**University of Waterloo**  
**BOARD OF GOVERNORS**  
**Tuesday 29 October 2013**

**Meeting**  
1:30 p.m.  
Centre for Environmental & Information Technology (EIT), Room 3142

**President’s Reception**  
Immediately following the meeting  
Mathematics 3 (M3), Bruce White Atrium

Parking available in Lot M [campus map enclosed]

Please convey regrets to Tracy Dietrich at 519-888-4567, ext. 36125 or tdietrich@uwaterloo.ca

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### OPEN SESSION

<table>
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<tr>
<th>Time</th>
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<tr>
<td>1:30</td>
<td>1. Remarks from the Chair</td>
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<td>1:35</td>
<td>2. Agenda/Additional Agenda Items</td>
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<tr>
<td>1:40</td>
<td><strong>Consent Agenda</strong></td>
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| 1:45 | 4. Report of the President  
a. Promotion to Professor  
b. Recognition and Commandation  
c. Sabbatical/Administrative Leaves and Administrative Appointments |  
| 5. Report of the Vice-President, University Research  
a. Contracts Research and Industrial Grants – Name Change | 13 | Information |
| 6. Report from the Executive Committee | 14 | Information |

### Regular Agenda

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<td>1:45</td>
<td>7. Business Arising from the Minutes</td>
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| 1:50 | 8. Report of the President  
a. Performance Indicators 2013 [enclosed]  
b. HEQCO Report: “The Diversity of Ontario’s Universities”  
c. International Rankings | 15-35 | Information |
| 2:10 | 9. Strategic Plan Implementation and Accountability Framework | Oral | Information |
a. FAUW/UW Memorandum of Agreement Changes  
b. Undergraduate Admissions Update | 36-46 | Decision |
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*Q&A Period*
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<td>2:50</td>
<td>OPEN SESSION</td>
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<td>11. Report of the Vice-President, Advancement</td>
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<td>a. Gift Acceptance Policy</td>
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<td>3:00</td>
<td>12. Break</td>
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<td>13. Reports from Committees</td>
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<td>a. Audit</td>
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<td>b. Building &amp; Properties</td>
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<td>c. Finance &amp; Investment</td>
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<td>e. Pension &amp; Benefits</td>
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<td>4:05</td>
<td>14. Other Business</td>
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<td>CONFIDENTIAL SESSION</td>
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<td>Consent Agenda</td>
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<td>Motion: To approve by consent items 15-17 below.</td>
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<td>4:15</td>
<td>15. Minutes of the 4 June 2013 Meeting [enclosed]</td>
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<td>16. Report of the President</td>
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<td>a. New Appointments with Tenure</td>
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<td>4:25</td>
<td>17. Other Business</td>
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<td>a. Pension &amp; Benefits Committee Appointment</td>
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<td>4:35</td>
<td>18. Business Arising from the Minutes</td>
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<td>a. Report of the Vice-President, Advancement</td>
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<td>20. Other Business</td>
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<td>21. Next Meeting/Adjournment</td>
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**Enclosed:** November University Affairs

**Note:** To allow the board to complete a number of matters quickly and to devote more of its attention to major items of business, the agenda has been divided between items that are to be approved and/or received for information by consent and those that are to be presented individually for discussion and decision and/or information.

A consent agenda is not intended to prevent discussion of any matter by the board, but items listed under the consent sections will not be discussed at the meeting unless a governor so requests. Governors are supplied with the appropriate documentation for each item and all items will be approved by means of one omnibus motion. The board will then move immediately to consideration of the items on the regular agenda.

JLA:tad/16 October 2013

Logan Atkinson, Secretary of the University
FOR INFORMATION

Promotion to Professor
Policy 77, Tenure and Promotion of Faculty Members, provides that “Promotion to the rank of Professor recognizes a high order of achievement in both scholarship and teaching by tenured Associate Professors, together with satisfactory performance in service.

Although evidence of strong teaching performance is required, normally the greatest emphasis is placed on scholarship and achievement within an individual’s discipline. However, in exceptional cases, a tenured Associate Professor may be promoted on the basis of an outstanding teaching record accompanied by a continuing and long-standing record of satisfactory or better scholarship and service.

A continuous program of scholarship with positive peer review by nationally and internationally recognized scholars is essential for promotion to Professor. The candidate’s record is to be judged in comparison with the records of faculty members recently promoted at UW and other universities of comparable standing. Promotion to Professor is not an assured step in the career of a faculty member, and some will not attain this rank.”

The 2012-13 promotion cycle carried out under Policy 77 resulted in the following individuals being promoted to professor, effective 1 July 2013.

Terri Meyer Boake, Architecture
Krzysztof Czarnecki, Electrical and Computer Engineering
Serge D’Alessio, Applied Mathematics
James Danckert, Psychology
Hans DeSterck, Applied Mathematics
Troy Glover, Recreation and Leisure Studies
Rhona Hanning, Public Health and Health Systems
Karim Karim, Electrical and Computer Engineering
Jochen Konemann, Combinatorics and Optimization
Yu-Ru Liu, Pure Mathematics
Qing-bin Lu, Physics and Astronomy
Kshirasagar Naik, Electrical and Computer Engineering
Ashwin Nayak, Combinatorics and Optimization
Mark Seasons, Planning
Hamid Tizhoosh, Systems Design Engineering
John Yeow, Systems Design Engineering
FOR INFORMATION

Recognition and Commendation

Vijay Ganesh, an assistant professor in electrical and computer engineering, is the recipient of funding from the Google Research Awards Program 2013 for his proposal entitled “From Functional Regressions to Security Testing.” The Google “unrestricted gift” awards support the work of faculty members at top universities around the world. Professor Ganesh is planning to use the funds to hire master’s and doctoral candidates to assist him with his research into computer security testing. In his proposal, he plans to leverage functional tests that humans routinely write to automatically construct tests for security properties of computer systems. He says he’s honoured to receive the Google award. “Every year hundreds of faculty apply from all over the world. Only about 10 per cent are successful in receiving the award,” he adds. He received the same award in 2011 in the software engineering category when he was a scientist at MIT. That award was for “String SMT solvers for theories over strings and regular expressions.” SMT solvers are computer programs that automatically solve certain kinds of mathematical formulas. They are useful in software testing, formal verification, program analysis and synthesis. The award was transferred to Waterloo engineering when he joined the faculty in September 2012. [21 August 2013 Daily Bulletin]

Professor Jim Walker of the Department of History has been named a Fellow of the Royal Society of Canada (RSC). “The university is proud to have an internationally recognized scholar like Professor Walker among our faculty,” said Feridun Hamdullahpur, president. “His work examining the importance of human rights in society has universal applications, and therefore the potential for positive impact in Canada and around the world. We congratulate him on this deserved honour.” Professor Walker teaches and conducts research in Canadian and international human rights, race relations in Canada, immigration and African-Canadian history. In honouring Professor Walker, the RSC noted, “His scholarship and teaching on racial equality in Canada since World War II have influenced an entire generation of Canadians both within and outside the academy. His research helped launch African-Canadian history and aboriginal history as fields of historical inquiry.” He is a former Bora Laskin National Fellow in Human Rights Research and the author of several works relating to the historical development of human rights. Professor Walker is among 84 new fellows, and will be inducted in a formal ceremony on 16 November at the annual general meeting of the RSC in Banff, Alberta.

Additionally, Professor John Thompson, professor emeritus from the Faculty of Science, and associate vice-president, university research, is recognized as a Life Member. He has been a Fellow of the RSC since 1987. The honour comes after 25 years of fellowship. [9 September 2013 Daily Bulletin]

The director of the Centre for Teaching Excellence, Donna Ellis, has won the 2013 Robert J. Menges Award for Outstanding Research in Educational Development, an award given out by the Professional and Organizational Development (POD) Network in Higher Education. She received the award for her conference session entitled “Why Students Avoid Risking Engagement with Innovative Instructional Methods.” The work was based on her recently defended dissertation. The award was established and first awarded at the 2000 POD conference in Vancouver. The award criteria include: “quality of the research question, design, and discussion of the results; internal coherence; alignment with the Professional & Organizational Development Network Strategic Plan; and value to advancing the field of professional development.” The award committee in particular commended Ellis’ proposal “for its rigorous research and its potential impact on the field of faculty development.” She will be presented with the award in November at the annual POD conference in Pittsburgh, Pennsylvania. [30 July 2013 Daily Bulletin]
“I am thrilled and proud that Waterloo received four Banting fellowships this year, when only 70 are awarded across the country,” said Sue Horton, associate provost, graduate studies. “The four winners represent a great range of talent, from areas as diverse as membrane biophysics and Mennonite literature, from quantum gravity to energy storage.” Two of the winners of the Banting Postdoctoral Fellowships are in the Faculty of Science. The others will each conduct their research in the Faculty of Mathematics and the Faculty of Arts.

- The work of William (Drew) Bennett of the Department of Chemistry will focus on bioactive molecules, and has applications for drug delivery and personalized medicine. His fellowship is from the Natural Sciences and Engineering Research Council of Canada (NSERC). His work fits into the university’s strategic research priority areas of health and materials manufacturing and devices.

- Jaka Sunarso of the Department of Chemistry will work on new rechargeable batteries that can perform at higher-than-normal temperatures. He received his fellowship from NSERC, and his research falls under Waterloo’s priority areas of energy and the environment, and materials manufacturing and devices.

- Maite Dupuis of the Department of Applied Mathematics will work on loop quantum gravity, which falls within the theory of general relativity. The research she will conduct under her NSERC Banting fellowship will allow Dupuis to focus on the quantum-nano nexus, which is one of the university’s top research priorities.

- Robert Zacharias of the Department of English Language & Literature is a leading international expert in the field of Mennonite literary studies. His work will situate Mennonite literature within the theoretic framework of hemispheric studies, which reads Canadian cultural production across national borders in relation to the Americas. His fellowship is from the Social Sciences and Humanities Research Council (SSHRC); his topic fits into the theme of society and culture, one of the areas of focus in Waterloo’s strategic research plan.

Banting fellowship awards are worth $70,000 a year, for two years. Their intent is to attract and retain top talent, and prepare recipients as leading researchers to solve the challenges of the future. This year’s recipients come to University of Waterloo from Canada, France and Indonesia.

The Vanier Canada Graduate Scholarships recognize top academic achievement and leadership skills. They support recipients as they complete doctoral degrees while conducting significant research. Scholars receive $50,000 each year, for three years. This year’s Waterloo recipients come from the arts, engineering and mathematics faculties. “Graduate students are instrumental in contributing to the high quality research taking place at Waterloo,” said Sue Horton, associate provost, graduate studies. “I am pleased to see Vanier recognize the outstanding achievements and promise of these award winners.”

- Timothy Leshuk is a doctoral candidate whose proposed research project involves the application of nanotechnology for water purification, and builds on the university’s established excellence in these areas. He received his Vanier scholarship from NSERC.

- Abbas Mehrabian is a doctoral candidate. He also received an NSERC Vanier. His research is in the area of graph theory, a branch of mathematics with fundamental links to computer science and operations research.

- Shauna Bottos is a doctoral candidate whose research interest lies in the areas of complex trauma and mentalizing with the particular interest in the psychological sequelae resulting from chronic childhood abuse and neglect. She is the recipient of the SSHRC Vanier.
The Honourable Greg Rickford, minister of state (science and technology), announced the 165 winners of the Vanier scholarships and 70 recipients of the Banting fellowships at an event recently held in Quebec City. [24 September 2013 Daily Bulletin]

Tourism Cares, the tourism industry’s leading non-profit organization whose mission involves “preserving the travel industry for future generations” has announced the recipients of $2,000 scholarships to Canadian students studying travel, tourism, and hospitality in Canada. Jasveen Rattan, a PhD candidate in recreation and leisure studies, was named as one of the recipients of the scholarships. The scholarships are funded by Tourism Cares, the National Tour Association, the American Society of Travel Agents, and the International Air Transport Association. Since 2005, 26 Canadians have been awarded scholarships through Tourism Cares. The academic scholarship recipients are also invited to attend the Tourism Cares Mentoring Program at the annual NTA/UMA Travel Exchange in February of 2014 in Los Angeles, California. The program gives students the opportunity to shadow professional mentors, build their professional network, and attend industry workshops. [16 July 2013 Daily Bulletin]

Waterloo’s “Ideas start here” video received a silver award in the recruitment videos category at the 2013 Council for Advancement and Support of Education (CASE) Circle of Excellence Awards, a CASE program that honours exemplary advancement programs and activities worldwide. The video competed in a field of 48 entries from universities across Canada and the US. It was selected for the award by a panel of independent judges who recognized Waterloo’s “advancement program as one that demonstrates superior accomplishments that have lasting impact, operates at the highest levels of professionalism, and delivers exceptional results.” Beth Bohnert (Marketing and Undergraduate Recruitment) developed the concept and script, Matt Regehr (Creative Services) produced it, and Aaron Miller (Communications and Public Affairs) was the narrator. [9 July 2013 CASE letter]

Feridun Hamdullahpur
President
FOR APPROVAL

1. **Sabbatical/Administrative Leaves**

   UW Policy 3, Sabbatical and Other Leaves for Faculty Members [excerpts below, full text available at: http://www.adm.uwaterloo.ca/infosec/Policies/policy3.htm], sets out the purpose of leaves for faculty members as well as the requirements/responsibilities of faculty who are granted such leave.

   The granting of a leave . . . depends on the University's assessment of the value of such leave to the institution as well as to the individual, and on whether teaching and other responsibilities of the applicant can be adequately provided for in her/his absence. A faculty member who is granted a sabbatical or other leave is expected to return to duties in the University for at least one year and upon return will be expected to submit a brief report to the Department Chair regarding scholarly activities while on leave.

   The purpose of a sabbatical leave is to contribute to professional development, enabling members to keep abreast of emerging developments in their particular fields and enhancing their effectiveness as teachers, researchers and scholars. Such leaves also help to prevent the development of closed or parochial environments by making it possible for faculty members to travel to differing locales where special research equipment may be available or specific discipline advances have been accomplished. Sabbaticals provide an opportunity for intellectual growth and enrichment as well as for scholarly renewal and reassessment.

   . . . the granting of sabbatical leave is contingent upon the faculty member's department being able to make the necessary arrangements to accommodate such an absence, and also upon the financial resources of the University in any given year. Should problems arise in any of the above, it may be necessary to postpone individual requests until such time as all the conditions can be satisfied.

   - **Sabbatical Leaves**
     - **Andison, Lois**, Fine Arts, January 1, 2014 to June 30, 2014 at 85% salary
       I will be preparing for a survey exhibition of my artwork that will be presented jointly at three different Ontario galleries in the fall of 2014. The survey show will be a combination of new and past work. A catalogue with commissioned essays will accompany the work.

     - **Berry, Daniel**, Computer Science, January 1, 2014 to December 31, 2014 at 96.1% salary
       I plan to focus the sabbatical on finishing three long-standing projects in empirical software engineering: 1) user persona identification as a requirements elicitation technique; 2) diagnosis of one company's requirements engineering process; and 3) validation that new personnel to a software engineering project perform better when they are given tasks for which domain ignorance is at least helpful.

     - **Brodland, Wayne**, Civil and Environmental Engineering, January 1, 2014 to December 31, 2014 at 95.4% salary
       The sabbatical will be used to move the focus of my lab from the mechanics of embryo development to the mechanics of cancer metastasis. I hope to also make progress on writing a book on modeling.
Carrington, Peter, Sociology and Legal Studies, July 1, 2014 to December 31, 2014 at 85% salary
I will visit the Canadian Centre for Justice Statistics at Statistics Canada, Ottawa to obtain and analyze the data for my research on criminal networks in Canada. This research is an original contribution to knowledge on gangs and organized crime, and will contribute to more effective crime prevention and rehabilitation programs.

Clarke, Amelia, Environment, Enterprise and Development, January 1, 2014 to June 30, 2014 at 100% salary
This sabbatical will be spent co-authoring academic papers and disseminating results on my sustainable cities and social entrepreneurship team research projects. The former team has been collecting data through surveys and the latter team through media content analysis and interviews. Co-authors are located in Canada, USA, UK and France, so the sabbatical will involve travelling for collaboration purposes.

Cooper, Andrew, Political Science, January 1, 2014 to June 30, 2014 at 85% salary
The pattern of intensified summity at the leaders’ level holds the promise of facilitating cooperation. Yet, as viewed by the extended trajectory of the G20 as a ‘global crisis committee,’ the pattern of more leaders’ summits appears to work against collective action. My research tackles the question: Do leaders’ summits enhance cooperation or open up new tensions?

Eliasmith, Chris, Philosophy and Systems Design Engineering, May 1, 2014 to October 31, 2014 at 100% salary
I will pursue research to expand the large-scale functional brain model recently published in Science, to include additional brain areas, and make it more interactive.

Emelko, Monica, Civil and Environmental Engineering, July 1, 2014 to December 31, 2014 at 100% salary
In conjunction with colleagues from UW, I will focus on developing new conceptual and quantitative approaches for describing pathogen transport in natural and engineered porous media systems with an ultimate goal of supporting the development of improved drinking water models and regulations.

Siddharth Garg, Electrical and Computer Engineering, January 1, 2014 to June 30, 2014 at 100% salary
My sabbatical will be spent studying areas of emerging research interest including hardware security and big data analytics. Visits to collaborators at the University of Southern California and Carnegie Mellon University are planned.

Gorbet, Maud, Systems Design Engineering, January 1, 2014 to June 30, 2014 at 100% salary
I will focus on completing research manuscripts and a review paper. I will be traveling to Australia to the University of South Western to establish a new collaboration with Mark Willcox, a leading researcher in infection associated with lens wear. There, I will be investigating the effect of material chemistry on inflammatory cells’ response.

Inal, Kaan, Mechanical and Mechatronics Engineering, January 1, 2014 to June 30, 2014 at 100% salary
During this sabbatical leave a new fracture criteria for aluminum alloys will be developed. Focus will remain on aluminum alloys for automotive industry.
Itier, Roxane, Psychology, January 1, 2014 to June 30, 2014 at 100% salary
This sabbatical leave will be employed mainly to finalize papers for publications, related to my research in the temporal dynamics of the neural underlying face processing, in particular the perception and recognition of face identity, facial expressions and gaze direction. I will also write the application for renewal of my Canada Research Chair and update my training in statistics.

Joseph, Jamie, Pharmacy, May 1, 2014 to October 31, 2014 at 100% salary
During my leave I plan on obtaining advanced training in multivariate analysis, Gas Chromatography/Mass Spectromet, and other metabolic assay critical to my research program. I am also planning on developing a new line of research in the lab to obtain a second CIHR grant.

Kaminskaia, Svetlana, French Studies, January 1, 2014 to June 30, 2014 at 85% salary
My sabbatical will advance my research in sociolinguistic variation in French – phonological and phonetic aspects of regional and social characteristics of Ontario, Quebec and European varieties, with the focus on prosody (rhythm and intonation). I plan to review peer-commented articles submitted this year, prepare and submit two more articles and initiate further presentations and publications.

Kirton, Doug, Fine Arts, January 1, 2014 to December 31, 2014 at 85% salary
I will produce a series of oil paintings and mixed media drawings for exhibition at the Michael Gibson Gallery in London, Ontario. I will reconsider my practice of drawing as a preparatory and problem-solving exercise, and as a means of expression in itself in its historical and contemporary dimensions. This work will take place primarily in my studio in Kitchener.

Klassen, Kenneth, Accounting and Finance, March 1, 2014 to February 28, 2015 at 100% salary
Beyond the continued development of my research on multinational corporations’ responses to global tax environments, I will begin a new research project that develops a fuller understanding of corporations’ tax risk management strategies and their consequences. Beyond producing research papers, the research outcomes will be incorporated into a course in the Master of Taxation program.

Koehler, Derek, Psychology, January 1, 2014 to December 31, 2014 at 85% salary
I plan to (a) continue research collaborations with colleagues at the University of Chicago on a project concerning the psychological determinants of volunteerism and with colleagues at the University of Pennsylvania on the economic psychology of goal pursuit; (b) explore alternative approaches to large-classroom teaching involving the flipped-classroom model and online lecture delivery.

Kroeker, Greta, History, January 1, 2014 to June 30, 2014 at 85% salary
During this leave, I plan to complete the manuscript for my SSHRC funded research on “For the Peace of the Church: Religious Compromise in the Age of Reform.” I intend to complete the research with trips to Germany and Italy.

Law, Jane, Planning, January 1, 2014 to December 31, 2014 at 85% salary
I plan to conduct basic and applied research in advanced spatial analysis, which is my area of specialization, during my sabbatical leave. New methodologies that aim to solve current problems of spatial analysis, and applications that aim to advance knowledge transfer and exchange with stakeholders in planning and public health will be developed.
Legge, Raymond, Chemical Engineering, January 1, 2014 to June 30, 2014 and January 1, 2015 to June 30, 2015 at 100% salary
I will spend most of my sabbatical in Waterloo although I have plans to visit colleagues in Canada and Germany to develop new collaborations in the area of biofilms and estuarial wetlands. The sabbatical will also provide an opportunity to catch-up on writing with a focus on numerous manuscripts and research grant applications. Two new research projects are in need of considerable attention that include travel and graduate student supervision.

McArthur, Murray, English Language and Literature, January 1, 2014 to June 30, 2014 at 100% salary
The sabbatical will be devoted to completing the research for and the writing of a book length study of the composition of T.S. Eliot’s “The Waste Land” (composed and published 1921-1922).

McGuirk, Kevin, English Language and Literature, January 1, 2014 to December 31, 2014 at 100% salary
I will be writing essays on the sociology and historicity of the 1960s career of the poet A.R. Ammons (1926-2001), treating topics such as the idea of a poet’s career, formal experimentation, literary friendship, Eastern thought and American poetics, campus unrest, and the photograph of earth from space.

McKay, Kenneth, Management Sciences, January 1, 2014 to December 31, 2014 at 100% salary
Working with St. Mary’s General Hospital, Kitchener to understand the dynamic relationships surrounding the surgical flow and to create the foundation of a general mathematical model, including costs of pre-, during, and post-surgery and resource utilization. This extends the work done in 2011-13 with the local hospitals on creating models to improve emergency departments and surgical flows.

Michailovich, Oleg, Electrical and Computer Engineering, March 1, 2014 to August 31, 2014 at 100% salary
The main objective of this sabbatical leave is to develop productive working relationships between my research group, the Department of Radiology (Mt. Sinai Hospital), and the Division of Surgical Oncology (Princess Margaret Hospital).

Moosa, Rahim, Pure Mathematics, January 1, 2014 to December 31, 2014 at 85% salary
I work in mathematical logic and its interactions with algebraic geometry. My research focuses on the model theory of structures that arise in various geometric contexts, especially bimeromorphic geometry and differential-algebraic geometry. I will be a Research Member at the Mathematical Sciences Research Institute in Berkeley, California.

Moresoli, Christine, Chemical Engineering, September 1, 2014 to August 31, 2015 at 85% salary
Pursue research activities in food process modeling, filtration processes (water and bioproducts) and bioproducts development (antioxidants, composite materials, protein films, monoclonal antibodies); prepare the renewal of my NSERC Discovery grant; explore new collaborations with research groups at NTNU (Norway), ENITIAA-Ecole des Mines (France), Karl Ruhr (Germany).

Myers, Anita, Public Health and Health Systems, July 1, 2014 to December 31, 2014 at 85% salary
I will focus on two research projects: the Can drive Older Driver Cohort Study (co-investigator) and transportation use by seniors (PI). The CIHR-funded cohort study is unique as we are collecting 4 years of prospective data (including ministry records) on 928 drivers aged 70+ at
baseline. The transportation studies are also the first to examine retirement versus community living older Canadians.

Naik, Kshirasagar, Electrical and Computer Engineering, January 1, 2014 to June 30, 2014 at 85% salary
I will complete a book in-progress and submit it to the publisher (Wiley); travel to UK and India to conduct joint research in power efficiency of large scale software running in data centres; travel to Japan to initiate new collaborative research; develop mobile applications for Blackberry and Android systems to be used in my undergraduate and graduate courses.

Nayak, Ashwin, Combinatorics and Optimization, January 1, 2014 to June 30, 2014 at 85% salary
I plan to participate in the program on Quantum Hamiltonian Complexity being held at Simons Institute for the Theory of Computing, University of California, Berkeley, CA. During this time, I plan to study the properties of the ground states of physical systems and their relation to the complexity of associated computational problems.

Nimubona, Alain-Désiré, Economics, March 1, 2014 to August 31, 2014 at 85% salary
During my sabbatical I will work on my SSHRC funded project on “Adaptation, Mitigation, and the Impact of International Trade.” Also, I will be preparing and reviewing manuscripts for publication for a number of research projects that I have been working on for the last years. Finally, I will attend a few conferences and will visit my collaborators in Edmonton and Montreal.

O’Gorman, Marcel, English Language and Literature, January 1, 2014 to June 30, 2014 at 85% salary
During this leave I will complete revisions on my book manuscript “Necromedia” for the University of Minnesota Press. I will also establish a formal exchange with Laboratoire Paragraphe at Université de Paris 8. Finally, I will begin research into my next book project, “Spleenhouse.”

O’Neill, Daniela, Psychology, January 1, 2014 to June 30, 2014 at 85% salary
(1) Explore with College of Family Physicians availability of Language Use Inventory for screening children for language delay; (2) Expand social media to communicate language and literacy research; (3) Continue collaborations on a book with Dr. Agnieszka Fecica on narrative and children’s development, a book on the power of picture books with Dr. Ageliki Nicolopoulou (Lehigh Univ.), and a book proposal on the importance of children’s language development to long-term outcomes; (4) Explore alternative approaches to large-classroom teaching involving the flipped-classroom model, online lecture delivery, classroom models and applied outcomes (e.g., more “flipped” classroom, updates presented weekly in “editorial board” style, in-class faculty mentoring/advising, outcomes directed to a more applied/general audience).

Park, Doug, Pure Mathematics, January 1, 2014 to June 30, 2014 at 85% salary
I will finish a couple of existing research projects on classification of four-dimensional geometric objects, develop new collaborative research projects, and work on a project constructing generalized complex structures on certain “knot-surgery 4-manifolds.”

Roberts, Julia, History, January 1, 2014 to June 30, 2014 at 85% salary
During war, society articulates terms of social inclusion and membership with acute clarity. This is particularly so in colonial societies complicated by issues of indignity and heterogeneity. Canada during the War of 1812 is a salient example. Current historiography interprets the War
as the launchpad of a unified “Canadian identity.” Referencing this nationalistic/historiography, I seek to complicate and historicize the contestation of identity in early Canada.

Saini, Simarjeet, Electrical and Computer Engineering, January 1, 2014 to December 31, 2014 at 85% salary
The leave will be used to help commercialize optical sensing technology we have developed over the last few years at University of Waterloo. The commercialization will be achieved through a start-up and I will provide the technical leadership during its initial stages.

Smith, Ralph, Biology, September 1, 2014 to February 28, 2015 at 100% salary
Research into lake ecology and computer modelling of lakes will be pursued through collaborative work at international sites and publication of work currently in progress.

Spafford, David, Biology, May 1, 2014 to April 30, 2015 at 100% salary
I will be studying voltage-gated T-type calcium channels and their involvement in pacemaker rhythms of the brain and heart. My laboratory is examining mutations in T-type channels that are implicated in children’s absence epilepsy and autism.

Spronk, Nico, Pure Mathematics, January 1, 2014 to December 31, 2014 at 85% salary
I intend to spend my sabbatical at the Fields Institute, Thematic Program on Abstract Harmonic Analysis Banach Algebras and Operator Algebras; and visiting Seoul National University to collaborate with H.H. Lee.

Swamy, Chaitanya, Combinatorics and Optimization, January 1, 2014 to June 30, 2014 at 85% salary
I plan to pursue research on algorithmic mechanism design and approximation algorithms for vehicle-routing and network-design problems. This will likely involve short visits to my collaborating researchers’ places of work to work on joint projects, as well as visits to workshops and conferences in areas of interest to foster further collaborations.

Tam, Michael, Chemical Engineering, January 1, 2014 to June 30, 2014 at 85% salary
I plan to develop and expand my research program on the processing and applications of renewable nanomaterials working with researchers at North Carolina State University (USA) and Nanyang Technological University (Singapore) and to apply novel nano-water-treatment technology in developing countries. I plan to complete writing a textbook entitled “Some nanomaterials-synthesis, properties and applications.”

Thagard, Paul, Philosophy, July 1, 2014 to December 31, 2014 at 85% salary
I plan to write a book, called “Mind-Brain: Cognitive Science and its Applications.” This book will provide a comprehensive review of cognitive-neural explanations of important aspects of thinking such as problem solving, learning, and consciousness, and show the relevance of these explanations to the professions, social sciences, and humanities.

Tsui, Ting, Chemical Engineering, January 1, 2014 to December 31, 2014 at 85% salary
My sabbatical goal is to develop new research skills in the area of novel polymerase chain reaction (PCR) lab-on-a-chip medical devices. These microfluidic devices are used for rapid verification of infectious viruses, such as, SARS and avian flu. The PCR technique replicates a limited number of DNA molecules to thousands or millions of copies in a short period of time.
Turri, John, Philosophy, January 1, 2014 to June 30, 2014 at 100% salary
On my sabbatical leave I will complete a book manuscript (on assertion and knowledge) and several articles in both theoretical and experimental philosophy.

Wagner, David, Combinatorics and Optimization, January 1, 2014 to December 31, 2014 at 100% salary
Stable polynomials have provided the keys to the recent solutions of many old problems in mathematics. I will develop the techniques discovered with my student Wenbo Gao this summer to construct them, and investigate their properties. I will also address some of the open questions about them for which there is a feasible strategy towards solution.

Ward, Paul, Electrical and Computer Engineering, January 1, 2014 to June 30, 2014 at 100% salary
I will spend my sabbatical working with local companies (Google, RIM, IBM Toronto) furthering my research into scalable self-managing systems. My approach is to create scalable, run-time behavioural models of the normal operation of systems, and to identify deviations between system behaviour and run-time-model prediction. Such deviations are potentially system errors, requiring proactive recovery to prevent system failure.

Welch, David, Political Science, January 1, 2014 to June 30, 2014 at 100% salary
I will be working on three projects: 1) completion of a book manuscript for a 2009 SSHRC grant on “Security Ontology”; 2) progress on a joint project book manuscript on “Why Leaders Fail to Learn From History (and How They Can Succeed)” with Professor Robert Patman, University of Otago; 3) ramp up international project on “Building Empathy/Confidence/Trust in the Asia Pacific” for various outputs.

White, Katherine, Psychology, January 1, 2014 to June 30, 2014 at 100% salary
My research focuses on understanding early stages of language development in infants and toddlers. Recent studies in my Lab for Infant Development and Language have explored infants’ acquisition of the sounds and words of their language. The purpose of this leave is to allow me to devote time to writing up these projects for publication.

• Sabbatical Leave Date Changes
  Bizheva, Kostadinka, Physics and Astronomy, change from September 1, 2013 to February 28, 2014 to January 1, 2014 to June 30, 2014 at 100% salary.

  LeDrew, Ellsworth, Geography and Environmental Management, change from July 1, 2013 to June 30, 2014 to July 1, 2013 to December 31, 2013 and July 1, 2014 to December 31, 2014 at 100% salary.

  Parry, Diana, Recreation and Leisure Studies, change from January 1, 2014 to December 31, 2014 to January 1, 2014 to June 30, 2014 at 100% salary.

  Safayeni, Frank, Management Sciences, change from September 1, 2013 to August 31, 2014 to September 1, 2014 to August 31, 2015 at 100% salary.

• Administrative Leave
  Chen, Jeff, Physics and Astronomy, January 1, 2014 to April 30, 2014 at 100% salary
I will use my four-month administrative leave to focus on soft matter research. As a current topic, the wormlike chain model is commonly used to determine the structural and conformational
properties of semiflexible polymers and biopolymers. My group is extensively involved in this theoretical research area.

FOR INFORMATION

2. Administrative Appointments/Reappointments

Berman, Ilia, appointment as Director, School of Architecture, Faculty of Engineering, January 1, 2014 to December 31, 2017.

Casello, Jeffrey, appointment as Associate Dean, Undergraduate Studies and Educational Liaison, Faculty of Environment, January 1, 2014 to June 30, 2016.

DeVidi, David, reappointment as Chair, Philosophy, Faculty of Arts, July 1, 2013 to June 30, 2016.

Fenn, Mavis, appointment as Chair, Religious Studies, Faculty of Arts, July 1, 2013 to June 30, 2017.

Garcia, John, appointment as Interim Director, Public Health and Health Systems, Faculty of Applied Health Sciences, July 1, 2013 to June 30, 2014.

Gorecki, Tadeusz, appointment as Associate Dean, Co-op, Faculty of Science, September 1, 2013 to August 31, 2014.

Haldenby, Eric, reappointment as Director, School of Architecture, Faculty of Engineering, July 1, 2013 to December 31, 2013.

Hellinga, Bruce, appointment as Associate Dean, Graduate Studies & International Agreements, Faculty of Engineering, July 1, 2013 to June 30, 2016.

Hudson, Michael, reappointment as Associate Dean, Computing, Faculty of Science, September 1, 2013 to August 31, 2016.

Safayeni, Frank, reappointment as Chair, Management Sciences, Faculty of Engineering, July 1, 2013 to May 31, 2014.

Stastna, Marek, appointment as Associate Dean, Computing, Faculty of Mathematics, July 1, 2014 to June 30, 2016.

Tyas, Suzanne, appointment as Associate Dean, Research, Faculty of Applied Health Sciences, September 1, 2013 to August 31, 2014.

Feridun Hamdullahpur
President
MEMO

TO: Senate
   Board of Governors

FROM: D. George Dixon, Vice-President, University Research

DATE: September 25, 2013

RE: Contracts Research and Industrial Grants (CRAIG) – Name Change

The Office of Research has decided to change the name of its ‘Contracts Research and Industrial Grants’ (CRAIG) group to ‘Research Partnerships,’ a name that more closely reflects the group’s responsibilities. The rationale for the name change is provided below.

When CRAIG was first established as a group within the Office of Research, its focus was on research sponsored by industry either through a research contract or an industrial grant. Of particular note, the interaction was directly with industry, and there were no additional partners. In the intervening period, this landscape has changed significantly. Specifically, various government departments and funding agencies have begun to promote industrially sponsored research by providing funds that match the industrial contribution. In effect, these government agencies have become partners with industry in supporting university research, and the CRAIG group has responsibility for negotiating and managing these multi-party research partnership agreements.

As well, the mandate of the CRAIG group has broadened to include oversight for all government grants and contracts that are not of Tri-Council origin. The group also has responsibility for proactively establishing new research partnerships, particularly with industry both within North America and overseas. To this end, the group now includes three industrial liaison officers who have responsibility for building these new research partnerships.
University of Waterloo
Board of Governors
EXECUTIVE COMMITTEE
Report to the Board
29 October 2013

FOR INFORMATION

University of Waterloo Financial Statements, 2012-13
On the delegated authority of the Board of Governors, the committee approved, on behalf of the board, the University of Waterloo Financial Statements for the year ended 30 April 2013.

Of note with respect to the Financial Statements:
- The Financial Statements reflect recent changes to accounting standards for not-for-profit organizations (the “New Standards”). The comparative numbers for the year ended 30 April 2012 have been adjusted to reflect the New Standards.
- Elections made by the university under the New Standards include a decision to apply the immediate recognition approach to accounting for employee future benefits and a decision not to take a one-time write-up of the fair market value of the university’s land.
- The university’s balance sheet continues to show a strong financial position.
- Revenues were $877.5 million, an increase of approximately 6.8% over the prior year.
- Scholarships and bursaries paid to undergraduate and graduate students totaled $99 million, an increase of approximately 2.2%.
- The university invested almost $78.2 million in new capital assets.

Kevin Lynch
Chair
THE DIVERSITY OF ONTARIO’S UNIVERSITIES:
A Data Set to Inform the Differentiation Discussion

Harvey P. Weingarten, Martin Hicks, Linda Jonker & Shuping Liu
Higher Education Quality Council of Ontario (HEQCO)
July 23, 2013
Cite this publication in the following format:


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We thank anonymous reviewers and informants who helped shape and sharpen this paper.
Executive Summary

The Ontario government has indicated its intention to negotiate individual mandate statements with each of Ontario’s public postsecondary institutions and to amend funding formulas to focus resources on what each institution does best. These actions signal the government’s desire to pursue a policy of greater institutional differentiation within the Ontario public postsecondary system. The purpose of this paper is to inform and assist the development of a differentiation framework for the university sector by describing the diversity of Ontario universities on variables that other jurisdictions have used to differentiate their university systems. These variables are important to consider first because they are globally accepted, and therefore influence the way the rest of the world will judge the Ontario system and its quality.

The paper describes the differences among Ontario’s 20 universities on key variables related to their comprehensiveness and research intensity.

The data suggest that the University of Toronto is in a cluster of its own. Not only does it lead all Ontario universities on each of the variables considered, it does so by a substantial margin on some key ones, such as doctoral degrees granted, research income, publications and citations.

Six other universities cluster at the upper end of research intensity: Guelph, McMaster, Ottawa, Queen’s, Waterloo and Western.

There is a cluster of mainly undergraduate universities that are less involved in graduate education, especially at the PhD level, and attract a lower level of research income. This cluster includes: Algoma, Brock, Laurier, Lakehead, Laurentian, Nipissing, Ontario College of Art and Design University (OCADU), Trent and University of Ontario Institute of Technology (UOIT). Two of these universities – UOIT and OCADU – have specialized mandates, and other jurisdictions sometimes include a category of “special purpose universities” in their differentiation frameworks for such cases.

Four Ontario universities – York, Carleton, Windsor and Ryerson – fall between the more research intensive and mainly undergraduate clusters.

The analysis provided here raises questions for government related to such things as the allocation of graduate spots and the assignment of rights and responsibilities, through mandate statements negotiated with the institutions, to universities in each of the different clusters. The analysis also underscores the importance of articulating other parameters that matter to the province and to the public that could act as other important dimensions for an Ontario differentiation framework.
Purpose of this paper

On May 30 2011, the then-Minister of Training, Colleges and Universities announced the government’s intention to negotiate individual mandate statements with each of Ontario’s public postsecondary institutions and to amend funding formulas to focus resources on what each institution did best (Milloy, 2011). These statements signalled the government’s desire to pursue a policy of greater institutional differentiation within the Ontario public postsecondary system, a policy recommended by several analyses suggesting the benefits of such an approach (Clark et al., 2009, 2011; HEQCO, 2010, 2013).

In June 2012, the Ministry of Training, Colleges and Universities (MTCU) pursued this differentiation policy in a tangible way by asking each of the province’s 44 public postsecondary institutions to generate a mandate statement that articulated the institution’s values, aspirations and goals and to identify three key institutional objectives consistent with that mandate. These submissions were reviewed by an independent Expert Panel convened by the Higher Education Quality Council of Ontario (HEQCO).

The Expert Panel strongly endorsed the goal of a more differentiated Ontario postsecondary system and urged government to adopt a more active role in system planning, lest the quality of higher education in Ontario continue to erode. The Expert Panel did not recommend a specific differentiation framework for Ontario, although it referenced such schemes in other provinces and states and thereby identified variables that were important to the differentiation frameworks in those jurisdictions (HEQCO, 2013).

An earlier paper by HEQCO (2010) laid out the arguments for and benefits of a more differentiated Ontario postsecondary system and offered some high-level advice to government about how this might be achieved. The Expert Panel Report on the Strategic Mandate Agreements continued that work by making specific recommendations to government and providing a more detailed commentary on the state of the postsecondary system in Ontario (HEQCO, 2013). The current paper builds on these reports by examining the diversity of Ontario’s universities and, based on the data, by suggesting a framework that could assist the development of a more differentiated postsecondary system.

Ultimately, as recommended by the Expert Panel, a key decision government will need to consider regarding differentiation is the utility of maintaining the strong college-university dichotomy that now exists in Ontario. As a first step, though, it is easiest to consider the issue of differentiation within each of the university and college sectors separately. The current paper focusses on universities; a corresponding analysis for the Ontario college sector is forthcoming.

Dimensions of differentiation

Although one could theoretically propose any dimension along which postsecondary institutions could be distinguished, two fundamental properties dominate current differentiation classification schemes. The first is the comprehensiveness of institutions. The second is research activity.

Comprehensiveness is indexed in a number of ways. One relates to the range of programs that a university offers. Some universities focus primarily or exclusively on undergraduate (baccalaureate) programs; others also offer a...
varying number of graduate programs (master’s and doctoral degrees). Some universities focus almost exclusively on arts and sciences; others house a varying range of professional schools (e.g., engineering, law, medicine). With professional schools, the presence of a medical school is especially salient because it constitutes a high percentage of the university’s total faculty complement, accounts for a significant proportion of the university’s research activity and absorbs a nontrivial proportion of the university’s operating budget. (There is a reason that Maclean’s reserves one category of its classification scheme for universities with medical schools.) Comprehensiveness often correlates with the size of universities, measured by student enrolment, faculty complement, operating budgets and campus size. In general, the more comprehensive the institution, the larger it is, although the correlation is not perfect.

Research activity is measured by a host of variables. The dominant measure is total research income (or total sponsored research revenue), which represents the sum of all external monies provided to the university by granting councils, industry or any other outside bodies to support its research work.¹ To account for differences in the size of institutions, total research income can also be expressed as research income per eligible faculty member. Since most graduate students are also engaged in active research (exceptions, for example, include course-based master’s programs), the size of the graduate student cohort can also index an institution’s research involvement and profile. One can consider the total number of graduate students or the percentage of graduate students relative to total student enrolment. Differentiation frameworks tend to emphasize doctoral (PhD) students. There are several reasons for this. First, the PhD is the quintessential and highest research credential offered by North American universities. Second, many institutions themselves tout PhD students as critical to their overall research effort and activity. Third, the total graduate cohort may include students in master’s programs that are not research based or that are related to professional credentials (e.g., Master of Business Administration).² It is not coincidental that the number of PhD graduates per year is an important criterion for membership in the cohort of Canada’s most research-intensive universities, the U-15.

Except as they may relate to reputational surveys and rankings, quantitative analyses of research quality and impact are rarely incorporated into differentiation frameworks. However, citation analyses or measures such as H-scores index the impact of research conducted by faculty members in a university.

There are two other dimensions of differentiation common in other jurisdictions, both of which are absent in the Ontario system. The first relates to the philosophy of the undergraduate curriculum. The best example is the distinction in the United States between the liberal arts undergraduate colleges (e.g., Swarthmore, Williams College, the Claremont colleges) and the research-intensive universities (University of California, Berkeley, University of Michigan, Stanford University). As the Expert Panel noted on its review of the Strategic Mandate Agreement submissions, essentially all of Ontario’s universities characterize themselves as, and aspire to be, research intensive; no Ontario university presents itself as a primarily undergraduate liberal arts university. In contrast, four universities in Canada (Bishop’s, St. Francis Xavier, Mount Allison and Acadia) have banded together

¹ We recognize that different disciplines are differentially dependent on external grants to support their research and scholarly activities. However, this variable is still considered to be one of the prime indices of the total research activity at a university, especially for inter-institution comparisons.

² For example, according to the Common University Data Ontario (CUOD), in 2011, 38% of the master’s degrees conferred by Wilfrid Laurier University were in the business and commerce category. CUOD does not identify how many of these degrees are Master of Business Administration (MBA). This general problem is the inability to discriminate master’s degrees that transition to the doctorate (and, therefore, are research-based) from professional and course-based master’s programs in Ontario (that may or may not involve research). In contrast, all doctoral programs are research-based.
as a U-4 on the basis of their commitment to and focus on a liberal arts undergraduate education. There are other public (University of King’s College in Nova Scotia) and private (Quest University in British Columbia) universities in Canada that promote themselves as liberal arts undergraduate colleges akin to their counterparts in the United States.

A second often-used dimension of differentiation absent in Ontario relates to the mode of instruction; specifically, postsecondary institutions that offer their programs online. In the United States, this would include institutions such as the University of Phoenix and Western Governors University. Athabasca University in Alberta is the prototypical example in Canada. Ontario has no online or open university, although there has been discussion along these lines for some years. Ontario universities vary considerably in terms of their use of online technology, but none advertise themselves, or appear inclined to promote themselves, to a degree of internet-based instruction that rivals its centrality to acknowledged online institutions.

Finally, it is worth noting here that the Expert Panel rejected the idea that regionalism by itself was a rational dimension of differentiation in the Ontario system.

In subsequent sections of this paper, we describe the variation among Ontario’s 20 universities on variables considered to be the most important with respect to the differentiation of higher education institutions. Before that, however, the next section discusses how these data can be used to develop a postsecondary differentiation framework.

Using data to develop an Ontario differentiation framework

Some have opined that there is no reason to pursue further differentiation discussions in Ontario because the province’s universities are already different on the dimensions noted above. These critics miss the point. Of course Ontario universities differ in size, research profile and participation in graduate studies. The critical point, however, is that all Ontario universities, regardless of the details of their current state and makeup, appear to aspire to the same goal; specifically, to grow discovery research programs and expand graduate studies. As the Expert Panel noted after its review of the Strategic Mandate Agreements (SMAs) submitted by Ontario’s universities, “…the SMA’s demonstrate a tendency to greater homogenization of the system based on preferences within the academy for research and advanced degrees, rather than greater institutional differentiation” (HEQCO, 2013, p. 11).

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The Expert Panel noted further that “…differentiation is a tool… its benefits are to maximize the quality of the overall system by enabling each institution to make an optimal and distinctive contribution to the province’s higher education system…” (HEQCO, 2013, p. 11). This is exactly what MTCU was striving for when the Minister announced the government’s intention to focus resources on what institutions do best. The fact that Ontario universities differ is precisely what permits the development of a rational differentiation framework. When such a framework is implemented, the impact of public support of universities is optimized, universities use their own resources more purposefully and students are presented with clear choices about which institutions best serve their personal and professional goals. This is how the quality of the overall system is uplifted and it is what the best differentiation frameworks enable.

The role of data is to provide the hard facts about the current activities of Ontario’s universities to inform the development of a sensible differentiation framework.

A differentiation framework could treat every university independently. However, many differentiation frameworks cluster like-minded institutions into categories in which institutions share the same rights and responsibilities as others in their cluster. The data presented in this paper are a first step towards seeing whether such clusters already exist on those variables that appear most critical to the design of a differentiation framework. If so, the next step is to clarify the relationship between the institutions in that cluster and government policies. By definition, a differentiation framework suggests that different clusters will have a different set of roles, responsibilities and expectations associated with them to allow different types of institutions to optimize their contribution to the overall system.

A differentiation framework defines differences among institutions. It does not signal differing merit, value or worth. The development of a differentiation framework is an exercise in a better, more rational and more effective allocation of public resources and a strategy for optimizing institutions’ use of their own resources. A differentiation framework offers students clarity of choice about which institutions in a system best serve their personal and professional goals.

Differentiation is compatible with a commitment to access. As the Expert Panel noted, “…Providing sufficient spaces for qualified students should remain a public policy imperative” (HEQCO, 2013, p. 9). A differentiation framework, however, would define where increased access is best positioned to occur and how we could best couple enrolment growth with quality considerations.

In the short term, the implementation of a differentiation framework in Ontario could constrain the desires or aspirations of some universities. This depends, of course, on the alignment between the university’s goals and the roles, rights and responsibilities of institutions in their cluster. However, rather than concentrating on what a university should not do, a useful differentiation framework enables institutions to do even more of what they do best. And, there is nothing about the existence of a differentiation framework that constrains a university from being as innovative as it wishes as it pursues what is expected of it. As the Expert Panel suggested, it is the role of government (in consultation with the institutions) to establish the differentiation framework and associated

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4 A critical feature of a well-designed postsecondary system is an efficient, transparent and effective transfer credit system so students can move efficiently and smoothly, with appropriate credit for prior learning, from one institution to the next when their personal or career goals change.
policies and accountability mechanisms to monitor performance. It is not the role of government to define the means, strategies or paths by which institutions would pursue and achieve their goals.

The data: How different are Ontario universities on variables relevant to differentiation frameworks?

Table 1 provides data from each Ontario university on variables most relevant to the development of differentiation frameworks. Explanatory notes for all tables and figures are contained in Appendix 1.
<table>
<thead>
<tr>
<th>University</th>
<th>FT enrolment</th>
<th>FT Faculty</th>
<th>Operating Budget ($000)</th>
<th># Degrees Awarded</th>
<th>Professional Schools</th>
<th>Sponsored Research Income</th>
<th>H-index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total PhDs</td>
<td>Engineering (accredited)</td>
<td>Medicine</td>
<td>Law</td>
</tr>
<tr>
<td>Algoma University</td>
<td>921</td>
<td>57</td>
<td>$20,538</td>
<td>202</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Brock University</td>
<td>15,321</td>
<td>582</td>
<td>$215,868</td>
<td>4,092</td>
<td>21</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>Carleton University</td>
<td>21,438</td>
<td>851</td>
<td>$353,769</td>
<td>4,716</td>
<td>131</td>
<td>2.8%</td>
<td></td>
</tr>
<tr>
<td>Lakehead University</td>
<td>6,999</td>
<td>319</td>
<td>$117,425</td>
<td>2,478</td>
<td>8</td>
<td>0.3%</td>
<td></td>
</tr>
<tr>
<td>Laurentian University</td>
<td>6,741</td>
<td>424</td>
<td>$134,103</td>
<td>2,229</td>
<td>9</td>
<td>0.4%</td>
<td></td>
</tr>
<tr>
<td>McMaster University</td>
<td>24,328</td>
<td>936</td>
<td>$498,796</td>
<td>6,422</td>
<td>210</td>
<td>3.3%</td>
<td></td>
</tr>
<tr>
<td>Nipissing University</td>
<td>3,910</td>
<td>178</td>
<td>$66,802</td>
<td>1,738</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>OCAD University</td>
<td>3,328</td>
<td>102</td>
<td>$58,998</td>
<td>684</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Queen's University</td>
<td>19,576</td>
<td>841</td>
<td>$415,239</td>
<td>5,530</td>
<td>172</td>
<td>3.1%</td>
<td></td>
</tr>
<tr>
<td>Ryerson University</td>
<td>20,775</td>
<td>808</td>
<td>$425,882</td>
<td>6,082</td>
<td>23</td>
<td>0.4%</td>
<td></td>
</tr>
<tr>
<td>Trent University</td>
<td>6,114</td>
<td>237</td>
<td>$104,181</td>
<td>1,788</td>
<td>12</td>
<td>0.7%</td>
<td></td>
</tr>
<tr>
<td>University of Guelph</td>
<td>20,730</td>
<td>763</td>
<td>$370,846</td>
<td>5,205</td>
<td>123</td>
<td>2.4%</td>
<td></td>
</tr>
<tr>
<td>University of Ottawa</td>
<td>31,789</td>
<td>1273</td>
<td>$677,270</td>
<td>8,700</td>
<td>207</td>
<td>2.4%</td>
<td></td>
</tr>
<tr>
<td>University of Toronto</td>
<td>67,271</td>
<td>2449</td>
<td>$1,618,370</td>
<td>16,384</td>
<td>830</td>
<td>5.1%</td>
<td></td>
</tr>
<tr>
<td>University of Waterloo</td>
<td>30,501</td>
<td>1093</td>
<td>$568,645</td>
<td>6,538</td>
<td>263</td>
<td>4.0%</td>
<td></td>
</tr>
<tr>
<td>University of Windsor</td>
<td>13,181</td>
<td>504</td>
<td>$229,438</td>
<td>4,019</td>
<td>67</td>
<td>1.7%</td>
<td></td>
</tr>
<tr>
<td>UOIT</td>
<td>7,752</td>
<td>209</td>
<td>$131,427</td>
<td>1,345</td>
<td>2</td>
<td>0.1%</td>
<td></td>
</tr>
<tr>
<td>Western University</td>
<td>32,075</td>
<td>1451</td>
<td>$657,223</td>
<td>8,720</td>
<td>289</td>
<td>3.3%</td>
<td></td>
</tr>
<tr>
<td>Wilfrid Laurier University</td>
<td>15,382</td>
<td>534</td>
<td>$227,771</td>
<td>3,566</td>
<td>24</td>
<td>0.7%</td>
<td></td>
</tr>
<tr>
<td>York University</td>
<td>44,325</td>
<td>1475</td>
<td>$718,567</td>
<td>11,742</td>
<td>202</td>
<td>1.7%</td>
<td></td>
</tr>
<tr>
<td>Source</td>
<td>CUDO</td>
<td>CUDO</td>
<td>COFO</td>
<td>CUDO</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The variables related to comprehensiveness – full-time (FT) head count enrolment, full-time faculty and operating budget – are highly correlated. The value of this observation is that differentiation on the basis of size could use any one of these variables. Figure 1 shows the ordering of universities on the basis of enrolment.

Figure 1. Full-time head count enrolment of Ontario universities, including international students

With respect to professional schools, Table 1 shows that of the 20 Ontario universities, 14 have an accredited engineering program, six have medical schools (Lakehead and Laurentian share a relationship with the Northern Ontario School of Medicine) and seven have law schools.

The relationship between the number of master's and doctoral degrees granted by each university per year is also very strong, with a correlation coefficient of 0.96. This suggests that once a university enters the realm of graduate studies it does so at both the master's and doctoral levels. There is not a strong tendency in Ontario, therefore, for universities to specialize at the graduate level, for example by specializing on master's-level programming and eschewing PhD programs.

Figure 2 shows the distribution of Ontario universities on the number of PhDs granted.

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3 The correlation between enrolment and faculty is 0.99; between enrolment and operating budget is 0.98; and between FT faculty and operating budget is 0.98.

4 We prefer to look at graduates rather than enrolments because it is typically advisable to consider outcome measures – in this case, successful completion of a program – rather than inputs.
By a substantial margin, the University of Toronto leads all Ontario universities in PhD graduates. In fact, the University of Toronto leads all Canadian universities on this measure.

It is worth noting that many more Ontario universities now grant the PhD than was the case a decade ago. In 2011, 17 of 20 Ontario universities granted at least one PhD degree; only Algoma, Nipissing and OCADU were out of the PhD-granting market. In contrast, in 2000, only 11 of Ontario's 19 universities granted PhDs; new entrants into the PhD-granting business since 2000 include Brock, Lakehead, Laurentian, Ryerson, Trent and UOIT.

Figure 3 shows the number of doctoral (PhD) graduates as a percentage to the total number of university graduates at each Ontario university in 2011.

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7 UOIT was established in 2002. Algoma was an affiliate of Laurentian in 2000 and became independent in 2008.
With respect to research income, the relationship between the total research income and research income per full-time faculty member in the Ontario system is also very high, with a correlation coefficient of 0.92. This suggests that either variable could be used as the basis for a differentiation framework based on overall research activity.

Figure 4 shows the total research income of each Ontario university in 2010-11. The University of Toronto leads all Ontario universities by a substantial margin. The significant research intensity of the University of Toronto compared to all other Ontario universities is reinforced by Figure 5, which shows the contribution of each Ontario university to the total number of publications emanating from the Ontario university system.
Figure 5. The contribution of each Ontario university to the total number of publications in the Ontario university system between 2008-2012

Total research income is a measure of the total research effort of the institution. It is also possible to measure the impact of a university's research effort. Figures 6 and 7 provide measures of the impact of the research emanating from each Ontario university. Figure 6 shows that publications from the University of Toronto are more frequently cited by a substantial margin by the rest of the world than those from any other Ontario university.

Figure 6. The contribution of each Ontario university to the total number of citations of papers published by the Ontario university system between 2008-2012

Figure 7 shows the average H-indices of faculty in each institution, averaged across the university and standardized for each faculty member for their discipline of study. H-indices capture both the number of research publications by a faculty member but also how often these publications are cited. For a fuller description of the H-index and how it is calculated, see Appendix 4 of HEQCO's productivity report (HEQCO, 2012).
The purpose of this paper was to examine the diversity of Ontario’s universities on variables that other jurisdictions have used to differentiate the universities within their systems.

The data suggest the existence of several clusters that can inform the development of a differentiation framework in Ontario.

1. The University of Toronto is in a cluster of its own.

The data suggest that the University of Toronto is in a cluster of its own. It is not simply that it leads all Ontario universities on all of the variables presented. It is especially the degree to which its results exceed those of all other Ontario universities, particularly on the two variables that may matter the most – PhDs graduated and research income. The University of Toronto graduates about 2.5 times as many PhDs as the second-ranked Ontario university. Its research income is almost 3 times greater than that of its nearest Ontario competitor. The University of Toronto leads all Canadian universities on both of these indicators. It is Ontario’s, indeed Canada’s, most highly placed university in many global rankings.

Given this observation, one might also consider the capacity of the University of Toronto to compete with its international competitors, the world’s most highly ranked universities.

Table 2 shows graduate enrolment as a percentage of total enrolment for the 30 most highly ranked universities in the 2012 Times Higher Education Rankings of World Universities. Two conclusions are obvious when comparing the University of Toronto to its peer group of world-ranked universities. First, the University of Toronto is significantly bigger than any of its competitors. Second, the cohort of graduate students at the University of Toronto is among the smallest of any of its competitors.
Table 2. Top 30 universities in the Times Higher Education World University Rankings in 2012, showing university type and total student enrolment and graduate enrolment as a percentage of total enrolment

<table>
<thead>
<tr>
<th>Rank</th>
<th>University</th>
<th>Enrolment</th>
<th>% Graduate</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>California Institute of Technology</td>
<td>2,231</td>
<td>56.2%</td>
<td>Private</td>
</tr>
<tr>
<td>2</td>
<td>University of Oxford</td>
<td>25,595</td>
<td>34.9%</td>
<td>Public</td>
</tr>
<tr>
<td>2</td>
<td>Stanford University</td>
<td>19,945</td>
<td>65.0%</td>
<td>Private</td>
</tr>
<tr>
<td>4</td>
<td>Harvard University</td>
<td>27,392</td>
<td>62.4%</td>
<td>Private</td>
</tr>
<tr>
<td>5</td>
<td>Massachusetts Institute of Technology</td>
<td>10,894</td>
<td>59.8%</td>
<td>Private</td>
</tr>
<tr>
<td>6</td>
<td>Princeton University</td>
<td>7,813</td>
<td>33.4%</td>
<td>Private</td>
</tr>
<tr>
<td>7</td>
<td>University of Cambridge</td>
<td>19,945</td>
<td>38.7%</td>
<td>Public</td>
</tr>
<tr>
<td>8</td>
<td>Imperial College London</td>
<td>15,641</td>
<td>41.5%</td>
<td>Public</td>
</tr>
<tr>
<td>9</td>
<td>University of California, Berkeley</td>
<td>36,137</td>
<td>28.4%</td>
<td>Public</td>
</tr>
<tr>
<td>10</td>
<td>University of Chicago</td>
<td>14,979</td>
<td>63.9%</td>
<td>Private</td>
</tr>
<tr>
<td>11</td>
<td>Yale University</td>
<td>11,875</td>
<td>55.0%</td>
<td>Private</td>
</tr>
<tr>
<td>12</td>
<td>ETH Zürich – Swiss Federal Institute of Technology Zürich</td>
<td>16,701</td>
<td>49.5%</td>
<td>Public</td>
</tr>
<tr>
<td>13</td>
<td>University of California, Los Angeles</td>
<td>39,271</td>
<td>30.7%</td>
<td>Public</td>
</tr>
<tr>
<td>14</td>
<td>Columbia University</td>
<td>26,050</td>
<td>68.8%</td>
<td>Private</td>
</tr>
<tr>
<td>15</td>
<td>University of Pennsylvania</td>
<td>24,832</td>
<td>52.6%</td>
<td>Private</td>
</tr>
<tr>
<td>16</td>
<td>Johns Hopkins University</td>
<td>20,996</td>
<td>72.2%</td>
<td>Private</td>
</tr>
<tr>
<td>17</td>
<td>University College London</td>
<td>24859</td>
<td>44.6%</td>
<td>Public</td>
</tr>
<tr>
<td>18</td>
<td>Cornell University</td>
<td>21,131</td>
<td>33.0%</td>
<td>Private</td>
</tr>
<tr>
<td>19</td>
<td>Northwestern University</td>
<td>20,959</td>
<td>54.8%</td>
<td>Private</td>
</tr>
<tr>
<td>20</td>
<td>University of Michigan</td>
<td>42,716</td>
<td>35.8%</td>
<td>Public</td>
</tr>
<tr>
<td>21</td>
<td>University of Toronto</td>
<td>73,817</td>
<td>20.0%</td>
<td>Public</td>
</tr>
<tr>
<td>22</td>
<td>Carnegie Mellon University</td>
<td>11,531</td>
<td>48.4%</td>
<td>Private</td>
</tr>
<tr>
<td>23</td>
<td>Duke University</td>
<td>15,427</td>
<td>56.7%</td>
<td>Private</td>
</tr>
<tr>
<td>24</td>
<td>University of Washington</td>
<td>42,444</td>
<td>31.6%</td>
<td>Public</td>
</tr>
<tr>
<td>25</td>
<td>University of Texas at Austin</td>
<td>51,112</td>
<td>24.8%</td>
<td>Public</td>
</tr>
<tr>
<td>25</td>
<td>Georgia Institute of Technology</td>
<td>20,941</td>
<td>33.4%</td>
<td>Public</td>
</tr>
<tr>
<td>27</td>
<td>University of Tokyo</td>
<td>28,793</td>
<td>50.9%</td>
<td>Public</td>
</tr>
<tr>
<td>28</td>
<td>University of Melbourne</td>
<td>43,240</td>
<td>N/A</td>
<td>Public</td>
</tr>
<tr>
<td>29</td>
<td>National University of Singapore</td>
<td>33,067</td>
<td>19.1%</td>
<td>Public</td>
</tr>
<tr>
<td>30</td>
<td>University of British Columbia</td>
<td>57,200</td>
<td>18.4%</td>
<td>Public</td>
</tr>
</tbody>
</table>

In terms of the undergraduate experience it can offer, Table 3 shows the percentage of small undergraduate classes at the University of Toronto compared to other universities ranked in the Top 30. A substantially smaller percentage of University of Toronto undergraduates enjoy the opportunity for small classes compared to its international competitors.
Table 3. Percentage of classes offered that are small

<table>
<thead>
<tr>
<th>University</th>
<th>% classes &lt;20 for U.S. universities, &lt;30 for University of Toronto</th>
</tr>
</thead>
<tbody>
<tr>
<td>Columbia University</td>
<td>81%</td>
</tr>
<tr>
<td>Harvard University</td>
<td>78%</td>
</tr>
<tr>
<td>Yale University</td>
<td>77%</td>
</tr>
<tr>
<td>Northwestern University</td>
<td>75%</td>
</tr>
<tr>
<td>University of Chicago</td>
<td>75%</td>
</tr>
<tr>
<td>University of Toronto</td>
<td>43%</td>
</tr>
</tbody>
</table>

Table 4 shows the revenue per student in 2010-11 for universities ranked in the Top 30 of the Times Higher Education World University Rankings in 2012, organized by type of institution. The University of Toronto operates with significantly less revenue per student than its international competitors.

Table 4. 2010-11 revenue per student of 20 universities ranked in the Top 30 of the Times Higher Education World University Rankings in 2012

<table>
<thead>
<tr>
<th>Type</th>
<th>Revenue per student, 2010-11 (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>$500,571</td>
</tr>
<tr>
<td>Private</td>
<td>$499,642</td>
</tr>
<tr>
<td>Private</td>
<td>$409,043</td>
</tr>
<tr>
<td>Private</td>
<td>$404,797</td>
</tr>
<tr>
<td>Private</td>
<td>$350,750</td>
</tr>
<tr>
<td>Private</td>
<td>$329,709</td>
</tr>
<tr>
<td>Private</td>
<td>$288,527</td>
</tr>
<tr>
<td>Private</td>
<td>$284,420</td>
</tr>
<tr>
<td>Private</td>
<td>$238,492</td>
</tr>
<tr>
<td>Private</td>
<td>$165,561</td>
</tr>
<tr>
<td>Private</td>
<td>$152,053</td>
</tr>
<tr>
<td>Private</td>
<td>$114,985</td>
</tr>
<tr>
<td>Private</td>
<td>$113,637</td>
</tr>
<tr>
<td>Public</td>
<td>$109,009</td>
</tr>
<tr>
<td>Public</td>
<td>$95,239</td>
</tr>
<tr>
<td>Public</td>
<td>$82,617</td>
</tr>
<tr>
<td>Public</td>
<td>$73,107</td>
</tr>
<tr>
<td>Public</td>
<td>$68,072</td>
</tr>
<tr>
<td>Public</td>
<td>$59,600</td>
</tr>
<tr>
<td>UofT</td>
<td>$37,086</td>
</tr>
</tbody>
</table>
2. There is a cluster of more research-intensive universities in the Ontario system.

Aside from the University of Toronto, the data identify a number of other universities that are at the upper end of research activity in the Ontario system. It is not surprising, perhaps, that this cluster includes the other five Ontario universities in the U-15 – McMaster, Western, Ottawa, Waterloo and Queen’s. The University of Guelph shows a level of research activity that would place it in this cluster as well. These universities are likely subject to the same institutional disadvantages relative to their international competitors as were outlined above for the University of Toronto.

3. There is a cluster of mainly undergraduate universities in the Ontario system.

The data reveal a cluster of Ontario institutions that are not very involved in graduate education, especially at the PhD level, and that attract a lower level of research income. These institutions are mainly undergraduate universities and include: Algoma, OCADU, Nipissing, UOIT, Laurier, Trent, Brock, Lakehead and Laurentian. Two of these institutions – UOIT and OCADU – may be considered to have specialized mandates, and differentiation frameworks used in other jurisdictions sometimes establish a category of “special purpose universities” in such cases.

For completeness, there are four universities – York, Carleton, Windsor and Ryerson – that fall between the more research intensive and mainly undergraduate clusters.

Where do we go from here?

The conclusion we provide about clusters of Ontario universities might seem to some to be a blinding flash of the obvious. Some knowledgeable individuals we spoke to as we were pursuing this analysis spontaneously and successfully predicted the clustering that they believed the analysis would reveal.

Even with the limited number of variables considered in this analysis, the clustering we identify raises a number of questions for government.

The first is how to consider the four universities that do not fall easily into the two broad clusters of “more research intensive” and “mainly undergraduate.” Is the pursuit of differentiation best served by creating a separate category for them or by allocating them to one of the two major clusters identified?

Second, the current financial and policy environment for higher education in Ontario coupled with the clustering proposed here raises some immediate questions for government. For example, should PhD spots be preferentially allocated to the more research-intensive universities and, if so, to what degree? Should government attempt to minimize the number of PhD programs in mainly undergraduate universities? How should the funding of master’s programs, especially professional and course-based master’s programs, be allocated across the clusters?

Third, what rights, expectations and responsibilities should be granted to institutions in the different clusters? And, as noted by the Expert Panel, these decisions are meaningful, worthwhile and effective only if they are tied to funding formulas, which represent the most powerful levers available to government to effect change. These debates are typically controversial, particularly as individual institutions consider how these decisions intersect.

The Diversity of Ontario's Universities: A Data Set to Inform the Differentiation Discussion
with their plans and aspirations. But, these are precisely the kind of discussions and decisions that are critical if the benefits of a more differentiated Ontario university system are to be derived and enjoyed by students, the public and the province.

A differentiation policy allows institutions to be the best at things that matter to the province, public and students. If it matters to Ontario to have a university that competes with the very best universities in the world, with all the benefits that accrue to the province as a result of having such a flagship, then this analysis suggests the one institution in the system best positioned to do just that.

If it matters to Ontario to have universities that offer an outstanding, high-quality liberal arts undergraduate experience that competes with the U-4 and other great liberal arts colleges, with all the benefits that accrue to the province as a result of having such institutions, then this analysis suggests a cluster of universities best positioned to do just that.

If it matters to Ontario to have universities that maintain a comprehensive set of high-quality research and graduate programs that are globally competitive, with all the benefits that accrue to the province as a result of having such institutions, then this analysis suggests a cluster of universities best positioned to do just that.

The first step for government, therefore, is to decide what matters to it and to the province. Although this is a discussion that merits broad and genuine consultation, it is one in which the provincial government, as the Expert Panel suggested, must be active, if not the leader.

The analysis provided in this paper differentiates Ontario universities on variables that matter to other jurisdictions. These variables cannot be ignored because they are broadly accepted and, therefore, the dimensions along which the rest of the world will judge the quality of the Ontario postsecondary system.

There is nothing to prevent Ontario, however, from deciding that there are other things that matter to it. For example, the province looks to universities as a source of commercialization and company creation. A recent international ranking of university-associated business incubators identifies Ryerson University’s Digital Media Zone as a top global performer.\footnote{http://ubiindex.com/benchmark-services/global-top-list-2013/} Similarly, Ontario could decide to differentiate universities on the basis of the degree of curriculum innovation. The critical considerations for any parameters along which a system could be differentiated is that they be variables that matter, that the mandate and expectations of institutions differentiated on the basis of those variables be clear, that the institutions be funded in accountable and meaningful ways aligned with those variables and, importantly, that the quality bar be set high, i.e., that the institutions differentiated on the basis of those variables strive to be among the best institutions of their kind in the world.

Given the conservative nature of higher education it may take some time for an innovative institution to be acknowledged and accepted. But the concept of institutional innovations, met initially with controversy but ultimately acknowledged as world-leading, should not be foreign to Ontario. The pioneering problem-based learning curriculum of McMaster’s Faculty of Health Sciences and the fundamental principle of cooperative education at the University of Waterloo are excellent examples of programs and institutions that differentiated on the basis of considerations people believed really mattered and, although met initially with skepticism (if not active resistance), were ultimately understood to be best practice.
References


Appendix 1. Explanatory notes for figures and tables

Table 1. Re: Overview of Ontario’s universities

- University totals include affiliates, except for Hearst, which is not included with Laurentian, and St. Paul, which is not included with Ottawa.
- Full-time enrolment includes international students, fall 2011. Algoma enrolment sourced from its Multi-Year Accountability Agreement, 2011-12.
- Full-time faculty of Algoma sourced from Algoma web site, no year referenced; UOIT is for fall 2009; Western’s Brescia is for fall 2010.
- Operating budget is COFO’s “Operating-General Expendable Funds” total amount and is driven primarily by MTCU grants and tuition fees.
- Total degrees awarded includes bachelor’s, first professional, master’s and doctoral degrees. The total excludes undergraduate and graduate certificates and diplomas.
- Degrees awarded for Algoma are for 2010 and are sourced from MTCU.
- Sponsored research income is sourced from Re$earch Infosource and includes all funds to support research received in the form of a grant, contribution or contract from all sources (internal and external) to the institution.
- Sponsored research income per full-time faculty is based on faculty counts from 2010.
- Sponsored research data not included for Algoma, Nipissing and OCADU, as these institutions fall below the Top 50 threshold.
- H-index data was last updated in December 2012 and includes the mean standardized H-score.

Figures 1, 2, 3, 4 and 7. Re: Full-time enrolment in 2011

- These figures are graphic representations of the data in Table 1.
- The research incomes of Nipissing, OCADU and Algoma were below the value to be included in Re$earch Infosource’s 2012 list of the Top 50 research universities in Canada.
- An H-index of 1.0 indicates the average on this measure.

Figures 5 and 6:

- Sourced from Incites™, total research publications from 2008 to 2012.
- Publications and citations data not included for Algoma, Nipissing and OCADU, as these institutions fall below the threshold employed by Incites™.
- The number of publications from Nipissing, OCADU and Algoma were below the threshold to be included by Incites™.

Table 2. Re: Top 30 universities in the Times Higher Education Rankings of World Universities in 2012

- For the universities in the United States, enrolment includes full-time and part-time head count as of the fall of 2011.
- University of Oxford and University of Cambridge enrolments include full-time equivalent students in 2011-2012.
- Imperial College London enrolment includes full-time and part-time head count for 2011-2012.
- ETH Zürich enrolment includes full-time and part-time head count for 2011.
• University of Toronto enrolment includes full-time and part-time head count as of the fall of 2011.
• University of Tokyo enrolment is as of May 1, 2011.
• National University of Singapore enrolment is as of September 2011 and includes full-time and part-time students.
• University of British Columbia enrolment is preliminary and includes full-time and part-time head count for 2012.
• Graduate enrolment for the University of Melbourne is not available for 2011.
• Sources for enrolment information: National Center for Education Statistics for universities in the United States, Higher Education Statistics Agency for University of Oxford and University of Cambridge, Common University Data Ontario for the University of Toronto, Association of Universities and Colleges of Canada for University of British Columbia, and institutional websites for all other enrolment statistics.

Table 3. Re: Percentage of classes offered that are small

• Data available are for classes with less than 20 students for the universities in the United States and less than 30 students for the University of Toronto.
• Sources: US News & World Report Ranking of Universities and the Common University Data Ontario.

Table 4. Re: 2010-11 revenue per student of 20 universities ranked in the Top 30 of the Times Higher Education World University Rankings in 2012

• Data from only 20 comprehensive universities of the Top 30 are available.
• Revenue includes endowment income but excludes auxiliary, hospital or independent operations.
• Sources: Integrated Postsecondary Education Data Systems (IPEDS), Canadian Association of University Business Officers (CAUBO) and Postsecondary Student Information System (PSIS).
FOR APPROVAL

Changes to the Memorandum of Agreement between the Faculty Association of the University of Waterloo and the University of Waterloo

1. **Motion**: That the Board of Governors approve addition of Article 12.10 to the Memorandum of Agreement between the Faculty Association of the University of Waterloo and the University of Waterloo as follows:

   12.10 **Amendment of this Agreement**

   12.10.1 Amendment of this Agreement may be made by the Parties at any time in accordance with the provisions of this Article.

   12.10.2 Minor change: If the proposed change is deemed by all members of the Faculty Relations Committee to be minor, approval of the change by Deans’ Council and the Board of Directors of the Association is required for it to take effect. No change to Articles 10, 13 or 17 can be deemed minor. Members (as defined in Article 2.1.1) shall be informed of a minor change via email shortly after approval.

   12.10.3 Except for minor changes (see Article 12.10.2) and changes to the Memorandum of Settlement (see Article 10.4), a change to this Agreement must be approved by the Association and the Board of Governors before it takes effect.

**Rationale**: The addition of a formal amendment clause provides additional clarity and creates streamlined procedures for minor “housekeeping” changes that need to be made from time to time.

**Background**: This change was brought forward by request of the Faculty Relations Committee and was ratified by the membership of the Faculty Association on 28 June 2013.

2. **Motion**: That the Board of Governors approve changes to Articles 8 and 14 of the Memorandum of Agreement between the Faculty Association of the University of Waterloo and the University of Waterloo as described in Appendix A [attached].

**Rationale**: These changes are required for consistency with the Tri-Agency Framework for Responsible Conduct of Research (http://www.rcr.ethics.gc.ca/eng/policy-politique/framework-cadre/). They reflect mandatory procedural changes imposed on all universities that receive Tri-
Agency (i.e. Canadian Institutes of Health Research, Natural Sciences & Engineering Research Council, and Social Sciences & Humanities Research Council) funding.

**Background:** These changes are supported by Deans’ Council and the Faculty Relations Committee, and were ratified by the membership of the Faculty Association on 28 June 2013.
Appendix A

Memorandum of Association between the Faculty Association of the University of Waterloo and the University of Waterloo

Proposed Changes to Articles 8 and 14

[Note: new text underlined; deletions strikethrough]

8. DISCIPLINE

8.1 A Member may be disciplined only for just cause and only in accordance with the provisions of this Article and, for matters dealing with scholarly research, the provisions of Article 14. Disciplinary processes are not to be used to inhibit free inquiry, discussion, exercise of judgement, or honest criticism within or without the University. Disciplinary action shall be reasonable, commensurate with the seriousness of the violations, and consistent with accumulated practice under this Article. The Parties recognize the value of promoting corrective action through guidance and progressive discipline, although this will not always be appropriate.

8.4 The only disciplinary measures which may be taken by the University against a Member are the following:

(a) A letter of warning or reprimand. Such letters must be specific and must be clearly identified as disciplinary measures.
(b) Suspension with pay. Suspension is the act of relieving a Member, without her/his consent, of some or all university duties and/or privileges.
(c) Suspension with partial pay, or without pay, or a fine in lieu thereof, where appropriate.
(d) Dismissal for cause. For Members with tenure or continuing lecturer appointments, dismissal means the termination of appointment without the Member's consent. For all others, dismissal means termination of appointment without the Member's consent before the end of the contract. Non-renewal of definite term or probationary appointments and denial of tenure do not constitute dismissal.
(e) A public statement from the University that a Member was guilty of misconduct in research.

14. INTEGRITY IN SCHOLARLY RESEARCH

14.1 Preliminary Matters

14.1.1 The University and the Association are committed to promoting ethical practices in scholarly research. This Article defines what actions do and do not constitute research misconduct, specifies the research record keeping obligations of Members, and sets out the procedures to be followed when the University receives an allegation of research misconduct by a Member.

14.1.2 The Parties recognize that the responsible conduct of research includes:
(a) providing accurate and reliable information in support of funding requests;
(b) responsible use of research funds in accordance with funding agreements;
(c) promoting and protecting the quality, accuracy and reliability of research; and
ensuring that the process for addressing allegations of policy breaches is followed.

14.1.3 The Parties agree that the Vice-President, University Research is designated as the University's central point of contact to receive any confidential enquiries, allegations of breaches of policies and information related to allegations of misconduct in scholarly research.

14.1.4 In this Article “Agencies” means the Canadian Institutes of Health Research, the Natural Sciences and Engineering Research Council and the Social Sciences and Humanities Research Council. “Agency” means one of those funding agencies, and “SRCR” means the Tri-Agencies' Secretariat, Responsible Conduct of Research.

14.1.5 In this Article “Vice-President, University Research” means the Vice-President, University Research or his/her designate.

14.1.6 In all matters under this Article, a Member has the right to seek advice from the Association and to be accompanied by an academic colleague for advice and support (including, if necessary, aid in presenting the Member's position) during any meetings attended to discuss such matters.

14.1.7 The University shall, where practicable, take disciplinary action against employees or students who make unfounded allegations of misconduct in research which are reckless, malicious, or not in good faith.

14.2 Definition Misconduct in Research

14.2.1 Factors intrinsic to the process of scholarly research such as honest error, conflicting data, or differences in interpretation or assessment of data or of experimental design do not constitute either misconduct or a lack of integrity.

14.2.2 Misconduct in research may include, but is not limited to, one or more of the following:

(a) Fabrication: Making up data, source material, methodologies or findings, including graphs and images.
(b) Falsification: Manipulating, changing, or omitting data, source material, methodologies or findings, including graphs and images, without acknowledgement and which results in inaccurate findings or conclusions.
(c) Destruction of research records: The destruction of one’s own or another’s research data or records to specifically avoid the detection of wrongdoing or in contravention of the applicable funding agreement, institutional policy and/or laws, regulations and professional or disciplinary standards.
(d) Plagiarism: Presenting and using another’s published or unpublished work, including theories, concepts, data, source material, methodologies or findings, including graphs and images, as one’s own, without appropriate referencing and, if required, without permission.
(e) Redundant publications: The re-publication of one’s own previously published work or part thereof, or data, in the same or another language, without adequate acknowledgment of the source, or justification.
(f) Invalid authorship: Inaccurate attribution of authorship, including attribution of authorship to persons other than those who have contributed sufficiently to take responsibility for the intellectual content, or agreeing to be listed as author to a publication for which one made little or no material contribution.

(g) Inadequate acknowledgement: Failure to appropriately recognize contributions of others in a manner consistent with their respective contributions and authorship policies of relevant publications.

(h) Mismanagement of Conflict of Interest: Failure to appropriately manage any real, potential or perceived conflict of interest, in accordance with the Institution’s policy on conflict of interest in research, preventing one or more of the objectives set out in 14.1.2 from being met.

(i) Providing incomplete, inaccurate or false information in a grant or award application or related document, such as a letter of support or a progress report.

(j) Applying for and/or holding an Agency award when deemed ineligible by NSERC, SSHRC, CIHR or any other research or research funding organization world-wide for reasons of breach of responsible conduct of research policies such as ethics, integrity or financial management policies.

(k) Listing of co-applicants, collaborators or partners without their agreement.

(l) Using grant or award funds for purposes inconsistent with the policies of the funding agency; misappropriating grants and award funds; contravening financial policies of the funding agency or University; or providing incomplete, inaccurate or false information on documentation for expenditures from grant or award accounts.

(m) Failing to meet Agency policy requirements or, to comply with relevant policies, laws or regulations, for the conduct of certain types of research activities; failing to obtain appropriate approvals, permits or certifications before conducting these activities.

(n) In accordance with Policy 69, Conflict of Interest, failure by those involved in a research project to comply with Policy 69, Conflict of Interest: a researcher failing to reveal to the University any significant financial interest he/she has in a company that contracts with the University to undertake research (particularly research involving the company's products or those of its direct competitors) or to provide research-related materials or services. Significant financial interest includes ownership, substantial stock holding, a directorship, significant honoraria or consulting fees but does not include routine stock holding in a large publicly traded company.

14.3 Retention of Research Record

14.3.1 For the purposes of this section of Article 14 the term research record refers to any data, document, computer file, computer diskette, or any other written or non-written account or object that reasonably may be expected to provide evidence or information regarding the proposed, conducted or reported research that constitutes the subject of an allegation of scientific misconduct. A research record includes, but is not limited to, grant or contract applications, whether funded or unfunded; grant or contract progress and other reports; laboratory notebooks; notes; correspondence; videos; photographs; X-ray film; slides; biological materials; computer files and printouts; manuscripts and publications; equipment use.
logs; laboratory procurement records; animal facility records; human and animal research protocols; consent forms; medical charts; and client research files.

14.3.2 Members shall only be responsible for providing access to research records which are in their possession and not for research records which may be stored in archives, libraries or other institutions which the University may consult at its expense and according to the rules of the host institution. Ownership of such records is governed by Policy 73, Intellectual Property Rights.

14.3.3 Normally, for the purposes described in 14.3.2, Members shall retain research records that are within their personal control for as long as may be reasonable, but in any case for no less a time than is required by the relevant professional association or discipline. Members shall be indemnified by the University for any material loss relating to their research records in the course of any investigation, inquiry, or arbitration.

14.4 Procedures

14.4.1 If alleged misconduct involves research conducted by a Member with someone who is not a Member (e.g. a student, a faculty member at a different university), these procedures may be modified to facilitate joint or parallel investigations provided that the Member shall be notified in writing of any proposed modification and shall have an opportunity to make submissions.

14.4.2 If circumstances warrant, timelines may be extended with the prior written approval of the Vice-President, University Research.

14.4.2 (a) If there is evidence that an allegation may have substance, the Member shall be informed promptly in writing of the allegation, the circumstances leading to its receipt and whether the University will launch a formal investigation of the allegation.

(b) A formal investigation of allegations against a Member for misconduct in research shall be based only on written allegations accompanied by documented evidence which are signed, dated and submitted to the Dean of the Member's Faculty. Oral or anonymous allegations shall not constitute a sufficient basis either for a formal investigation or for disciplinary action.

14.4.3 (a) Any formal investigation of allegations against a Member for misconduct in research shall be carried out by the Dean of the Faculty in accordance with the provisions of Article 8 of this Agreement. The Dean is responsible for reporting on the progress of the investigation to the Vice-President, University Research.

(b) Any discipline imposed on a Member for misconduct in research shall be grievable under the provisions of Article 9 of this Agreement.

(c) In addition, the provisions of 14.4.4 to 14.4.10 of this Article shall also apply.

14.4.4 Any oral or anonymous allegation of misconduct in research by a Member received by a Chair, Dean, Vice-President or other administrative officer of the University are to be forwarded to the Vice-President, University Research who may be investigated informally by that officer to determine whether the allegation may have substance. In all such inquiries, care must be taken to ensure that those
contacted understand that the process is both informal and confidential, and that no inference should be made concerning the validity of the allegation. If there is no evidence that the allegation has substance, the University shall destroy all documentation concerning it. If the allegation has substance, it will be investigated only if a signed and dated allegation is submitted. Oral or anonymous allegations shall not constitute a sufficient basis either for a formal investigation or for disciplinary action.

14.4.4  (a) An allegation of misconduct in scholarly research shall be submitted in writing to the Vice-President, University Research who is to determine whether the allegation may have substance and whether an investigation is to be undertaken.
(b) The Vice-President, University Research may choose to notify the subject of the allegation (the “Responding Member”) in writing of the nature of the allegation and that s/he is to retain all materials relevant to the allegation and invite the Responding Member to respond by meeting with him/her and/or submitting a written response. Any such meeting or submission shall take place within 10 working days of the notification.
(c) The Vice-President, University Research shall determine whether:
   i) there is sufficient evidence to merit a full investigation; or
   ii) there is insufficient evidence to merit a full investigation and any material collected is to be destroyed.

The complainant shall be informed in writing of the decision as shall the Responding Member if s/he was notified under (b). In the event that it is determined that there shall be no investigation, the Vice-President, University Research must inform each individual to whom concerns and allegations were disclosed that there is no basis for an investigation.

14.4.5  If a full investigation is determined appropriate and the Responding Member was not notified of the allegation under 14.4.4(b) the Vice-President, University Research shall notify the Responding Member in writing of the nature of the allegation and that s/he is to retain all materials relevant to the allegation.

If the Responding Member admits the breach, the Vice-President, University Research may choose to forgo establishing an Investigation Committee and instead report the matter to the Dean in accordance with 14.4.7.

14.4.5 A statement from the University that a Member was guilty of misconduct in research constitutes discipline.

14.4.6 Any finding of misconduct in research shall be based only on clear, compelling, written and documented evidence.

14.4.6 The Vice-President, University Research shall establish a three-person Investigation Committee, comprised of two internal members and one external member who has no current affiliation with the University. Members of the Investigation Committee will be selected so that the Committee has appropriate expertise. Committee members shall not have had any prior connection with the particular matter nor have had a close professional or personal relationship with the Responding Member. No person consulted by the University concerning the case shall be appointed. Internal members of the
Investigation Committee normally shall be tenured associate professors or professors at the University in the Responding Member's discipline or a related discipline.

The Responding Member and his/her Dean shall each propose at least three possible internal Investigation Committee members and three possible external members in accordance with the above criteria and shall be given the opportunity to challenge in writing the names proposed by the other with respect to the criteria or for bias, apprehension of bias or perceived conflict of interest. The Vice-President, University Research will determine any challenge and will appoint members from the names proposed, normally including at least one member proposed by each, and shall name one of the members as the Investigating Committee Chair.

14.4.7 The Investigation Committee is to determine whether, on a balance of probabilities, the Responding Member committed an act of research misconduct. It shall conduct its proceedings in accordance with the principles of natural justice. It will review the allegation and any material submitted, may obtain additional material (and will provide any such material to the Responding Member), will give the complainant and the Responding Member an opportunity to appear before it to provide evidence, and may call witnesses to provide evidence.

Upon completion of the evidence gathering, the Committee will provide a report of the relevant facts to the Responding Party who will have 10 working days to submit a written response if s/he chooses to do so.

After the expiry of the 10 working days the Investigation Committee shall decide by majority vote on the basis of the evidence submitted to it whether misconduct occurred. Any finding of misconduct in research shall be based only on clear, compelling, written, and documented evidence.

The Chair of the Investigation Committee shall submit a report to the Vice-President, University Research and the Responding Member within 120 days of the date on which the allegation was received by the Vice-President, University Research. The report shall set out, at a minimum, the specific allegation(s), the Responding Member’s response, a summary of the finding(s) and reasons for the finding(s). If misconduct was found, the report may also comment on its extent and seriousness and include recommendations of the committee regarding rectification.

The report of the Investigation Committee will be maintained in a confidential and secure manner, with limited access, in the office of the Vice-President, University Research.

The decision of the Committee is final and binding on the Responding Member and the University unless successfully grieved under Article 9.

14.4.8 Within 5 working days of receipt of a report that misconduct was determined to have occurred, the Vice-President, University Research will provide a copy of the report to the Responding Member’s Dean who shall consider disciplinary action in accordance with Article 8.
Within 5 working days of completion of the disciplinary decision, the Dean shall advise the Vice-President, University Research of any disciplinary action taken.

14.5 Reporting

14.5.1 Subject to any applicable privacy laws, if an allegation involves significant financial, health and safety or other risks, the Vice-President, University Research will immediately notify the SRCR.

14.5.2 If an allegation concerns an activity about which the SRCR was notified, the Vice-President, University Research shall, within 2 months of receipt of the allegation, advise the SRCR whether or not an investigation is being undertaken.

14.5.3 If an investigation is undertaken in response to an allegation of policy breaches related to a funding application submitted to an Agency or to an activity funded by an Agency, within 7 months of completion of the investigation, the Vice-President, University Research shall submit to the SRCR a report including the following information:
   (a) The specific allegation(s), a summary of the finding(s) and reasons for the finding(s);
   (b) The process and timelines followed;
   (c) The researcher’s response to the allegation, investigation and findings and any measures the research has taken to rectify the breach;
   (d) The Investigation Committee’s decision and any recommendations for rectification; and
   (e) Actions taken by the University.

14.5.4 The report submitted under 14.5.3 shall not include:
   (a) information that is not related specifically to Agency funding and policies; or
   (b) personal information about the Responding Member or any other person that is not material to the University’s findings and its report to the SRCR.

14.5.5 Where the source of research funding is unclear, the SRCR has the right to request information and reports from the University and the University is required to comply.

14.5.6 Neither the University nor a Member may enter into confidentiality agreements that prevent the University from reporting to the Agencies.

14.5.7 If the University investigation or the arbitrator sustains an accusation of misconduct in research, and if that research is funded by an outside agency or has been published or submitted for publication, the President, Vice-President, University Research shall, before the decision or report becomes public, inform the agency or publisher concerned of the decision, as well as, the Association, and the complainant and respondent before the arbitration report becomes public. Responding Member of the outcome of the investigation. If the complainant has a legitimate interest in the outcome, the Vice-President, University Research will advise the complainant of the outcome of the investigation, subject to applicable laws, including privacy laws. In any event, if the outside agency or publisher has been informed of the proceedings before a judgment has been rendered, the President shall send a copy of the decision of the University to the agency or publisher concerned.
14.5.8 Through reports to Senate, the Vice-President, University Research will make public statistical annual reports on confirmed findings of breaches and actions taken, subject to applicable laws, including privacy laws.

14.6 General

14.6.1 The University shall take such steps as may be necessary and reasonable to:

(a) not make public or allow to be made public by its officers, employees or other persons within its control any statement suggesting that a Member is guilty of misconduct in research as well as refute publicly any statements so made, unless an arbitrator has upheld the University's right to impose discipline upon that Member, or any grievance process in connection with such discipline has been concluded;
(b) protect the reputation and credibility of Members wrongfully accused of misconduct in research, including written notification of the decision to all agencies, publishers, or individuals who were informed by the University of the investigation;
(c) protect the rights, position, and reputation of any Member who, in good faith, makes an allegation of research misconduct, or whom it calls as a witness in an investigation or arbitration hearing, including the provision of legal counsel and the payment of other reasonable legal and related costs should the Member be sued for her/his participation in any such investigation or arbitration proceedings,
(d) minimize disruption to the scholarly activities of the Member making the allegation and of any third party whose research may be affected by the securing of evidence relevant to the allegation during the course of the investigation, and
(e) ensure that any disruption in research, teaching and community service resulting from allegations of misconduct in research does not adversely affect future decisions concerning the careers of those referenced in (b), (c), and (d) above.

14.6.2 If the University decides after investigation not to take disciplinary action against the Member named in the allegations or if an arbitrator decides in her/his favour, the University shall remove and destroy all documentation concerning the allegations from the Member’s Official File, except for any arbitration report which is a public document.

14.6.3 No person consulted by the University concerning the case shall be appointed an arbitrator in any subsequent arbitration dealing with these allegations.

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MEMO

To: Board of Governors
cc: Ken McGillivray, Vice-President, Advancement

From: Erin Sargeant Greenwood, Associate Vice-President, Development

Date: October 7, 2013

Re: Gift Acceptance Policy

Please see proposed Gift Acceptance Policy attached for your information and discussion.

The Gift Acceptance Policy will serve the purpose previously met by the Provostial Statement on Donation Guidelines/Role of Advisory Bodies/Naming Principles & Procedures and by Policy 7: Approaches for Donations and Gifts-in-Kind. This document, upon approval, will replace the existing Policy 7 and the Provostial Statement will become defunct.

We look forward to questions and comments from Board members and will provide additional information about Gift Acceptance Policies at the upcoming meeting.
Gift Acceptance Policy

Established: [Insert Effective Date]
Revised: N/A (New)
Mandatory Review Date: [The second anniversary of the establishment date and every five years thereafter.]
Supersedes: Policy 7: Approaches for Donations and Gifts-in-Kind; Provostial Statement on Donation Guidelines/Role of Advisory Bodies/Naming Principles & Procedures

Class: G
Responsible/Originating Department: Advancement
Executive Contact: Vice-President, Advancement

Related Policies, Guidelines & Procedures:
1. Policy 8: Information Security
2. Policy 10: Naming Opportunities
3. Policy 69: Conflict of Interest
4. Procedure 1: Contracts and Agreements – Excluding Research
5. Procedure 25: Contracts and Agreements – Zero or Unspecified Dollar Amounts
6. Procedure 26: Contracts and Agreements – Zero or Unspecified Dollar Amounts, Template Approved by Secretariat
7. Procedures re: University Contracts
8. Naming Opportunities Guidelines
9. Gift Acceptance Guidelines
10. Information and Privacy Statement

1. Introduction
According to the University of Waterloo Act 1972, the objects of the University of Waterloo are the pursuit of learning through scholarship, teaching and research within a spirit of free enquiry and expression. The university welcomes gifts of a philanthropic nature made in accordance with this policy to help it achieve these objects.

2. Scope
This policy governs the solicitation by or on behalf of, donation to, receipt by and recognition of gifts (as defined in Appendix A) by the university, to the extent activities are not covered by Policy 10: Naming Opportunities and the Naming Opportunities Guidelines. This policy is intended to be read in conjunction with the Gift Acceptance Guidelines. Gifts made to Conrad Grebel University College, St. Jerome’s University, St. Paul’s University College, Renison University College and other charitable organizations with which the university has affiliations.
are made in accordance with the policies and procedures of those organizations and agreements for cooperation, if any, between such organizations and the university.

3. Purpose
The purpose of this policy is to guide members of the university community on matters of gift acceptance. This policy is intended to ensure the university can respond quickly and appropriately to all gift offers.

4. Principles Governing Gift Acceptance
- All gifts will be subject to review in accordance with this policy prior to acceptance and will be used expressly for the purpose(s) for which they are given.
- Acceptance of a gift will be conditional on compliance with university policy, procedures, guidelines, governance framework and applicable law, as well as consistency with the university’s objects, strategic plan, values and priorities.
- The university will not accept gifts that could reasonably compromise its public image, reputation or commitment to its objects, strategic plan, values and priorities.
- The university values and will protect its integrity and autonomy and the academic freedom of the members of the university community, and will not accept gifts when a condition of such acceptance would compromise these fundamental values.
- The university holds itself to the highest standards of ethical conduct in all of its external relationships and interactions, and reserves the right to decline a gift in any circumstance, including, but without limitation:
  - the gift terms contain unacceptable restrictions or conditions;
  - the gift will be unduly difficult or expensive to administer;
  - the gift exposes the university to legal risk or liability, including, but without limitation, risk or liability arising out of the contravention of applicable laws, such as the Human Rights Code (Ontario) or the Income Tax Act (Canada);
  - the gift is inconsistent with the university’s fundraising priorities, objects, strategic plan or values, including, but without limitation, protecting and fostering equity, diversity, academic freedom and academic integrity;
  - the gift is reasonably suspected to have come from illegal activities; or
  - the gift could improperly benefit any person.

5. Authority to Accept Gifts
The Board of Governors has delegated authority to the president to make decisions concerning the acceptance of gifts and he/she is accountable to the Board for such decisions. The president has the ultimate authority to make decisions to accept or reject gifts valued in excess of $2 million. The president may delegate his/her authority to accept or reject gifts valued at below $2 million to the vice-president, advancement.

6. Authority to Solicit, Negotiate and Receipt Gifts
The Office of Advancement has the primary authority to solicit, negotiate and receipt gifts on behalf of the university. It is also the responsibility of the Office of Advancement to ensure the highest standards of professionalism and ethics are followed in working with donors.

An individual outside of the Office of Advancement who wishes to engage in fundraising activity on behalf of the university must consult with the Office of Advancement and follow university policies, procedures and guidelines, including internal guidelines of the Office of Advancement, to ensure consistency, compliance and professionalism in all dealings with
donors. An individual who is approached by a potential donor should refer such donor to the Office of Advancement, or report the gift to the Office of Advancement and work with the Office of Advancement regarding the negotiation, documentation, acceptance and receipting of the gift.

If a gift accepted under this policy is intended to be documented in the form of a written agreement:

- the Office of Advancement must be engaged to assist with the writing and negotiation of the agreement;
- the agreement should follow the approved templates developed by the Office of Advancement in consultation with the Secretariat;
- if an approved template is not used or is altered, the gift agreement must be referred to the Secretariat for review or referral to external counsel;
- the agreement must be approved by the vice-president, advancement or his/her delegate;
- the agreement, or relevant aspects thereof, must be approved by the appropriate individuals or governing bodies, in accordance with university policies, procedures and guidelines;
- the agreement must be signed in accordance with the relevant signing procedure; and
- the agreement must also bear the signature of the most senior officer in the academic or academic support unit to which the gift is designated to the extent the relevant signing procedure does not already require that individual’s signature.

If a gift is determined by the Office of Advancement to be eligible for an official donation receipt in whole or in part, the Office of Advancement will issue such receipt on behalf of the university in compliance with the Income Tax Act (Canada), Canada Revenue Agency guidelines, and university policies, procedures and guidelines. No other individual is authorized to offer, promise or purport to issue an official donation receipt on behalf of the university.

7. Fundraising Priorities
Gift solicitation and acceptance is informed by and must advance the university’s objects, strategic plan, values and priorities as established by the University of Waterloo Act 1972 or set by the collegial processes that govern decision-making at the university. In the context of the foregoing, the president will set fundraising priorities for the university in consultation with the vice-presidents and deans, with input and recommendations by the vice-president, advancement.

8. Use of Professional Advisors by Donors
The university cannot and does not provide any legal, accounting, tax, financial or other advice to donors with respect to gifts to the university. The university cannot suggest or endorse a third party as a source of professional advice. Donors are encouraged to discuss proposed gifts with an independent professional advisor of the donor’s choice and at his/her own expense to ensure the donor receives a full and accurate explanation of all aspects of the proposed gift. Where the university deems necessary, donors will be requested to provide the university with an acknowledgement that:

- the donor has obtained or has waived his/her/its right to obtain independent professional advice; and
- the University is released from any liability that may arise in relation to the making of the gift.
Donors may also be required to obtain, at their own expense, professional valuations for certain types of gift, in particular, gifts-in-kind, deferred gifts and gifts of securities in private corporations. Further details regarding gift valuations can be found in the Gift Acceptance Guidelines.

9. Transparency
As a publicly-funded institution, the university is committed to principles of accountability and transparency and is subject to legislation governing access to information. Information regarding gifts to the university is public information, except to the extent its use or disclosure is restricted under Policy 8 or the Freedom of Information and Protection of Privacy Act (Ontario). Those fundraising on behalf of the university will inform potential donors of the foregoing when soliciting and negotiating gifts.

A list of all gifts of $250,000+ will be provided by the Office of Advancement to the Board of Governors and Senate annually.
Appendix A – Glossary

Cash – includes cash, cheque, credit card, payroll deduction and electronic fund transfer.

Deferred gifts – includes will bequests, life insurance policies, gift annuities and charitable remainder trusts.

Gift – has the meaning given to such term by the Canada Revenue Agency: a voluntary transfer of property without valuable consideration. In order to be characterized as a gift by the Canada Revenue Agency, a gift must satisfy the following conditions: (a) property is transferred by a donor to a registered charity; (b) the transfer is voluntary; and (c) the transfer is made without expectation of return. No benefit or advantage may be provided to the donor or to anyone designated by the donor, except where the benefit is of nominal value. Gifts may be in the form of cash, marketable securities, gifts-in-kind and deferred gifts.

Gifts-in-kind – a gift of property other than cash such as real (capital) property or personal property. A gift-in-kind should be an item that can be retained as a university asset and used in connection with university activities with discretion as to its use and management, or disposed of for cash equivalent.

Securities – refers to privately or publicly held shares, flow-through shares, bonds, units of a mutual fund, stock options and charitable stock options.
This report is submitted following the committee’s meeting of 1 August 2013. The chair may supplement this report with oral comments following the committee’s meeting on the morning of 29 October 2013.

FOR APPROVAL

Appointment of External Auditors: Ernst & Young

With the endorsement of the vice-president, administration & finance, and subject to a satisfactory audit plan and fee to be discussed at the meeting on 29 October 2013, the committee recommends the reappointment of Ernst & Young as the university’s external auditors for the fiscal year ending 30 April 2014.

FOR INFORMATION

Financial Statements, 2012-2013

The university’s financial statements for the year ended 30 April 2013, which were approved by the Board Executive Committee, are included with the meeting agenda package for your information.

Risk and Risk Mitigation

The committee has received several audit reviews and audit follow-up reports. On the basis of reviews of university management initiatives and approaches, the committee is satisfied that risk mitigation is being addressed.

David McKay
Chair
This report is submitted following the committee’s meeting of 7 October 2013.

FOR INFORMATION

1. **Campus Master Plan**
   The committee received a general review of the Campus Master Plan from Vice-President, Administration & Finance Dennis Huber. In particular, Huber focused on the relationship between the Master Plan and the university’s strategic plan, emphasizing the possibility of making the campus more pedestrian friendly as it evolves over the coming years.

2. **Hagey Hall – Courtyard Infill**
   The committee passed a motion to approve a project budget of $4.775 million to design and construct a 10,000 gross square foot infill addition to Hagey Hall. This is a project that emerges from the Faculty of Arts strategic plan, and allows the faculty to expand its student space without the necessity of constructing an additional building. The new facility will be constructed to occupy an existing courtyard, to be integrated into the existing Hagey Hall. The timeline for completion of this project is 18-24 months.

3. **Cell Tower Update**
   Huber provided an update to the committee on this project, confirming the nature of the technology to be deployed on the tower following the meeting. He indicated that Rogers operates HSPA+, LTE and legacy GSM wireless voice and data networks. The initial proposed installation at the university will consist of between six and nine cellular antennas, providing LTE and HSPA+ coverage and capacity, primarily to the campus and immediate area.

4. **General Oversight**
   The committee reviewed and accepted for information:
   - the capital financing commitments associated with capital projects and advises that these commitments fall within Waterloo’s board-approved debt policy
   - the status of capital projects

7 October 2013

Murray Gamble
Chair
FOR INFORMATION

1. General Oversight
The committee reviewed the performance of the registered pension plan, endowment fund, IQC trust fund, and payroll pension plan portfolios as at 30 June 2013. The registered pension fund was lagging its five-year performance target; the endowment fund’s performance was slightly behind the policy benchmark for the four-year period; IQC trust fund’s four-year performance was ahead of the policy benchmark and four-year minimum risk portfolio; and the payroll pension plan’s four-year performance was slightly behind the benchmark.

The committee also reviewed the audited pension fund financial statements as at 31 December 2012.

2. School of Accounting & Finance Student-run Investment Fund
The committee approved changes to the Statement of Investment Policies and Procedures for the School of Accounting & Finance Student-run Investment Fund as recommended by its Advisory Board in order to permit investment in U.S. equities.

/ew

Prem Watsa
Chair
FOR INFORMATION

1. **Reflection on Appointment/Reappointment of Governors/Governors to Board Committees**
   The committee discussed pending vacancies on both the board and board committees. The committee notes a particular challenge in empanelling the Audit Committee and the Finance & Investment Committee, and will use best efforts prior to the board meeting of April 2014 to come to appropriate recommendations.

   The committee will hold an *ad hoc* meeting on this question immediately prior to the 29 October 2013 board meeting.

2. **Skills Matrix**
   The secretary of the university is developing a new skills matrix to assist the committee in ensuring that the board best meets the needs of the university. The new skills matrix will be used by the secretary of the university following the April board meeting, and governors will be asked to complete the skills matrix individually so as to self-identify with particular skills.

3. **Orientation**
   Orientation sessions have been conducted by the secretary of the university for senators/internal governors (on general university governance), internal governors (with focus on board responsibilities), and external governors (sessions in Waterloo and Toronto). The committee will continue discussions with the secretary of the university to determine orientation options for 2014 and beyond.

4. **Board/Committee Assessments**
   It was confirmed by the secretary of the university that, in 2014, board assessment and committee assessments will be done through an online tool developed for each purpose in the Secretariat. The spring 2013 experience with the online board assessment worked very well, and the Secretariat will add committee assessment in the round to follow the April board meeting. This means that the paper-based assessment ordinarily done by committees in December will be abandoned.

7 October 2013

Kevin Lynch
Chair
This report is submitted following the committee’s meetings of 14 June 2013, 20 September 2013 and 11 October 2013.

FOR INFORMATION

1. General Oversight
The committee receives regular reports from the consulting actuary on legislative and policy changes anticipated and in force that impact public sector pensions, as well as changes implemented by other public sector pension plans. During the reporting period, this included discussion of new guidance to actuaries from the Canadian Institute of Actuaries re: interest rates for solvency and hypothetical wind-up valuations, and draft recommendations re: mortality tables. The committee discusses implications for the university’s pension plans and takes the information into account when making decisions on matters including plan design, funding and administration.

2. Solvency Funding Relief
On 10 June, the committee was informed that the University of Waterloo Pension Plan has been accepted for stage one solvency funding relief.

3. Indexation Protocol
At its 11 October meeting, the committee adopted a new protocol to assist with decisions re: topping up indexation for pensions in payment in the event that the plan returns to positive funded status, plus a margin (indexation was reduced in 2012 from 100% to 75% of the increase in CPI up to a maximum increase in CPI of 5%, in order to address the funding shortfall under the pension plan as well as the long-term sustainability of the plan). Principles behind the protocol include ensuring equity of treatment between cohorts of pensioners, and between pensioners and active members.

4. Registered Pension Plan Investments Subcommittee (“RPPI”)
A recommendation from RPPI was endorsed by the committee at its 20 September 2013 meeting and by the Finance & Investment Committee (“F+I”) at its 3 June 2013 meeting to approve a further investment of $30M in Sionna Investment Managers (Canadian equity fund) on behalf of the university’s registered pension plan (to be deployed in quarterly tranches of $5-10M per quarter, commencing in Q3 2013, subject to review and approval each quarter by the Registered Pension Plan Investments Subcommittee and confirmation with the chairs of the Pension & Benefits Committee and the Finance and Investment Committee).

Background: After a search conducted last year, the Board of Governors pre-approved two Canadian equity managers: Sionna Investment Managers (“Sionna”) and Burgundy Asset Management for future investments. In May 2012, RPPI recommended and the committee and F+I approved a $20 million investment in Sionna. RPPI recommended a second laddered investment into Sionna of $20 million to be made in two tranches on October 2012, which has now been completed. RPPI recommended a further investment of $30 million in Sionna for the following reasons:

• Sionna’s positive performance since the initial investment in May 2012;
• Sionna’s historical positive performance for the university’s endowment fund;
• Sionna’s relatively conservative approach, evidenced by their significant underweight in materials;
• Concern re: the low proportion of assets invested in Canadian equities, in absolute terms (approximately 4% of total assets) and relative to other Canadian university pension funds (on average 19%); and
• Concern re: the large proportion of the Plan’s assets being held in cash.

At its 11 October meeting, the committee received an overview of the total fund from RPPI, as well as a report on RPPI’s meetings with the fund’s domestic investment managers.

Bill Watson, Chair