judged by higher standards of peer-reviewed excellence.

The University's prominence in publications and awards is all the more auspicious given the fact that per-capita funding of higher education in Ontario is dead last among Canadian provinces, and among the lowest two or three jurisdictions out of 60 states and provinces in North America.

At the same time, we should be clear about the challenges facing our research enterprises. Over the past decade, private sector investments in university research across Canada have increased substantially, growing by 25% from 2001 to 2004 alone. This increase, however, is not mirrored at the University of Toronto. In 2003-04, research funding from industrial sources for contract or sponsored research was \$62.5 million, an increase of only 7.8% over that of 2000-01. Looking towards 2030, there will be opportunities to increase the University's engagement with industry on sponsored research, not just in the applied sciences, but in the social sciences and humanities as well. Decisions will need to be made about how and how far to facilitate these research activities.

Overall, as mentioned briefly above, our success in research has paradoxically put substantial pressure on the institution's operating budget and taxed our support for the University's core educational mission. This is because the indirect costs of research [ICR] – those associated with heating and lighting laboratories, cleaning, accounting and providing for the health and safety of faculty, students and staff – are not fully covered at any of Canada's research-intensive universities. Governments typically provide institutions with coverage for some percentage of these indirect costs. The Province of Ontario, in particular, has been a leader in its degree of coverage. However, the current federal ICR program leaves the University of Toronto well behind its international peers in this respect.

The question of how to recover the indirect costs of research is a critical one. Research grants help create a powerful environment for graduate and professional education, and a vibrant scholarly milieu that is critical to recruiting the best and brightest faculty who will teach undergraduates and graduate students alike. Consequently, competitive research grants are integral to the university's ability to

carry out its core missions of education and scholarship. Planning for 2030, it seems overwhelmingly probable that we shall need to pursue major increases in our absolute level of direct and indirect research support. The question will be: How can that goal be achieved?

U of T has a long and extraordinary history of contributing to breakthroughs in a staggering range of disciplines. A challenge facing the institution today and over the next twenty years is to anticipate and respond strongly to research opportunities on strategic issues, without losing our remarkable momentum in basic scholarship. In this light, consider the following example. The University has recently seen a reduction in its share of Canada Research Chairs. This occurred not because of diminished performance in competitive grant-seeking at the federal councils, but rather because our faculty members are now relatively less engaged with the evolving Networks of Centres of Excellence [NCEs]. NCEs have a mixed record in collaboration and commercialization; but they have the worthy aim of bringing scientists and industry partners together on a national footing. Though support for fundamental research has been sustained federally in absolute terms, its relative growth seems likely to be slower in the next few years. Instead, both the federal and provincial governments may well have entered a phase of relatively more generous support for strategic initiatives including NCEs. And those initiatives in turn are often tied to community engagement or industrial partnerships.

Any slowing of support for fundamental research is unsettling because Canada's standing in discovery-oriented scholarship and research is far from secure. Taking one example, researchers at the University of California Berkeley have won 20 Nobel Prizes since 1939, including four in the last decade. John Polanyi's 1986 Nobel prize was the last won by a U of T faculty member. Publication totals notwithstanding, citation counts for several private (Harvard, Johns Hopkins, and Stanford) and public (University of Washington and UCLA) universities are higher than for Toronto. We may well be paying a price in Canada for the broad diffusion of research resources across multiple organizations, and for placing too many of our top researchers on a treadmill for grant applications.

In sum, the domestic playing field for university-based scholarship is dramatically better than it was even a decade ago. The good news is that governments today appear willing to invest differentially in centres of excellence. The challenge is that governments will always be pressured into picking 'winners' based on regional interests and guesswork about commercialization opportunities, rather than dispassionate assessments of past and potential research performance. The University of Toronto research enterprise is entering a new era with shifts in government resource allocation and changes in the public policy environment, including a renewed emphasis on our ability to translate ideas and innovations into non-profit and commercial applications, and a greater emphasis on strategic research initiatives. The University must be alive to this evolving research landscape, our continuing fiscal pressures, and our core values, in finding a way forward over the next twenty-five years.

## **Our Future in Education and Scholarship**

The University of Toronto can take pride in its position as Canada's undisputed scholarship leader and in the breadth and depth of its educational programs. Through two decades of pressure on core

operating budgets, we have sustained a balance between our education and scholarship missions. Today, we face a clear need to re-position our research enterprise in a shifting landscape, along with an imperative to capitalize on the extraordinary scholarship in the University so as to enhance the undergraduate student experience.

We hear competing arguments about our strategic directions for the next quarter-century. Some suggest that the University should reduce its focus on scholarship, recruit more teaching-stream faculty, and concentrate on delivering higher quality undergraduate education. Others suggest that, finances permitting, the University should scale back undergraduate enrolments, and augment its role in graduate and professional education. Beijing University, for example, has followed this path and enrolls roughly an equal proportion of graduate and undergraduate students. These and other options require serious deliberation and debate in the months ahead. Accordingly, the questions below address our future role in education and scholarship, focusing on ‘what we should do’. The section that follows will examine ‘how much we should do’ from an enrolment perspective.

## TOWARDS 2030: Some strategic questions to promote dialogue ...

Given the current constraints on per-student grants and our focus on optimizing the undergraduate student experience, should we maintain our current emphasis on scholarship, or tilt the institutional balance towards more investment in undergraduate education?

Are there novel and cost-effective ways to create a better pedagogic environment for undergraduates that have not been fully explored? Examples include increasing the number of teaching-stream faculty, recruiting alumni mentors, augmenting work-study and co-operative programs, better deploying e-learning technologies, modularizing curricula, and relying more on half-courses or three-semester programs.

If we believe that research-intensiveness is indeed one of the University's defining features, how can we leverage our research strength to create a more powerful and engaging experience for first- and second-entry undergraduates and professional master's candidates?

Are we investing appropriately in information technology and information resources, including libraries?

Are there core competencies that we believe all our undergraduates should acquire before receiving a baccalaureate degree from the University of Toronto? Are there courses or themes that can serve to unify or define our varied degree offerings in undergraduate education? If so, how can they be taught so as to draw on our comparative strengths in scholarship?

Are there emerging disciplines or global challenges where the University has research strengths and could do more to establish an educational presence?

Independent of absolute enrolment targets, what is the most appropriate balance of undergraduate, professional and research-stream graduate programs? What is the appropriate balance between domestic and international students?

What are the barriers to international student enrolment growth and how can we surmount them?

Given current constraints in federal research funding, how can we foster the optimum environment for graduate studies in the doctoral stream?

Given the federal and provincial governments' emphasis on knowledge translation and commercialization of university research, how do we maintain basic research while creating the structures, culture, and incentives that will promote the transfer and uptake of new ideas?

## 2. Enrolment Growth

The student population at the University of Toronto has grown steadily since we opened our doors as King's College in 1827. Beginning in the mid 1960s the Baby Boomers arrived on campus and sustained enrolment growth for approximately 20 years. Following the lexicon of U of T economist David Foot, the next demographic wave was the 'Bust Generation'. By the late 1980s and early 1990s postsecondary enrolment growth slowed as a relatively smaller cohort of young people born in the late 1960s and 1970s made their way to and through university. The growth curve, however, sharpened significantly beginning in the early 2000s with the arrival of the 'Echo Generation', children of the Boomers.

In fact, the University has experienced enrolment growth

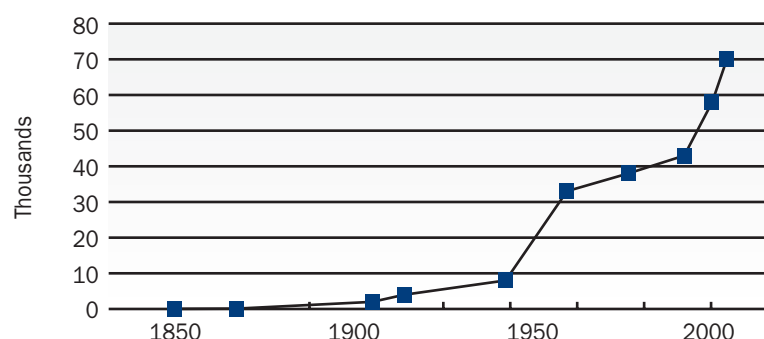
of 35%<sup>6</sup> over the past ten years, and 50% growth over the past twenty years. The University has accommodated the increased number of students across all three campuses. In the past 10 years, UTM expanded by 4,185 students (70% increase), UTSC expanded by 4,934 students (96% increase), and the St. George campus expanded by 9,377 students (23% increase). For 2006-07, the total student enrolment (headcount) at the University of Toronto stood at 72,494. The demand for university places has been driven by population growth in the 18 to 24 year age group and increasing participation rates.

Since 1997-98, enrolment in graduate professional masters programs has almost doubled, and doctoral enrolment has grown by 30%. Doctoral-stream Masters programs remained steady, increasing only by about 3%. The rapid growth in Professional Masters enrolment reflects the growing societal demand for these degrees, the increased number of offerings at the University, and shifts from second-entry baccalaureate programs. The increase in doctoral students is indicative of the growing intensity of research and scholarship at the University.

### Projected enrolment growth demands

Across Ontario, the growth in the population of 18 to 24 year olds is projected to peak in 2014, rising 118,000 above 2005 levels<sup>7</sup>. The population will then decline somewhat but remain about 80,000 above 2005 levels beyond 2030. Professor David Foot suggests that "Over the next decade Canadian postsecondary institutions can be expected to experience enrolment growth. After that, the boom becomes a bust as the declining births of the 1990s gradually impact enrolments."<sup>8</sup> However, these general projections may not take full account of changing participation rates. A

Figure 5: Full-Time Enrolment at UofT in thousands



baccalaureate in today's 'knowledge economy' can be seen as an entry-level credential, similar to a high school diploma in the 1970s. That reality may lead in turn to growing demand for of second-entry undergraduate and graduate programs.

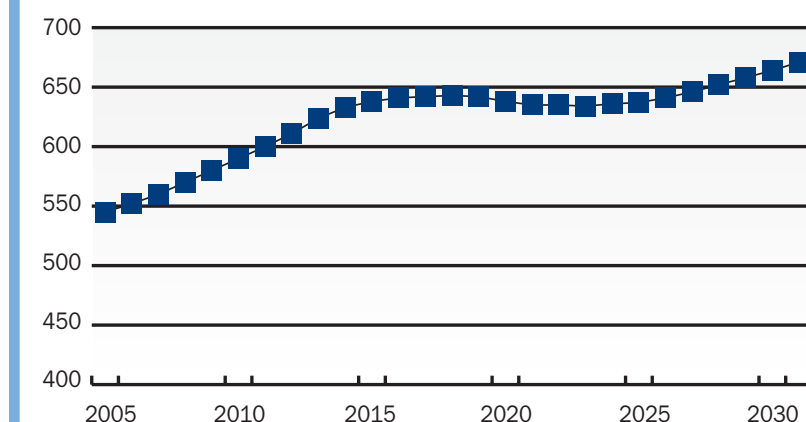
As well, most of Ontario's population growth in this 18 to 24 year old age group in the next two decades will be in the Greater Toronto Area (GTA) region, with a 24% increase projected for 2005 to 2031 (an additional 126,000 potential students). For the same period, growth in this age group for regions outside the GTA is projected at more modest levels to 2013-2014 and then falling

to 2005 levels or below. Indeed, for the area of Ontario outside the GTA, the population of the 18 to 24 year olds in 2031 is projected to be 7% below 2005 levels. As noted, these declines are likely to be offset by increasing university participation rates<sup>9</sup>. Participation rates for Ontario universities have climbed from 18.1 % (1989-90) to 27.9% (2004-05). Although some of the recent increases are an artefact of the double cohort (caused by elimination of grade 13), labour market dynamics and immigration are likely to drive up the demand for university education even if the population of 18 to 24 year olds drops slightly.

These differential enrolment pressures across Ontario present a significant challenge for all universities, and especially those located in the GTA (University of Toronto, York University, Ryerson University, the Ontario College of Art and Design and the University of Ontario Institute of Technology). The University of Toronto provides an education to approximately 24% of all GTA residents who register for university. If we do not expand, and especially

if our sister institutions expand slowly or not at all, tens of thousands of students will need to leave the GTA for higher education. The situation is particularly fluid because colleges and universities outside the GTA, particularly in northern Ontario, could well see declining enrolments in the same period. Furthermore, the province has struggled to finance current students at levels that will sustain educational quality, and undergraduate enrolment expansion will create new financial pressures.

Figure 6: GTA Population Ages 18-24, in 000's



#### University of Toronto is a key provider of higher education to the GTA community

- » In 2005, 71% of all new students entering first year at U of T originated from GTA communities.
- » Of all GTA students registered at university (2004), 24.4% came to University of Toronto.

Graduate enrolment is also expected to increase, but the first period of increase will follow a province-wide plan. In the 2005 Spring Budget, the Ontario Government announced that by 2009-10, an additional \$220M per annum will be made available to expand graduate enrolment in Ontario universities. This funding is intended to support a system-wide growth of 14,000 graduate spaces over 2002-03 levels. The University's long-term expansion target is to add 4,470 FTEs, which represents an expansion of 42% over the 2004-05 level. Implementation of this plan is conditional on availability of appropriate resources, including funding for capital, student support and research support.

### Accommodating growth without compromising quality

Management consultants sometimes speak of 'the impossible triad' – 'better, faster, and cheaper', and ask clients to 'pick any two'. The analogous attributes of education are quality, accessibility, and affordability. As one indicator of the trade-offs in the system, in 2005-06 Canadian universities on average received \$2,500 per student less operating support from the government than was provided at the beginning of the 1990s.\*\* At Toronto, the impact of chronic funding shortfalls has been felt in rising student-to-faculty ratios, bigger class sizes and depleted administrative infrastructure. An increasing number of first year undergraduate students are experiencing large class sizes (greater than 100 students per class), particularly at the Mississauga and Scarborough campuses.<sup>10</sup> This challenge is also felt acutely in higher-level courses with fewer small lectures and seminars now available to students.

Similarly, while the University of Toronto and sister institutions have done well to meet the growing demand for university degrees, students across Canada, and especially in Ontario, are receiving a very different education than is available to US students at top public universities. One of our sources of performance metrics on student experience, the National Survey of Student Engagement, indicates unsettling differences when we compare Ontario universities to their peers in the United States. The intensity of student-faculty interactions at Ontario universities is at least 25% below that seen at US peer universities. Further, the degree of active and collaborative learning at Ontario institutions is

#### U of T High Student-Faculty Ratio

In the last 10 years, the University of Toronto student-faculty ratios have increased from 14 to 24, an increase of close to 70%. Our student-faculty ratio is almost twice as high as that of the University of Calgary.

U of T student-faculty ratios run 60% higher than American peer average and 20% higher than the Canadian peer mean.

The St. George campus currently serves **51,000 students**, a number that is larger than any university campus in Canada and, among US university campuses, ranks second in size following Ohio State University (at 51,800 students).

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\*\* In real terms (2005 dollars).



lagging at least 15% below that of the US peer group. Notwithstanding concerns over rising tuition levels, evidence from multiple indicators suggests that our ability to maintain – let alone enhance – quality is being severely constrained.

Physical capacity is a related concern. Facilities on all three campuses are very heavily booked during the fall and spring semesters. Summer enrolments are growing. Additional growth is clearly possible, but there are differing views on ‘trimesterization’ and the cost-efficiency of greatly-increased summer enrolments. By the space standards of the Council of Ontario Universities [COU], all three campuses – but particularly UTM and UTSC – already fall significantly short of the square footage recommended for our configuration of faculty, staff, and students. Facility expansion is needed given current enrolments and staffing, not least the ongoing growth in the numbers of graduate students. However, with both the UTM and UTSC campuses situated near ravines or conservation areas, with the St. George campus located in an area of costly real estate in downtown Toronto and with GTA construction costs rising steadily, physical expansion is not without obstacles. Even in the health sphere, where several of the fully-affiliated research hospitals are expanding their physical plants, the availability of real estate constrains growth near the St. George Campus.<sup>†</sup> Meanwhile, the peak in GTA population growth among 18 to 24 year olds will be reached in only seven years, raising acute questions about whether and how we might accommodate a new wave of undergraduates.

## Our Future Enrolment Patterns

The University of Toronto is at a critical juncture in decision-making about enrolment. Reflecting on the increases in student-faculty ratios, large class sizes and our performance on several measures of undergraduate student satisfaction, it appears unlikely – absent radical changes in funding – that bigger will be better. We have limited physical and human capacity to absorb more students on our three campuses. Yet, we also are expected to be responsive to the educational aspirations of residents of Ontario and particularly our citizens who live in the GTA. Those aspirations and associated population dynamics all point towards undergraduate growth at exactly a point in time when the majority of our colleagues and staff seem to be leaning in the precisely the opposite direction. The University is currently working with York and Ryerson as well as the Ministry of Training, Colleges and Universities to explore regional options. The immediate challenge, however, is to clarify our own long-term goals so that short-term decisions can be made within a sound strategic framework.

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<sup>†</sup> Seven institutions are relatively land-locked. The exceptions are: Sunnybrook with its large tract of University-owned land; the Centre for Addiction and Mental Health with its new Queen Street campus; and Toronto Rehabilitation Institute which has under-developed sites.



## TOWARDS 2030: Some strategic questions to promote dialogue ...

What is the optimum student enrolment for the University overall, and for each of the three campuses?

From a system-wide standpoint, there are a number of options the University might consider when reflecting on its participation in the Greater Toronto Area during a period of increasing participation rates and enrolment growth. They are not mutually exclusive and include:

- a) Limit further undergraduate enrolment increases, assuming that students will move out of region to other universities in the 'Golden Horseshoe' and beyond
- b) Develop a fourth University of Toronto campus in a region of the GTA with high population growth
- c) Increase enrolment across one or more of the three campuses to the greatest extent possible
- d) Develop partnerships with one or more colleges to facilitate transfers to degree programs, or with other universities outside the GTA to assist their entry into the GTA market
- e) Work collaboratively with government, colleges, and university partners to create another university in the GTA.

In light of the long-term position of the University, which of these (or other) options should be advanced?

Assuming a particular enrolment or growth scenario, what is the optimum blend of domestic and international students? Do absolute growth targets alter our institutional views about the optimum balance of undergraduate and graduate students?

The University of Toronto's enrolment has been described as 'two Gs' (GTA and Global). What type of students are we seeking to enrol and from what geographic areas? Given those goals, do we have the right methods of recruitment and selection?

### 3. U of T's Financial Model

Two decades ago, the then President George Connell noted in *Renewal 1987* that “for the past 10 to 15 years, the University of Toronto has endured serious constraints upon its financial resources and in turn on its academic work”. Today, the University is still in an era of serious funding challenges.

In 2004-05, U of T's operating budget was about \$1.2 billion. The core provincial grant currently represents about 48% of that total, down from 76% in 1991-92. Tuition has risen from 20 to 37% of revenue. The remainder comes from other sources, such as endowment payouts, federal government support and divisionally generated income.

Figure 6: University of Toronto Operating Revenue 1991-92 to 2005-06

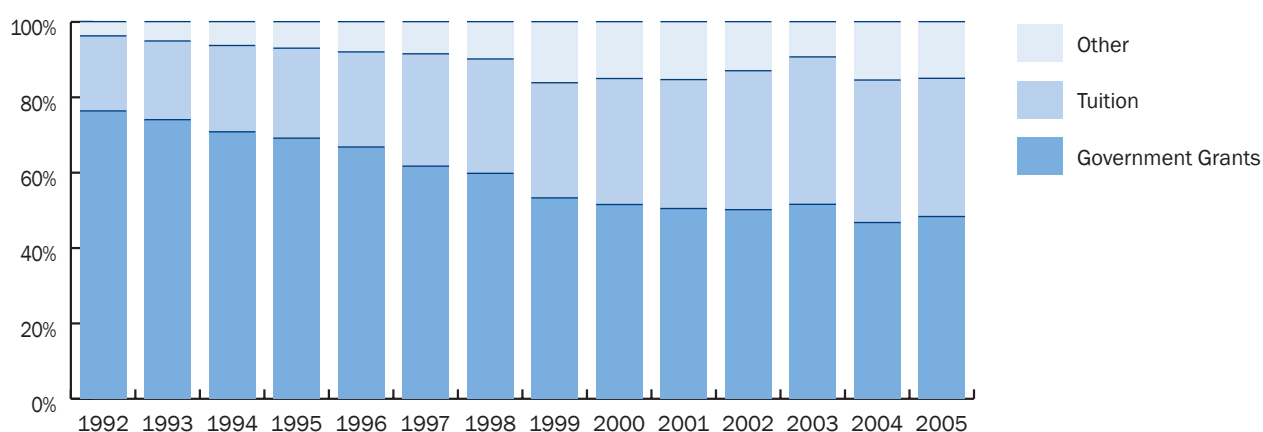


Figure 6 illustrates a declining share of government grants in the funding of university education. In fact, the proportion of provincial GDP devoted to post-secondary education in Ontario is lower than in all other provinces. Whereas per-capita funding of health care and K-12 schooling in Ontario is at the national average, funding of colleges and universities is 30% below the national average. Moreover, from the early 1990s to 2004-05, per-student inflation-adjusted funding from the provincial government (not including direct grants and research awards) fell by about 30%.

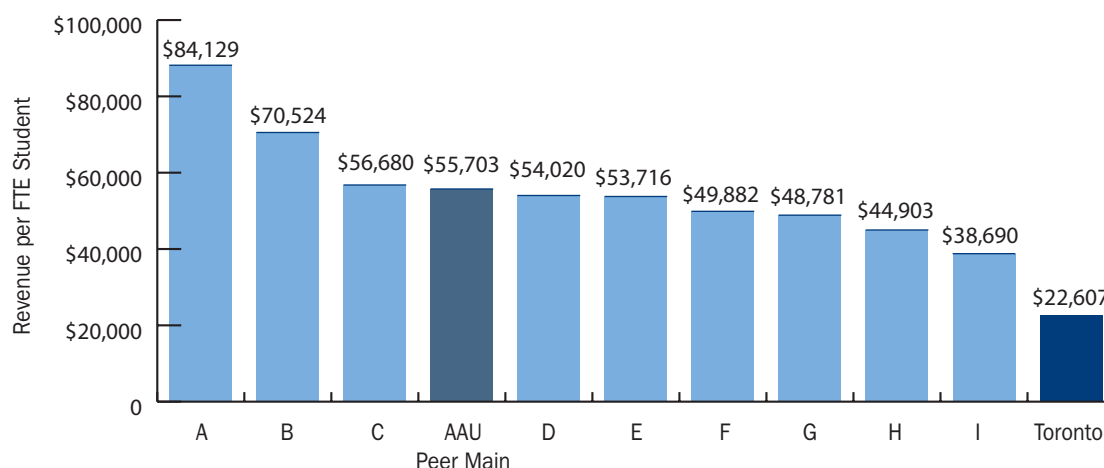
The provincial government recently responded to the level of per-student funding in Ontario with its very welcome Reaching Higher Plan. The plan promised \$6.2 billion in expenditure over five years and is particularly generous in its support of graduate students. However, much of the funding is directed to student aid, to the college sector and to enrolment growth. Thus, the Reaching Higher Plan has led to only modest increases in per student grants, particularly after ordinary inflation is taken into account.

Ontario has been dead last among the provinces in per-student funding of higher education for about 15 years.

Ontario government funding per student is 50 to 66% of per student funding to public universities in American peer states.

The Council of Ontario Universities has estimated that, even by 2009-10, the additional resources committed per-student are unlikely to move Ontario out of last place among the provinces.

Figure 7: Total All Revenue per FTE Student ~ Fiscal Year 2005 - 2006 (US Funds)  
University of Toronto vs AAU Peers (Institutions are masked according to AAUDE guidelines.)



Just as Ontario sits in last place among the provinces in per-student funding, Figure 7 below shows that, by the same measure, the University of Toronto lags behind all of our public AAU peers in total per-student revenues.

The core mechanism for government funding of Ontario universities is through basic operating grants. Since the 1960s, funding has been based on a weighted average of the number of students in various programs. The weights, known as 'Basic Income Units' or BIUs, were derived in the first instance from estimates of the relative cost of educating students in differing programs. However, the precision and accuracy of BIU weights today is questionable and the per-unit valuation remains too low to secure desirable features of undergraduate education, such as small class sizes and increased personal contact between professors and students. Another limitation is the fact that BIU weights and values are applied without reference to quality of academic programs or consideration of differing institutional roles in research.

The BIU weights and funding levels have created a set of incentives that are not necessarily aligned with our institutional strengths or past track record of research-intensive differentiation. High-volume undergraduate programs, characterized by large classes and limited professorial contact, are often cited as a cause of dissatisfaction among students; but in many ways they are the logical response to an environment of net revenue generation based on constrained BIUs. At one time, doctoral-stream programs were more financially sustainable, but the implementation of the 'full funding guarantee' (living stipend + tuition rebate), while an important advance in graduate education, has radically altered the net revenues associated with delivery of graduate research degrees. Without external financial awards or grants to cover minimum stipends associated with the graduate funding

guarantee, doctoral programs in effect end up sending much of the BIU-associated grant directly to students themselves to cover the funding guarantee. Professional master's programs, in turn, are more sustainable because students are provided with some measure of bursary support, but not a guaranteed stipend and tuition rebate.

## Tuition

The tuition levels at Canadian universities roughly track inversely to the per-student funding provided by their home province. Higher tuitions in Nova Scotia and Ontario, for example, serve in part to offset lower per-student funding in those two provinces. Tuition fees for bachelor of arts programs at Ontario universities have increased 49% over the past decade, from \$2,925 in 1996-97 to an average of \$4,343 in 2006-07.<sup>11</sup> While recent increases are above the Consumer Price Index, analysis of the trend over three or four decades shows that tuitions have basically tracked the provincial average of wages and salaries. Accounting for exchange rates and the cost of living, Ontario fees are comparable to Australian fees and significantly lower than those of many public universities in the United States.<sup>12</sup>

The University has a tuition framework that weighs factors ranging from program costs to anticipated earnings, and also commits the institution to ensuring that no student should ever be forced to leave without completing his or her degree on the basis of financial need. The application of this framework occurs, however, within a Procrustean bed of varying government regulations regarding domestic students. In the 1990s, the Government of Ontario capped growth in undergraduate fees at 2% per annum, but allowed institutions to set their own tuition fees for most professional programs. The Government froze tuition fees for 2 years in 2004 and 2005, and then in 2006, announced a new multi-year tuition framework which provided for some degree of tuition fee differentiation, subject to the condition (among others) that the overall average tuition increase across the institution could not exceed 5%. Our new tuition levels reflect the competing influences within each program of chronic revenue shortfalls, variable baseline tuitions in the light of previous regulatory frameworks, and our firm institutional commitment to accessibility.

On the latter point, student groups point to rising tuition levels as barriers to accessing a university education, and have called repeatedly for tuition freezes or reductions. Within the present fiscal framework, however, and looking forward to 2030, a tuition freeze would have a profoundly detrimental impact on the quality of education and student experience available at the University of Toronto. While the impact of tuitions on university finance – and hence quality of education – is not mysterious, the impact of tuitions on accessibility, by contrast, is complex and counter-intuitive. Available data demonstrate a positive correlation in many jurisdictions (Canada and internationally) between tuition levels and university participation rates. That is, increasing tuition is often associated with increasing, not decreasing, participation rates. But these ecological correlations at the broad group level do not hold consistently for individuals or subgroups. The supply-demand dynamic is affected, *inter alia*, by the jurisdictional availability of student aid, by variability in the

willingness of individuals and families to seek bursaries or assume debt to finance higher education, by internal financial aid offered by the programs themselves, and by the perceived long-term economic value of credentials from different degree programs.

Our status as a publicly-assisted university and our institutional commitment to access are both clear cut. Thus, for the University of Toronto, rising tuitions are accompanied by the assumption of an obligation to implement programs of financial aid that will help provide equitable access to our degree programs. A substantial percentage of new tuition revenue is drawn away to generate pools of bursary funds to offset tuition charges for lower-income students who require financial assistance above the loans and bursaries available through combined provincial and federal sources. In fundraising campaigns, we place special emphasis on bursaries and scholarships to support access and offset tuition costs. The multi-year campaign that ended in December 2003 raised more than \$500 million for student aid through direct gifts and leverage from government matching programs.

In short, at the University of Toronto, we have used tuition flexibility in meaningful measure not just to sustain the quality of our educational programs in a setting of constrained per-student grants from government, but also to ensure that we remain open to the best and brightest students regardless of their economic circumstances. Our approach to financial aid is manifestly effective. In recent years, about 40% of our undergraduates report a total family income of less than \$50,000 per annum. Division-specific analyses, most notably in our Faculty of Law, highlight the effectiveness of bursary programs based on tuition redistribution – access has improved even as tuitions have risen.

Today, the University of Toronto contributes about twice the Ontario average into student financial aid – a commitment that necessarily limits the resources available for our educational mission. The sustainability of our model depends in part on the level of student aid provided by governments and on philanthropic support for scholarships and bursaries. It also depends, meaningfully, on enhanced tuition resources that can be drawn into bursary funds. This model has much to commend it, but its practicality has been constrained by tuition limits and freezes, as well as slower-than-expected growth in external scholarship funds. It is arguably time for reasoned debate about alternative models that will carry the institution into its third century.

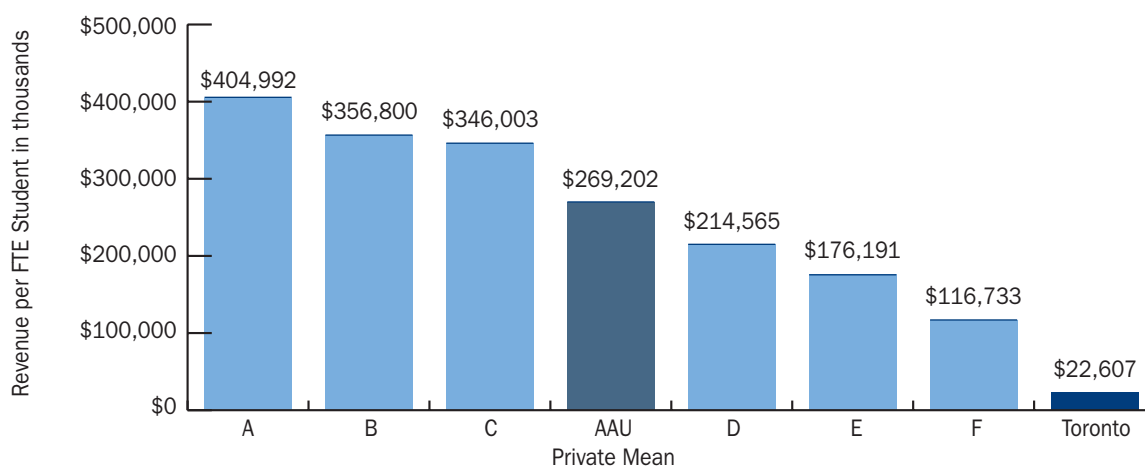
### **A Structural Subsidy for Research Activity**

We have already addressed the perverse effect of research grants on university finances in Canada. Although the Province of Ontario provides 40% coverage of the indirect costs of research, research-intensive universities are disadvantaged by the low level of coverage of ICR associated with federal grants. For any large research-intensive institution, the actual indirect costs of research average at least 50 cents on the direct research dollar. In the USA, where these costs are assigned to individual projects and submitted to audit, ICR for physical and life sciences can run in excess of 80 cents on the dollar. Federal grants are carrying ICR coverage that, for the University of Toronto, is under 20 cents on the dollar. This situation severely compromises our ability to compete with British (ICR coverage at 48 cents on the dollar) or American universities (ICR averaging about 60 cents on the dollar for science grants from federal agencies).

## Sustainability with current funding approaches

In the USA, as already noted, the financial gap is growing between various private institutions – such as Harvard, Stanford, Princeton, and Yale – and a much larger group of publicly-financed universities. Berkeley and San Francisco in the University of California system, among others, are effective public competitors with these private powerhouses. Given our radically lower per-student funding from all sources, it is a small miracle that the University of Toronto continues to compete with so many of these American institutions. But while the research outputs of many public universities in Canada and the USA remain impressive, the private institutions have pulled ahead in other ways – delivering smaller class sizes to undergraduates, offering higher-quality services and amenities, and subsidizing an impressive range of co- and extra-curricular opportunities. Figure 7 above illustrated U of T's per-student funding relative to our public AAU peers. Figure 8 below depicts a more daunting relationship: U of T's per-student funding relative to that of several private US universities. Our challenge may be expressed in financial terms, but it is grounded in our concern for the experience of our students, now and in the years ahead.

Figure 8: Total All Revenue per FTE Student ~ Fiscal Year 2005 - 2006 (US Funds)  
University of Toronto vs Select AAU Private (Institutions are masked according to AAUDE guidelines.)



The growing financial gap between private and public institutions has fuelled debate and divergent policies in the USA. On the one hand, there is continuing anxiety about the financial inaccessibility of private institutions where tuitions for baccalaureate programs often exceed C\$25,000 per annum. On the other hand, state legislators have allowed publicly-assisted universities – including the University of Virginia, University of Texas, and the University of Colorado – to raise tuitions with limited interference provided accessibility commitments are maintained.

The same debate has played out in Canada, albeit in a muted fashion given the absence of private institutions in the higher education sector. Several provinces offer a degree of tuition flexibility and universities within those provinces can set market prices for new programs. In Ontario, the government allows some programs that do not seek public funding to operate on a self-funded basis. Meanwhile, colleagues and students at many Ontario universities are expressing serious concerns

about the quality of university education in our province and how best to finance its enhancement. Faced with rising expectations, ongoing budgetary pressure and our continuing concern to enrich our students' experiences and compete effectively with our wealthier peers, the University's present funding approach may not be sustainable.

### Alternative government funding options

A number of policy initiatives would reshape the financial future of the University of Toronto.

#### *At the federal level:*

- » Improved federal research grant coverage of indirect costs would go a long way to minimize the strain of research costs on the university's educational mission. Until the federal government increases its indirect cost coverage to 40 cents on the dollar for all federal grants, all of Canada's research-intensive universities are compromised financially.
- » The general enhancement of research funding for operating grants is required to support graduate students with stimulating projects and part-time work as research assistants.
- » Ongoing expansion of graduate scholarships and fellowships would help the next generation of young Canadians pursue advanced degrees. With the future of the Millennium Scholarship Foundation in question, there is also an urgent need to buttress the national framework for undergraduate loans and bursaries.
- » Above all, institutions could benefit from full and fair flow-through of the new post-secondary education (PSE) transfer to provinces. The PSE transfer amounts to \$800M per annum with ongoing inflation-related increases – and, in fact, the initial amount itself could be escalated as a result of federal-provincial negotiations. At the University of Toronto, the relevant base increase from this source alone could be at least \$35M starting in 2008-09. This allocation, however, could be significantly delayed by federal-provincial disagreements over jurisdiction and conditionality. Although the federal intent is that these funds be incremental to current and projected funding of colleges and universities, their impact will be greatly attenuated if they are used instead to offset existing or planned commitments.

#### *At the provincial level:*

- » Current per-capita funding for PSE remains surprisingly low, notwithstanding the positive investments made recently through the Government's Reaching Higher Plan. Ontario has the second-highest per-capita GDP of the ten Canadian provinces, and an economy with limited dependence on natural resources. In theory, to secure the future of our jurisdiction, spending on post-secondary education in Ontario should be at worst second-highest in Canada on a per-student basis, rather than tenth of ten provinces. The University of Toronto would be transformed if the per-student grants were raised to the national average level for the other nine provinces in the Canadian federation.
- » As noted earlier, educational programs in Ontario are uniformly funded on a per-student basis. While identical funding of clearly identical programs is defensible, there seems to be limited capacity or willingness to assess programs in more detail and provide differential funding on the basis of those assessments. In addition, the province could create distinct mandates for sets of institutions as occurs with the California State and University of California systems.



- » Another option is what might be called ‘earned tuition autonomy’. This option would give selected institutions greater flexibility in setting tuitions, provided they maintained full accessibility by offering generous financial assistance, particularly internally-derived bursaries, to their students. Some institutions would then increase fees modestly in hopes of enhancing quality while attracting the best and brightest students, and other institutions could flat-line tuitions and seek top-flight students through offering competitive quality at a lower price.

## Alternative Funding Sources

### a) Philanthropy

The University has benefited enormously from generous philanthropic support over the last 15 years. From 1993 to 2001, the University’s Campaign raised over \$1B, and the endowment currently has a market value equal to about \$1.7B. In the last two years, alumni and friends have made remarkable gifts to the University with values totalling above \$100M in 2006 and \$160M in 2007. Philanthropic support for the University of Toronto remains higher than for other Canadian universities and hospitals, and shows no signs of flagging. However, the extent to which current support can be augmented is unclear.

Currently the University anticipates real pay-out rates on endowed funds at around 3.5% to 4%, or, accounting for current inflation, roughly 6% to 7% per annum.<sup>‡</sup> One option, therefore, is that future fund-raising might focus less on endowments and more on immediate expendable supports, including capital gifts. While this strategy is appealing, the short-term gains from this option must be weighed against the duty of all fund-raisers to secure indefinite support for an institution with a life-span measured in centuries.

### b) Commercialization and Sponsored Contract Research

The translation of research output into applications with wide uptake is particularly appealing because it enables the work of the University to make a positive difference in the world. It deepens and broadens the connections between the University and the public and private sectors and it creates employment and educational opportunities for our students. In this context, another potential source of increased revenue is commercialization of intellectual property generated through university research. Starting in 1981, the University took steps to help academic researchers transfer their innovations to the private sector through the formation of the Innovations Foundation. In the last two years, the University has restructured its research commercialization operation, working in concert with the MaRS Centre, a massive new \$450 million capital development at the edge of the St. George campus. MaRS aims to promote collaboration among scientists, knowledge-based industries, and investors in those same industries. As we prepare for 2030, there will be a new level of expertise and support for U of T researchers bringing their research through the complex processes of commercialization.

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<sup>‡</sup> Whenever possible, the University also augments the principle in endowed accounts as a means of preventing the erosion of pay-out rates in periods of accelerated inflation.



In terms of licensing inventions, the University of Toronto continues to lead Canadian universities in the cumulative number of new licences in recent years. Over 2001-02 to 2004-05, the University of Toronto created 189 new licences, ranking fifth among US peer institutions, and first among Canadian universities.<sup>13</sup> While this leading position is reassuring, critics have suggested that the University could do better and take more of its research output to the marketplace. If one uses older data, the first impression is that, given its huge research output, the University of Toronto is indeed an under-performer in commercialization. The good news – and bad news – is that the data are flawed. Toronto for years has reported net revenues while others reported gross revenues; and the data are reported only for on-campus research while other institutions roll in affiliated hospital revenues. For example, widely-cited data (e.g. from the Milken Institute) suggest the University of Toronto lags dramatically in biotechnology patents issued, licensing activity, spin-offs developed, and total revenues. This is hardly surprising when 70% of the relevant research and associated commercialization activity is hospital-based and not included in the tally. Thus, while the ‘head room’ for revenue growth is meaningful, it is smaller than historical data would suggest.

Debate continues about the optimum intellectual property (IP) strategy that might increase our commercialization performance. One model for intellectual property ownership starts at 100% with the faculty member. With this approach, disclosures since 2001 are lower at the University of Waterloo than at a number of Canadian research universities. Although the number of spin-off companies generated is second only to Toronto, Waterloo’s gross commercialization revenues are near the bottom of the Canadian list for the same period. In contrast, the top performer in revenue generation is British Columbia, an institution that starts with 100% university ownership but assigns a percentage of proceeds to the faculty inventor, leading to a revenue-sharing result very similar to the Toronto model. Much more impressive comparators are institutions such as the University of Minnesota or University of Washington, where gross commercialization revenues are several times higher than at Toronto. Both institutions work within the Baye-Dohi Act that assigns IP to the institution for federally-funded research and both provide incentives to faculty members. In short, IP policy *per se* does not drive this dimension of performance.

Examining the overall structure of technology transfer for the University and its hospital partners, a number of observers have suggested that a combined ‘front office’ with top-notch leadership would do much to catalyze success in commercialization. This model presumes that the ‘back office’ functions are maintained or strengthened at each institution, reinforcing a culture of innovation and augmenting the numbers of disclosures. Whatever the optimum model may be, it seems clear that better results are possible. With a major reorganization and strategic investment in technology transfer and commercialization, our faculty inventors should be able to share in new net income from commercialization amounting to several million dollars per annum.<sup>†</sup> An increase in the overall level of commercialization and technology transfer could also promote enhanced levels of industry-sponsored research.

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<sup>†</sup> The University has a very strong commitment to knowledge translation for social innovation, often involving advances in the social sciences and humanities and non-profit partnerships. We focus here on intellectual property with commercial potential given that the focus of the section is on net revenues.

## Unpredictable Costs

Among the unpredictable costs that lie ahead, two bear brief attention here. The first is the cost of utilities. The University has carefully studied its options in this regard, and cost savings through contracting out or rapid adoption of alternative energy sources thus far appear modest at best. We are instead taking steps to amortize the maintenance costs for our heating infrastructure, to promote energy conservation, and to ensure that new buildings are designed with a view to energy cost-effectiveness. The second is our defined benefit pension liability. Our retirees are living longer, requiring actuarial adjustments to our anticipated obligations. Arguments have also been made that the University is too optimistic in using a 4% discount rate to calculate pension liabilities. After considering discount rates as low as 2.5%, the Ontario Teachers Pension Plan shifted to a 3.725% discount rate for liabilities in their most recent pension plan valuation. This shift occurred after the much lower rates were mooted in the context of efforts to raise employee contribution levels. Some private companies, moreover, have capped defined benefit plan enrolments and are now promoting defined contribution plans for new employees.

## Our Financial Future

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Our financial challenges are real. Our expenses are increasing at an average of 6% annually, a rate consistently above general inflation. Our revenues are not keeping pace, and the pressure is being felt at multiple points in the organization, not least in heavier workloads for our faculty and staff, and a more impersonal learning environment for our undergraduate students. Recognizing that we cannot sustain our current level of activity with the current business model, what are the options?

## TOWARDS 2030: Some strategic questions to promote dialogue ...

Are we maximizing all our current sources of revenue? If not, which ones can be enhanced without adversely affecting the institution in other respects?

What advocacy strategies should be put in place to address those areas where federal and provincial support is failing to cover our costs, or insufficient to ensure that we can give our students the quality of education that they deserve?

What funding blend (as between enhanced per-student grants and increased tuition revenues) would be the most sustainable to support the University's long-term position as a leading publicly-assisted research university? Have we got the right mix of students in relation to our complement and staff so as to maximize net revenues while sustaining our core mission?

Given the likelihood of ongoing constraints on per-student grants, how can we strengthen the quality of education for our students and improve the quality of the working life of faculty and staff?

Can accessibility be sustained or even enhanced in the context of a more flexible tuition policy based on earned autonomy? Should more programs be fully self-funded? If so, how do we ensure that student debt-loads and part-time work activities are constrained rather than increased?

Should we change our approach to fund-raising so as to put more emphasis on expendable gifts and capital projects?

Have we put in place the right structures and processes to facilitate commercialization of university-based research? Have we built an effective commercialization enterprise with our research hospital partners? How can we ensure that knowledge translation for better public policy and successful communities receives attention alongside traditional market-facing commercialization activities?

Have we taken the right steps in anticipating the future costs of utilities and utilities-related infrastructure at U of T? Do we have the right financial model for our pension plan, or should employer and employee contributions be raised?

Are we containing all unnecessary expenses? If not, which expenses can be reduced without adversely affecting our mission?

## 4. Our Campuses, Colleges and Affiliates

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### Three Campuses

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The history of the Mississauga and Scarborough campuses reaches back to the early 1960s<sup>14</sup>. Following the creation of York University and two new colleges on the St. George campus, New College and Innis College, it was evident that demand for student places would still not be satisfied. In 1962, the Committee of Ontario University Presidents recommended that two new colleges on the outskirts of Toronto be established by the University of Toronto. The two colleges were to be like other colleges in the Toronto system, though it was envisioned that they would gradually achieve greater autonomy. Scarborough College<sup>15</sup> opened its doors in 1965 and Erindale College in 1967.

There have been several occasions in the history of the campuses where questions of autonomy and differentiation have been raised, and the views of the two campuses have frequently differed. Scarborough College, in its early years, expressed some opposition to the decision making and control exercised by the downtown (St. George campus) departments, and then-principal, Wynne Plumptre, requested ‘a fundamental review of the position and prospects of Scarborough College’. He proposed that the College should, over a short period of years, become an independent university with a primary mission in undergraduate education. A subsequent task force (chaired by Kenneth Hare) recommended greater autonomy for the College which came in the form of more independence in the decisions about faculty recruitment and appointments for the College. Erindale College did not share these ambitions for autonomy, and colleagues there perceived the advantages of close association to outweigh the disadvantages.

In *Renewal 1987*, President George Connell proposed ‘campus-by-campus planning’, i.e., planning for the academic and physical development of each campus independent of the others. Responses to the *Renewal 1987 Discussion Paper*<sup>16</sup> pointed to the challenges of campus-by-campus planning when most programs are department-based, and most appointments, not least graduate appointments, are to University-wide departments. It was further suggested that any differentiation that adversely affected student quality or program quality would not be desirable. Overall, the majority of responses identified the need for a balance of campus-by-campus planning and three-campus planning to both preserve the ‘University of Toronto’ value and create new opportunities that capitalized on the strengths and imaginations of the individual campuses.

### UTM and UTSC Today

Today the University of Toronto at Mississauga (UTM) and University of Toronto - Scarborough (UTSC) are predominantly undergraduate campuses which, over the years, have accommodated significant enrolment expansion. Each campus now enrolls approximately 10,000 students.

Regarding functional integration, the east and west campuses are divisions in the University

structure, with a Principal and Vice President position as the highest executive officer and relationships at the departmental level cross the three campuses. Graduate education on the Mississauga and Scarborough campuses is integrated within the University's School of Graduate Studies and includes a range of programs in the Arts, Sciences and Management.

The unique role of both campuses, and their growing autonomy, is also evident. Both UTM and UTSC have developed relationships with faculties other than Arts and Science. They have distinctive departmental structures and many unique programs.

The Mississauga campus has been transformed by about \$200M in capital redevelopment in the last five years alone. It hosts professional master's programs in Management and Professional Accounting, Management of Innovation, Biotechnology and Biomedical Communications. A diploma program in Investigative and Forensic Accounting is offered primarily on a distance education basis. UTM's unique undergraduate programs include Forensic Sciences (offered as a combination of Forensics and Biology, Chemistry or Anthropology), Geographical Information Systems, Biotechnology, Professional Writing, and Science Education. In partnership with Sheridan College, UTM has recently developed several programs at the interface of communications, culture and new technology. UTM has established strong ties with the City of Mississauga, and has a conspicuous commitment to environmental issues in its growth and development.

From its early days, the Scarborough campus has developed a distinct niche in offering co-operative undergraduate programs, with about 15% of Scarborough students currently engaged in co-op options. Co-op programs include Management with streams in accounting, finance, marketing, human resources, and economics; Computer Science with streams in software engineering, information systems and statistics; Arts Management; Environmental Science; and International Development. UTSC hosts a graduate level program in environmental science. UTSC and Centennial College jointly offer innovative four-year undergraduate programs in Journalism, New Media Studies, Paramedicine, Environmental Science and Technology, and Industrial Microbiology. Capital investment is accelerating. Recently-opened buildings include a new Student Residence, the Academic Resource Centre, the Management Building, a Student Centre and an Arts and Administration Building. A Science Building is underway.

Both campuses host graduate level education with an emphasis on professional master's programs and faculty from both campuses are engaged in research-stream graduate programs extending across multiple campuses. Growing numbers of research-stream graduate students work and study on the two campuses, particularly in fields where research is contingent on laboratory or other physical resources. This is in part linked to growth in research funding at UTM and UTSC over the past five years. UTM reported \$9.5 million in research revenue in 2004-05, and UTSC reported \$6.4 million. Oversight of research-stream graduate education is currently vested primarily within the graduate departments of the Faculty of Arts and Science, as will be discussed below.

## Key challenges of the three campus model

The three campus configuration currently presents two major challenges – one relates to the balance of resources across the three campuses, and the second relates to mandate, including the evolution of graduate education across the three campuses.

First, resources: In assessing the distribution of resources across the three campuses, it appears that the Mississauga and Scarborough campuses are funded at levels lower than would be expected based on a roll-up of equivalent departments at the St. George campus. This is reflected in higher student-faculty ratios, fewer small classes, in some cases fewer teaching assistant hours, and less funding on a per-student basis. Some services funded by the University centrally are headquartered at the St. George campus, and while ostensibly tri-campus in mandate, do not have an equivalent presence at the Mississauga and Scarborough campuses. Conversely, UTM and UTSC have responsibility for a variety of local services that are funded by the central administration for the St. George campus. Part of the remedy for this imbalance is underway with the new budget model, discussed in the next section. The new model openly dissects revenues and costs, and assigns a net revenue budget to the operating divisions. Hidden inequities will inevitably be exposed, debated, maintained if they serve important academic priorities, or gradually rolled back if they are unsustainable or otherwise indefensible.

The second challenge is more complex. The three campuses are primarily collaborative in their interactions, but there are points where ‘sibling rivalry’ is apparent. The academic evolution of all three campuses has been guided through five-year planning cycles, with implicit assumptions about the linkage of UTM and UTSC to Arts and Science on the St. George campus, even as both the east and west campuses have forged other partnerships and relationships. Earlier in this document, we framed a series of questions around the long-term mix of students and programs for the University, as well as enrolment numbers for the institution. Those questions merit careful attention on each campus, and for the three-campus system as a whole.

Graduate education exemplifies the type of issue that must be joined. Distinct professional graduate programs are hosted successfully at both UTM and UTSC. These programs are presently administered through graduate chairs based on the St. George campus but recent initiatives are paving the way for campus-based structures. For research-stream graduate education, however, the prospects of the east and west campuses are dependent on factors such as a critical mass of faculty, research space and laboratory facilities, libraries, and the vibrancy of the relevant intellectual community. UTM and UTSC have both signalled an interest in selective expansion of research-stream graduate enrolment. The benefits to undergraduate education from the presence of graduate students on campus are well established. Beyond their obvious role as teaching assistants, graduate students enrich the intellectual life of any campus. If graduate student presence on the Mississauga and Scarborough campuses is important, then how big should that presence be, and how should the mix of graduate students relate to the undergraduate programs on offer? Few colleagues on the

east and west campuses dispute the overall advantages of the tri-campus framework for graduate studies, but some chafe quietly about the structural conflict of interest and hierarchy implicit in the vesting of graduate chair status with the St. George department. It is possible that more pluralistic arrangements will evolve in some disciplines. What are the potential configurations that will promote collegiality, fairness, flexibility and quality?

Overall, the three-campus model has assisted the University in offering a first-class university education to a rapidly growing number of students from within the GTA and across the Province of Ontario. Entering averages of students admitted to the east and west campuses are lower than those for the St. George campus (by about 5%). However, there are also inter-college differences in entering averages on the St. George campus and there is no shortage of outstanding undergraduate students on all three campuses. World-class faculty are being recruited to the east and west campuses, and there is synergistic movement of excellent administrative staff from the older campus to the east and west, and back again. Graduate departments have been strengthened by the breadth and depth of intellectual capacity on three sites.

In addition, UTM and UTSC represent a unique opportunity for the University that transcends simple geography: Owing to their relative youth and smaller size, UTM and UTSC should in principle be more ‘nimble’ and in a strong position to implement bold new programs in a timely manner. Innovation and differentiation across all three campuses have fostered new programs and fields of scholarship, increased the diversity of the academic enterprise, and enabled us to respond more fully to the interests of our students. Last and not least, the east and west campuses have been characterized by strong engagement with local communities and cultural groups, and they have won countless new friends for the University.

Our tri-campus challenge, then, is very much as President Emeritus Connell framed it two decades ago. How do we balance independence and integration in academic and general administration of the three campuses? Can we better balance ‘all-campus planning’ and ‘campus-by-campus planning’ to foster differentiation and innovation? Is our long-term intent to create a regional ‘University of Toronto system’ with three campuses and a stronger identity and greater autonomy for each of them? Or do we allow evolution to occur on a more ad hoc basis? Both the east and west campuses could intensify or expand their physical facilities and accommodate substantial enrolment growth. Is that the best direction for UTM and UTSC to follow? We shall return to these and other questions below.

### **Our federated universities and colleges**

The University of Toronto enterprise includes three federated universities – St. Michael’s, Trinity and Victoria, along with four constituent colleges – University, Innis, New, and Woodsworth. The federated universities and University College had, at one time, a distinct role in providing academic programs, predominantly in the humanities. That role has evolved, and the Faculty of Arts and Science now has responsibility for the academic programs in the humanities, social sciences and sciences.



With the assimilation of their academic departments within the Faculty of Arts and Science starting in 1974, the federated universities and colleges initially took on roles that revolved around provision of a home base for undergraduate students enrolled in the Faculty of Arts and Science. Some college loyalists have lamented the transformation of these divisions from academic units to centres focusing primarily on student engagement. However, their importance, if anything, has grown. Today, more than ever, the colleges and federated universities serve the invaluable function of disaggregating a very large and potentially overwhelming campus into navigable neighbourhoods for new students. All colleges have a mix of arts, science and commerce students and provide student services and activities, including counselling, writing workshops, math support services, libraries (at most colleges), computer facilities, residence accommodation, student government, social gatherings, student-run newspapers, and competitive and recreational sports. At their best, they offer students the sense of community and personal connections that inhere in attending a small college, in the context of a vibrant and extremely diverse university campus.

Moreover, in recent years, the colleges and federated universities have strengthened their roles as focal points for interdisciplinary programs or centres. In the process, they have fostered an intellectual community where students and faculty together pursue scholarly excellence and curricular innovation. To name a few from among a great many examples, one might cite: Cinema Studies at Innis College; Canadian Studies at University College; Christianity and Culture at St. Michael's; International Relations at Trinity, Caribbean Studies at New College, and Employment Relations at Woodsworth. These programmatic functions create great synergy but also some tension with traditional departmental mandates.

As well, whether explicitly or not, the constituent and federated colleges have engaged in some degree of 'market segmentation' in student recruitment. There are differences across these divisions in disciplinary mix, ethno-cultural and religious backgrounds, and proportions of part-time students. Both Trinity and Victoria have strategically capitalized on distinctive identities and highly selective first-year programs to recruit a disproportionate number of top academic performers.

Finally, the colleges are introducing year-one programs to facilitate transition of new students to university life. These vary in configuration. Some target all first-year students. Others, most notably Vic One and Trinity One, offer additional seminar courses and some academic enrichment to a subgroup of first-year students who meet stringent academic and extracurricular criteria.

Against this background, it is clear that the colleges and federated universities have never been more important to the success of the University's largest campus. But it takes little imagination to surmise that challenges have also emerged.

The majority of the University's students commute. While the colleges have been successful in tailoring events and services to the needs of commuter students, the challenge of engaging commuter students in college life persists. Some commentators have argued that the colleges should increase the number of residence spaces, but here a series of tensions emerges. An



increase in the number of residence spaces might necessitate a shift in recruitment patterns and in turn require the University to cede some of its competitive advantage in attracting excellent students who prefer to commute from within the GTA. Likewise, accommodating more residential students may well enhance the overall quality of student life but it will require the construction of new residence halls in a period of increasingly tight budgets. As we look forward to 2030, what is the ideal balance of residential and commuter students that best serves the academic mission of the University?

There are various relationships between the Colleges and other academic units and specialized links continue to be developed, e.g. between Victoria and the Faculty of Music. Nevertheless, students often form associations with other students they meet in campus-wide academic courses and extra-curricular activities that are stronger than any connections to their home colleges. In this context, the Colleges are therefore well positioned to continue broadening the undergraduate experience through pioneering interdisciplinary programs.

Given the broad mandate of the Faculty of Arts and Science, there can be overlap in functions such as academic advising and provision of related supports for students. Although colleges provide students with services that are more personalized, there may also be problems with service integration between faculties and colleges. Debate continues about whether decentralization leads to diseconomies of scope and scale, or whether it is actually more efficient for some services.

Last, the new academic roles of the colleges have become more visible in recent years and with them has come greater visibility for the differential in resource base of these seven entities. While the usual Canadian impulse is to ‘level down’, or to ‘equalize’ by centralization, it is refreshing to note that there has instead been a constructive focus on innovation, differentiation, and local resource generation, including more aggressive fund-raising. That said, the emergence of academic programs at the college level has raised questions about the sharing of responsibilities and resources with academic divisions.

### **Our research hospital partners**

The University of Toronto benefits enormously from a partnership with ten fully-affiliated hospitals, as well as its relationship with community hospitals and health service providers. This relationship is vital to health professional education in multiple fields. Over 50% of all research funding attributable to the University of Toronto is held by hospital-based faculty, and as many as 1800 research-stream graduate students work in hospital environments. The research hospitals no longer appoint adjunct and ‘status-only’ faculty only in traditional health disciplines. Among the academic disciplines now represented in the hospitals are chemists, mathematicians, engineers, social scientists, ethicists, informatics specialists, and computer scientists.

The framework for hospital-university relations has been clarified on multiple levels in the last few years. A multi-year omnibus agreement was signed regarding research revenues and collaborative research planning. Another milestone was the adoption in 2005 of a policy governing appointments of some 1300 full-time members of the clinical faculty. Guidelines have been implemented across

the campus and hospitals on ethical conduct of research and the publication of industry-sponsored research. The framework for graduate supervision in hospitals settings has been clarified and aligned with University policy. As well, in 2007, all affiliation agreements were updated and standardized for both fully-affiliated hospitals and community hospitals.

While much has been accomplished, there are challenges. Many are short-term, and division-specific but some are more general and recurrent. We mentioned earlier the challenges of commercialization and the continuing problems of metrics that tally the performance of the University of Toronto campus rather than the entire academic family including hospitals. We also asked what structures might facilitate commercialization, leveraging the University and hospital activity and the relevant institutional machinery for technology transfer. Hospitals and the University are engaged in constant fund-raising. Benefactors frequently provide generous support to one or more hospitals as well as the University. Collaboration on specific initiatives might further reinforce these positive patterns of philanthropy. Public policy advocacy is another area where collaboration among the institutional partners occurs intermittently, but might yield more positive results if it were done more systematically.

## **Our Campuses, Colleges, and Affiliates in 2030 and Beyond**

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As outlined above, we face important strategic questions about the degree of autonomy and integration that is desirable for our three campuses. These questions were raised, considered and, not unreasonably, deferred in 1987. Leaders at UTM and UTSC then had differing views with respect to future autonomy, and neither campus was at a scale that gave practical credence to theoretical arguments about stand-alone status. Today, very few voices call for a separate University of Mississauga or a University of Scarborough, but there are rational divisions of opinion about how the tri-campus system should evolve in the next few decades.

These questions recur in different forms as we consider the system of constituent colleges and federated universities on the St. George campus. Each college has the status of a ‘division’ within the University with its own governance body (divisional councils) for decision-making, while the federated universities have substantial autonomy and unique resources. Indeed all of the Colleges could serve increasingly as institution-wide ‘innovation laboratories’, given their differing governance structures, endowments, and strong alumni relations.

Reporting relationships, however, are complex, and the principles underlying the sharing of responsibilities and resources are still being delineated as the role of the colleges and federated universities continues to evolve. It is self-evident that the vast majority of college students are enrolled in degree programs where the locus of academic oversight rests within a Faculty, usually the Faculty of Arts and Science. At the same time, students vary in the extent to which they identify with their college rather than their faculty or department, and the suite of services and programs offered by colleges is also variable. That variability seems likely to increase in the years ahead, posing new challenges as well as exciting opportunities.

## TOWARDS 2030: Some strategic questions to promote dialogue ...

Considering the three campus system, is greater integration or greater autonomy required? What is the balance? How should enrolment growth or reduction be distributed across the three campuses in the years ahead?

Should the University of Toronto develop a unique regional variant of longer-distance models that are successful in some US jurisdictions?

Some performance indicators for external reporting (e.g. per-capita availability of student aid, per-faculty research funding, ratio of graduate to undergraduate students) are skewed by the aggregation of data across the three campuses. To what extent should campus-specific profiles be established for external reporting?

What academic and administrative functions should be integrated and which should be separate across the three campuses? Can or should the integration of all graduate programs be maintained?

To what extent should the academic offerings of the three campuses be deliberately differentiated?

In what dimensions can the University's partnership with Toronto's research hospitals be further enhanced to mutual benefit?

How can the federated universities and colleges be empowered so as to contribute even more successfully to the undergraduate student experience? How can this occur without creating gridlock in academic planning at the departmental or divisional level?

What broad principles should govern the allocation of resources among colleges, divisions, and the University's central administration?

Should college admissions be more sensitive to students' programs, allowing greater differentiation of student profiles across colleges? Or, if greater alignment is deemed to narrow the student experience through a more homogenous peer group in each college, then what is our vision of the ideal mix of disciplines to promote a diverse environment for undergraduate student life?

Currently, the college system is associated primarily with the Faculty of Arts and Science. Should we ensure that first-entry students on the St. George campus from all faculties are aligned with colleges and the associated residence opportunities?

## 5. Governance and Administration

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It has been said that the administration and governance of the University of Toronto is more complicated than that of the Canadian federation itself. Despite radical demographic changes, Canada has retained its original provinces ranging from Ontario to Prince Edward Island; and the University likewise has retained divisions with deep-rooted traditions ranging from Arts and Science to Forestry or Information Studies. We have many Departments that are larger than Divisions, just as many Canadian cities are bigger than provinces. Indeed, the University is ‘ahead’ in one respect. We encompass many variations on sovereignty-association and asymmetric federalism in our immediate and extended academic family – exemplified by the east and west campuses, the federated universities, and, very importantly, ten fully-affiliated teaching hospitals. Like Canada, we have enjoyed remarkable success. And as is also true for our great nation, the University’s citizens sometimes wonder whether our success is because of – or in spite of – these complex federal arrangements!

### Administration

The University’s three-campus structure is administratively asymmetric. As noted earlier, the east and west campuses function as divisions, but take responsibility for a variety of functions that are funded centrally for the divisions on the St. George campus. Conversely, all academic divisions on the St. George campus are expected to carry out similar administrative roles, but their size varies to such a degree that many smaller divisions strain to be effective in specialized areas ranging from fund-raising to human resources.

These challenges have been placed in high relief as a result of the new budget model that will be initiated in 2007-08. Under the current system, the annual budget for any faculty reflected a remote historical baseline, more recent adjustments made through strategic allocations to support academic objectives, and, starting in the 1990s, ad hoc revenue-sharing for new or expanded faculty programs. The new model calculates gross revenues for each academic division, attributes costs for both unique divisional expenses and shared academic and administrative services, and generates a net-revenue budget. The revenue drivers of the model are at once a weakness and strength. The imputed revenues derive from crude BIU approximations to program costs along with tuition levels that reflect politically-driven provincial regulation rather than reasonable cost-sharing with students and families. However, those revenues reflect our current fiscal realities and we ignore those realities at our peril. The implementation of the model accordingly incorporates a central pool called the University Fund, designed to avoid disruptive changes resulting from imputed revenues and vitiation of allocations made through academic priority-setting in the recent past. The University Fund will be allocated to divisions based on their academic plans and budget circumstances.

The new model provides incentives to academic divisions to increase revenues. More importantly, it should improve cost management of university-wide services. Useful debate has already unfolded as major divisions have considered the substantial costs of shared academic services such as facilities maintenance and libraries.

The model also clearly highlights differential spending on services across divisions, and is raising important questions of fairness in the treatment of UTM and UTSC. It has catalyzed dialogue within and among divisions as to how they might band together to achieve more effective and efficient operations. A few members of the University community have quietly wondered about the conversion of small divisions into departments within larger divisions, while others ask whether large divisions contribute to alienation among undergraduate students and should be functionally disaggregated.

In fact, there are other options to consider that would maintain small divisional identities or the multi-disciplinary character of larger divisions while promoting a more effective set of administrative structures. For example, a Faculty of Health Sciences could serve as the administrative home for academically autonomous Schools, or a Health Sciences Administrative Group could be constructed to serve all the health science faculties. Other groupings for administrative efficiency without compromising divisional governance could be made on the basis of proximity (as now occurs with human resources for Social Work and OISE), or disciplinary synergy (Forestry and Information Studies aligned with allied Departments in Arts and Science). In the final analysis, one could imagine five broad academic divisional groupings on the St. George Campus, each well-positioned to capitalize on the new budget model and provide more effective administration to serve the needs of students, staff, and faculty alike.

Last, the new budget model has also opened up a useful dialogue between divisions and the central administration as to ‘who should be doing what’ in our complex federal system. Inherent challenges for any future organizational model have been illuminated: for example, decentralization may enhance academic and administrative functions, but legal and financial accountabilities are almost entirely vested with the University as a single corporate entity. For reasons already stated, the dialogue has a different character depending on the division and its administrative capacity. What matters most, arguably, is that the issue of divisional versus central responsibility is now on the table and being discussed.

## Governance

The University of Toronto has had a unicameral system of governance since 1972. The Governing Council, a 50-member body, oversees the academic, business, and institutional affairs of the University. In contrast, most North American institutions of postsecondary education have a Faculty Senate and a separate Board of Governors or Trustees to divide the academic and other oversight functions.

The single-chamber council provides a voice to each major constituency of the University community. Twenty-five members of the Governing Council are from within the University: 12 teaching staff, 8 students, 2 administrative staff, the President and 2 senior officers appointed by the President. The other 25 members consist of 16 appointees of the provincial government, 8 elected alumni and the Chancellor, who is also elected by the alumni. The Governing Council annually elects a Chair and Vice-Chair from among the members appointed by the province.

In view of the size and complexity of the University and the extensive duties of the Governing Council, it operates with the assistance of an Executive Committee and has delegated authority for various matters to three boards – the Academic Board, the Business Board, and the University Affairs Board. Six Committees operate under the three Boards. Members of Governing Council normally sit on at least one of the Boards.

The last review of the governance structure and processes was in 1987-88. At that time, the Governing Council commissioned Professor Edward J. Stansbury of McGill University to conduct a survey of the University community about the governing structure and its effectiveness. His report prompted a review, chaired by St. Clair Balfour, then Chair of the Governing Council, that resulted in the creation of the three Boards. Among these boards, the Academic Board was established to serve most of the functions of a Faculty Senate in other universities. The Balfour review also led to the articulation of a set of principles that has guided our governance for the last two decades, and the definition of some process changes.

The University of Toronto Governing Council is responsible and accountable for a large, complex and highly decentralized organization on three campuses. Not only has the institution grown dramatically in the last decade, but there has been increased pressure on universities and their governance for more detailed and sophisticated approaches to accountability and performance measurement. At present, our governance bodies receive almost 20 major accountability reports annually, as well as regular oral and written reports on a variety of matters at each meeting.

Notwithstanding these pressures, the governance system at the University of Toronto continues to function smoothly and avoids the tension that can arise between university Senates and Boards in bi-cameral governance. There has been gradual evolution in the function of boards and committees, and a succession of governors has selflessly dedicated themselves to the growing demands of our changing University and the postsecondary environment.

The University's governance is characterized by values essential to the University and to collegial decision-making: transparency, openness, consultation, and fair debate, complemented by a strong and mutually supportive working relationship with the Administration. The workings of our governance ensure the opportunity for scrutiny of a great range of issues, but also result in repetition of presentation and debate as matters proceed through various bodies. Many items for approval

“To my mind, it is the great strength of the U of T Governing Council that we can make decisions with the full and active participation of representatives from both academic and fiduciary backgrounds. Coming from a corporate world that can often be characterized by fast decision making, and being at least a bit less consensus oriented, I am amazed how smoothly this more complex structure works.”

**Rose M. Patten, Chair of Governing Council, in an address to the National Association of University Board Chairs and Secretaries.**

move through multiple governance Committees and all three Boards before reaching the Executive Committee and ultimately the Governing Council.

Thus, while there is widespread wariness about seeking amendments to the *University of Toronto Act*, a number of governors, administrators and faculty members have raised questions about the efficiency of our processes. Advance planning to intercept the various governance cycles has become a logistical challenge for divisions and the central administration. The transactional load on committees and boards is enormous, and at times constrains opportunities for broader strategic debate. Some of the most illuminating exchanges occur at off-line meetings between administrators and subgroups of governors from specific constituencies. Furthermore, additional full-Council off-line meetings have become necessary to provide Governors with more time to review and discuss strategic issues.

Even as questions have been raised about improvements to University-wide governance, divisions have given considerable attention to governance over the past three years as a result of the changes in oversight of graduate education. Greater delegated decision-making authority to the academic divisions meant that their councils' constitutions required revision. In a process that is still ongoing, academic divisions have reviewed their constitutions; clarified their decision-making, advisory and communication roles; and examined structures, membership and terms of reference of standing committees with a view to renewing and updating their processes and systems. Cross-divisional consultation means that there has also been a greater level of consistency in governance structures across divisions. With these improvements and refinements in hand, a larger number of governance approvals could perhaps be delegated to divisional or campus councils.

Only the Governors themselves can determine if it is timely to examine whether and how our governance procedures might be streamlined. However, the senior administrative team and the Governing Council secretariat alike would welcome the opportunity to support such a process, and strategic questions to this end are accordingly set out below.

## **Our Administration and Governance in 2030**

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The University of Toronto today is very different than it was three decades ago when the foundations of our current administrative and governance arrangements were laid. UTM and UTSC were comparatively new and very small campuses. The St. George campus was much smaller and much less research-intensive. Over 80% of the institution's revenues came from provincial grants that tracked enrolment. The absolute disparities in the size of divisions were smaller, and the complexity of administration was dramatically less. As well, the accountability requirements for governance were radically different. Changes over the last three decades, together with the new budget model and the continued financial pressure on the institution, all suggest that some questions must be raised about the ways that our University will administer and govern itself over the next quarter-century.



## TOWARDS 2030: Some strategic questions to promote dialogue ...

Is the distribution of revenues and responsibilities across the three campuses equitable and sustainable? If not, what changes are fair and feasible?

Do we have an optimal distribution of administrative responsibilities across divisions on the St. George campus? Or should there be a re-thinking of the current configuration as regards academic or administrative functions?

Should the University's budgeting and planning processes be oriented to facilitate more inter-divisional or institution-wide perspectives?

In the light of current best practices, is the University's current governance model optimally structured to:

- a) facilitate inclusive debate and decisions on issues of importance to the long-term interests of the institution?
- b) ensure accountability at the appropriate levels within the University while providing efficient assessments and approvals of key initiatives?
- c) provide the appropriate linkages with relevant internal constituencies and external communities?
- d) address the unique governance and oversight needs of a three-campus institution?

Is the distribution of responsibility among the Governing Council and its Boards and Committees appropriately balanced? Is the division of responsibility between the central governing bodies and the divisional governing councils appropriately balanced?

If there are concerns about our current governance, what changes to the structures and processes would improve efficiency and responsiveness in decision-making, while building on current strengths and sustaining our standards of transparency and accountability?



## President's Afterword

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The University of Toronto has been through a turbulent decade. We have rebounded from the deep provincial cutbacks of the early 1990s, and grown at an unprecedented rate. In the last ten years alone, revenue and expenditures have doubled, and student numbers have grown by a staggering 35%. Research revenues have also doubled, and many new programs, centres, and institutes have been established. The east and west campuses have been transformed, and capital projects valued at over \$800M are underway or complete.

The next decades promise to be equally challenging. Major graduate expansion is beginning. The post-secondary educational system will be responding province-wide to increasing participation rates. Past demographic pressures leading to enrolment increases are likely to abate in other regions, but intensify in the GTA. We remain subject to huge budget pressures and Ontario trails the other provinces – and nearly all US jurisdictions – in per-student funding. Meanwhile, the University is making strenuous efforts to enhance the undergraduate student experience, raise its international profile and augment its capacity for research and scholarship.

Given this transformative confluence of events and opportunities, it is important that we pause to address some of the questions raised in this document.

Those questions are pitched deliberately at a high level of generality. Some readers will lament the absence of attention to strategic issues that they deem more important than those covered above. To that end, I encourage readers to flag any glaring omissions, and to put forward their own variations on the set of questions proposed here. In so doing, however, I would again urge readers to focus on the 'big picture'. The goal of the exercise, after all, is to answer one essential question: How can we ensure that the University of Toronto's third century is even more successful than this one has been?

Our success to date, I would re-emphasize, has already been conspicuous. Despite ongoing financial constraints, the University of Toronto is recognized globally as a truly outstanding institution. We are clearly a small nation's strongest contender in the increasingly competitive world of higher education. The University's attainment of widely-recognized excellence in myriad dimensions of its mission is therefore important not just for the benefit of our own community, but for the success of Canada itself.

I look forward to hearing and reading your thoughts on the future of the University through the varied channels that will be open in the weeks and months ahead. In the meantime, please do not hesitate to send your initial thoughts to 'towards2030@utoronto.ca'.

Thank you in advance for your ideas and input.

Best wishes,

David Naylor, President

## Notes

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### (Endnotes)

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2. Howard Davies, Director of the London School of Economics, Peking University Speech, Developing a Strategy in the 21st Century.
3. Performance Indicators for Governance: Measuring Up, December 2006.
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5. Alan Bernstein, President's Message to the Research Community – January, 2007, [www.cihr.ca](http://www.cihr.ca)
6. Ten year enrolment data to 2006 – headcounts.
7. Population projects from Ontario Ministry of Finance: <http://www.fin.gov.on.ca/english/economy/demographics/projections/2006/index.html>
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9. University participation rate is full-time enrolment divided by population of 18 to 24 year olds
10. Performance Indicators for Governance: Measuring Up; December 2006, University of Toronto.
11. Council of Ontario Universities Briefing Notes 2006-07, December 2006.
12. Government of Ontario Post-Secondary Review, Discussion Paper, 2004.
13. Licensing figures are not available for many UofT inventors who choose personal ownership of IP (roughly 90% choose personal ownership)
14. Friedland, Martin L. The University of Toronto – A History, University of Toronto Press, 2002, page 449.
15. In the 1990s, Scarborough College became named University of Toronto at Scarborough and Erindale College became University of Toronto at Mississauga.
16. Response to Renewal 1987, University of Toronto, pages 12 – 18.