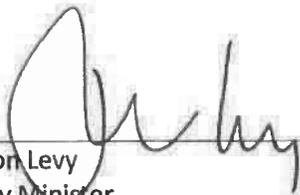


STRATEGIC MANDATE AGREEMENT

University of Waterloo
Ministry of Advanced Education and Skills Development
2017-20

SIGNED for and on behalf of the Ministry of
Advanced Education and Skills Development
by:



Sheldon Levy
Deputy Minister

Date

SIGNED for and on behalf of University of Waterloo
by:



(Feridun Hamdullahpur)
President

Oct. 4, 2017

Date



Table of Contents

Section 1: Introduction

Preamble

Institutional Vision, Mission, Mandate

Aspirations

Section 2: Shared Objectives and Priorities for Differentiation

1.0 Student Experience

2.0 Innovation in Teaching and Learning Excellence

3.0 Access and Equity

4.0 Applied Research and Excellence Impact

5.0 Innovation, Economic Development and Community Engagement

Section 3: Strategy, Sustainability and Partnerships

6.0 Enrolment Strategy & Program Direction

- International Strategy
- Strategic Areas of Program Strength and Expansion
- Financial Sustainability

7.0 Institutional Collaborations and Partnerships

Section 4: Ministry Commitments

Preamble

This Strategic Mandate Agreement between the Ministry of Advanced Education and Skills Development and University of Waterloo outlines the role the University currently performs in Ontario's postsecondary education system and how it will build on its current strengths to achieve its vision and help drive system-wide objectives and government priorities.

The Strategic Mandate Agreement (SMA):

- Identifies and explains the shared objectives and priorities between the Ontario government and the University;
- Outlines current and future areas of program strength;
- Supports the current vision, mission, and mandate of the University and established areas of strength within the context of the University's governing legislation;
- Describes the agreed-upon elements of the new university funding model, including:
 - a University's enrolment plans as well as their projections of their enrolments relative to their corridor midpoint and any desired changes to their corridor during the period of this SMA; and
 - differentiation areas of focus including metrics and targets.
- Provides information on the financial sustainability of the institution; and
- Informs Ministry decision-making and enables the Ministry to align its policies and processes to further support the University's areas of strength.

The term of the SMA is from April 1, 2017 to March 31, 2020.

The agreement may be amended in the event of substantive policy or program changes that would significantly affect joint commitments made in the SMA (e.g. Major Capacity Expansion, Highly Skilled Workforce, etc.). Any such amendment would be mutually agreed to in writing, dated, and signed by both signatories.

Ontario's Vision for Postsecondary Education

Ontario's colleges and universities will drive creativity, innovation, knowledge, skills development and community engagement through teaching and learning, research, and service.

Ontario's colleges and universities will put students first by providing the best possible learning experience for all qualified learners in an affordable and financially sustainable way, ensuring high quality and globally competitive outcomes for students and Ontario's economy.

University of Waterloo Vision, Mission and Mandate

Vision

The University of Waterloo's vision is charted in the *University of Waterloo Act*: "The objects of the University are the pursuit of learning through scholarship, teaching and research within a spirit of free enquiry and expression." Waterloo embraces and imbues innovation — from teaching to research and relationship-building — all with a goal to create a league of learners who will lead, support and implement innovations to advance all areas of the human condition and address the challenges of our time.

Mission

The University of Waterloo's foundational strengths will propel our institution towards a single goal: to be recognized as one of the top innovation universities in the world. Waterloo will do this by focusing energy and allocating resources into areas that set this institution apart. Waterloo will transform education and economies through experiential learning, build its reputation as a uniquely entrepreneurial university and change lives and advance industries through high-impact, highly relevant research. This dynamic future will be built on Waterloo's solid foundation, including excellent academic programming, global impact, and vibrant student experience. To reach this goal, Waterloo must choose to focus energy and allocate resources into the areas that set it apart, ensure the best experience for students, and serve as a model for the future of higher education.

Aspirations

The Ministry recognizes the importance of supporting institutions to evolve and acknowledges the strategic aspirations of its postsecondary education institutions. The SMA is not intended to capture all decisions and issues in the postsecondary education system, as many will be addressed through the Ministry's policies and standard processes. The Ministry will not be approving any requests for capital funding or new program approvals, for example, through the SMA process.

Institutional Aspirations

In an ever-changing, dynamic world, where the pace of emerging challenges often outstrips available answers, conventional approaches to higher education, innovation and discovery are no longer enough.

Answering the world's call requires a bold and unconventional approach — one that combines deep knowledge, extraordinary research, broad-based experience, an entrepreneurial spirit and academic excellence. It requires interdisciplinary approaches and a forward-looking focus on advancing knowledge and meeting society's needs.

As Ontario understands the importance and value of talent and knowledge in securing the future of our province and explores new ways to drive creativity, innovation, knowledge and community engagement through differentiation in higher education, the University of Waterloo stands ready to lead the way, drawing on its established excellence in experiential and entrepreneurial approaches to education and research and deep-rooted connections to industry and society.

Waterloo is proud to have been recognized as Canada's most innovative university for 25 years and counting¹. It is a distinction Waterloo has earned by looking at problems in a different way, by blazing new trails and continuing to redefine 21st century university education as a fundamental and transformational kind of learning.

As home to the world's largest postsecondary co-operative education program of its kind², the University of Waterloo differentiates itself from its peers in Ontario and across North America in preparing generations of highly qualified, skilled graduates ready to lead the workforce and act as agents of change, fueling innovation, prosperity and job creation here and around the globe.

Waterloo has the experience, the intellectual resources and the proven track record of building success to help lead the development of a new higher education model for this province and the world. The University of Waterloo will continue to enhance its contributions in partnership with the Province of Ontario, building a modern intelligence-age economy and training the leaders of tomorrow's workforce.

¹ Maclean's National University Reputational Ranking, <http://www.macleans.ca/education/unirankings/best-20-universities-in-canada-by-reputation-2017-ranking-full-results/>

² Canadian Association for Co-operative Education (CAFCE), <http://www.cafce.ca/coop-defined.html>, and the World Association for Co-operative Education (WACE), <http://www.waceinc.org/>

Shared Objectives and Priorities for Differentiation

1.0 Student Experience

This section captures institutional strengths in improving student experience, outcomes and success. This section recognizes institutions for measuring the broader learning environment, such as continuity of learning pathways; retention; student satisfaction; co-curricular activities and records; career preparedness; and student services and supports.

Institutional Approach to Improving Student Experience

Waterloo attracts and retains bright and motivated students, from near and far, offering them the opportunity to become something more. Students are inspired in an environment of imagination, innovation and interdisciplinary endeavours. The confluence of remarkable classroom, campus and community experiences at Waterloo transforms excellent students into extraordinary alumni uniquely equipped to contribute to society and lead change. Waterloo is proud to be a global university, where top students from Ontario, Canada and around the world come together to share and expand their knowledge and perspectives with other students, faculty, staff and partners.

Examples of Institutional Initiatives

Waterloo is committed to continuing to enhance and enrich the student experience with a student-focused approach to services. Waterloo is expanding the range of experiences, programs and supports for students, including student leadership development opportunities that foster student success, develop potential and build a stronger sense of community connection for students, both on and off campus.

The University of Waterloo strives to deliver excellent student services through an integrated student-focused approach. The ways in which students engage with campus groups, and the quality of that interaction, is one indication of the quality and integration of services provided to Waterloo students. Waterloo actively enables and supports students' use of technology in every part of their living and learning experiences. Having a campus that uses responsive and current technology, tools, and web-based environments to which students can relate is important. Providing meaningful interactions at all levels (with faculty, with staff, with other students) is necessary for a strong sense of connection to Waterloo.

Waterloo continues to champion a vibrant student experience that includes classroom, campus and community experience and builds a life-long connection. Becoming involved in student life offers an opportunity for students to develop their potential outside of classroom experiences. Understanding the nature of students' involvement in extra-curricular activities can help Waterloo develop services and spaces to better suit their needs. Waterloo recently completed the Arts Student Space Project, a student hub providing new study, social and project spaces for Waterloo Arts students. Construction will soon begin on the expansion to the Student Life Centre and the Physical Activities Centre — a 63,970-square-foot addition — and a Field House, which will focus on the creation of additional student space to help facilitate a greater sense of community and improving the Waterloo student experience. Waterloo has also begun a phased-in renovation and revitalization of its existing classrooms.

Academic Advisors play a critical role in the student experience at the University of Waterloo and over the past two years the work done with the Community of Advisors has been successful in supporting staff and faculty in an advising role. Monthly Coffee Chats and an annual conference provide faculty and staff serving as Academic Advisors with an opportunity for professional development, a chance to participate in a dialogue about best practices within the field of advising and to learn about the different services and resources available on campus.

The Student Service Transformation Project is working to centralize student service provision on the main campus. This phased project will begin with connecting the Graduate Studies Office, the Student Success Office and the Registrar's Office into one front-end service that will streamline the in-person and online interactions with students. This project will enhance the physical space within Needles Hall to be more student friendly and accessible, as well as improving online forms, systems and experiences for students.

Through strong partnerships within and between academic and non-academic units, Waterloo works steadily to enhance the positive student experience and build a community of communities by providing an environment where students, faculty and staff can connect. Waterloo also aspires to deepen the connections between students and the communities its campuses call home.

Providing a more satisfying experience for students involves every aspect of Waterloo's community. To understand Waterloo's progress and impact around this vital theme of its Strategic Plan, campus leaders have identified key indicators and measures that will track progress and impact on the student experience.

Metrics and Targets

System-Wide Metrics	2019-20 Target
Proportion of fourth year students with two or more High-Impact Practices (HIPs) (from the National Survey of Student Engagement)	At or above 50%
Year 1 to Year 2 retention (from the Consortium for Student Retention Data Exchange)	At or above 90%
Proportion of operating expenditures on student services, net of student assistance (as reported in the Council of University Finance Officers data)	At or above 3%

Institutional Metrics	2019-20 Target
Proportion of operating expenditures on student scholarships and bursaries	At or above 12%
Number of student international experiences	At or above 1,000
Percentage of graduate students who would recommend Waterloo (Canadian Graduate and Professional Student Survey)	At or above 70%

2.0 Innovation in Teaching and Learning Excellence

This section focuses on innovative efforts including pedagogical approaches, program delivery and student services that contribute to a highly skilled workforce and ensure positive student outcomes.

This section captures institutional strengths in delivering high-quality learning experiences, such as experiential, entrepreneurial, personalized and digital learning, to prepare students for rewarding careers. It includes recognition of student competencies that improve employability.

It begins to identify indicators of quality that are currently available and within an institution's control.

Institutional Approach to Innovation in Teaching and Learning Excellence

Waterloo's commitment to excellence in teaching and learning has been core to the institution since its beginning. Waterloo pioneered experiential education with the adoption of co-operative education in 1957 and continues to innovate and transform learning. In 1976, Waterloo was one of the first universities in Canada to develop a unit devoted to teaching development for the professoriate³ and this early commitment to teaching

³ University of Waterloo Centre for Teaching Excellence, <https://uwaterloo.ca/centre-for-teaching-excellence/about-cte>

and learning excellence continues today. Waterloo provides supports for student learning using a multitude of approaches, including its encouragement of international experiences through the Global Experience Certificate, innovation in online and technology-enabled learning, engaging undergraduate students in research experiences early in their studies and energizing entrepreneurial-minded undergraduate students with mentorship throughout their career.

As home to the world's largest postsecondary co-operative education program of its kind⁴, Waterloo fully understands how experience transforms learning. In 2015-16, Waterloo had 20,000 students enrolled in more than 120 accredited co-operative education programs⁵, accessing a worldwide network of more than 6,700 co-op employers⁶. Together, these co-op students earned more than \$225.9 million in 2015-16⁷ and gained real-world employment skills.

From enterprise co-op terms, where students gain valuable experience building their own businesses, to clinical internships, research work terms, community service and employment experiences at home and abroad, Waterloo continues to reshape the learning landscape.

The benefit to society is extensive and far-reaching; students graduate workplace-ready, with up to two years of real and relevant workplace experience, along with a solid understanding of how organizations work and what it takes to become a valued employee⁸. Compared to the provincial average, Waterloo co-op graduates are more likely than other university graduates to be employed six months and two years after graduation⁹. They earn more than their university-educated peers and are much more likely to be hired in positions related to their field of study¹⁰.

Simply put, experiential education allows students to link their academic goals with their career goals. This is accomplished through hands-on learning experiences that link theoretical knowledge and practical experiences, enabling students to acquire and demonstrate personal transferrable skills. At Waterloo, experiential education opportunities are defined as:

- Connected to the curriculum,
- Associated with clearly articulated learning outcomes, and

⁴ Canadian Association for Co-operative Education (CAFCE), <http://www.cafce.ca/coop-defined.html>, and the World Association for Co-operative Education (WACE), <http://www.waceinc.org/>

⁵ University of Waterloo 2015/16 SMA report back, section 2d, https://uwaterloo.ca/institutional-analysis-planning/sites/ca.institutional-analysis-planning/files/uploads/files/sma_report_finalsubmitted_30nov2016.pdf

⁶ University of Waterloo Co-operative Education and Career Action, <https://uwaterloo.ca/co-operative-education/about-co-operative-education>

⁷ University of Waterloo Co-operative Education and Career Action, <https://uwaterloo.ca/co-operative-education/why-co-op>

⁸ University of Waterloo Co-operative Education and Career Action, <https://uwaterloo.ca/co-operative-education/why-co-op>

⁹ As measured by the Ontario University Graduate Survey and reported in the Ontario University Key Performance Indicators administered by the Ministry of Advanced Education and Skills Development, <http://www.iaccess.gov.on.ca/OsapRatesWeb/enterapp/home.xhtml>

¹⁰ As measured by the Ontario University Graduate Survey and reported in the Ontario University Key Performance Indicators administered by the Ministry of Advanced Education and Skills Development, <http://www.iaccess.gov.on.ca/OsapRatesWeb/enterapp/home.xhtml>

- Supervised and evaluated/assessed.

As noted in the report of the Premier’s Highly Skilled Workforce report, “a fast changing economy means constantly evolving options for jobs and careers. Students, new immigrants, and adults transitioning into the workforce need a greater awareness and a real understanding of all of the career opportunities, traditional and non-traditional, that are available to them, including the steps to get there.” Waterloo will build on the success of its world-renowned co-op program through Co-op 2.0, the introduction of the EDGE certificate for non-co-op students and through expansion of co-op opportunities for graduate students at Waterloo.

Examples of Institutional Initiatives

Co-op 2.0

Students, industry partners and staff are all committed to finding new ways to leverage the power of co-op in the workplace. The Co-op 2.0 project will create a framework to support the continuous evolution of co-operative education, including flexible work terms, co-op certificates, greater support for first work term success and enhanced industry partnerships. Flexible work terms allow students to satisfy their co-op work term requirements in non-traditional ways, such as through humanitarian work (typically work terms must be paid) or through working for more than one employer in a single work term. The addition of co-op certificates recognizes students who choose to focus their work terms in a specific direction (e.g., on research and discovery), with academic courses to help support that choice. In exploring new directions for co-operative education, Waterloo continues to innovate and revolutionize the role of work-integrated learning in postsecondary education.

EDGE Certificate

Building on its success in co-operative education, the University of Waterloo has created a new EDGE certificate program that will provide non-co-op students with opportunities to engage in formalized experiential education. Once fully established at Waterloo, this program has the potential to be expanded to include students at universities across the province.

In order to complete the EDGE certificate, students complete four main components, which include:

- A skills identification and articulation workshop,
- A career development course,
- Three work/community experiences paired with professional development courses, and
- A final capstone workshop.

The skills identification and articulation workshop helps students identify the skills they are developing and refining through their normal program of academic study and it gives them the tools they need to communicate those skills to potential employers with confidence.

Next, students complete a career development course that helps them to build the skills needed to seek out and obtain employment. Students learn to prepare résumés and cover letters, develop effective interviewing skills, and explore networking and on-the-job success strategies. The career development course also exposes

students to the spectrum of career options related to their degree and introduces them to the notion of multiple pathways for career success.

Students also complete three experiential education opportunities to fulfill EDGE's work/community experiences component. Waterloo recognizes that valuable experiential education can occur in a variety of contexts. EDGE students are given the flexibility to count a wide range of opportunities towards the certificate, ranging from part-time work and volunteer opportunities to on-campus experiences. EDGE provides curricular supports to students while they are engaged in these opportunities to help them make connections between the skills they are developing in the workplace and their future employability. Waterloo has already identified over 50 on-campus undergraduate courses with work/community experience components that have been pre-approved as EDGE-eligible experiences. Alternatively, students can pair a professional development course, which focuses on the development of soft skills, with a work or community opportunity. In all contexts, students explore their interests, develop their professional skills and gain valuable experience by learning in the field and engaging with community and industry partners. Students also receive a performance evaluation from their supervisor and prepare a reflection on their experience, enriching their own personal growth.

The final EDGE component students complete is a capstone workshop. Whether they are heading to graduate school, directly into industry, or seeking further guidance on next steps, students completing the capstone workshop connect with career experts to develop a post-graduation plan for success.

Graduate Co-op

Although Waterloo's co-op program has historically focused primarily on undergraduate students, experiential learning is also occurring and expanding at the graduate level. There has been a large increase in the number of professional or course-based Masters programs at Waterloo, the goals of which are to develop and enhance applied skill sets in targeted fields. Many of these programs require or encourage professional internships, which complement the in-class learning experience. Waterloo has plans to make co-op a more formal option within selected graduate programs where formal co-op terms, specifically geared toward graduate-level students, could further enhance the graduate student experience at Waterloo.

Additionally, Waterloo will identify opportunities for research students (at the Masters and PhD levels) to engage in scholarly exploration in partnership with Waterloo and external organizations. These may include: novel practices, organizational structures, methods, policies and materials that produce innovative changes to existing practices; new and emerging areas and sectors; operationalizing entrepreneurial activities with the graduate student community; thematic research to advance best practices; and leveraging advantages of multidisciplinary perspectives on research themes.

The external partnerships facilitated by Grad Co-op are expected to produce innovative funding opportunities as well as impactful research dissemination venues.

Metrics and Targets

System-Wide Metrics	2019-20 Target
Composite score on National Survey of Student Engagement questions related to students' perceived gains in higher order learning outcomes	At or above 30
Proportion of programs with explicit curriculum maps and articulation of learning outcomes	At or above 50%
Graduation rate (from the Consortium for Student Retention Data Exchange)	At or above 75%

Institutional Metrics	2019-20 Target
Percentage of undergraduate students enrolled in co-op programs	At or above 62%
Total annual earnings by co-op students	At or above \$200 million
Percentage of students rated between very good and outstanding in work term performance	At or above 90%

3.0 Access and Equity

This section recognizes institutions for their efforts in improving postsecondary education equity and access. Institutions play an important role in providing equitable and inclusive environments that make it possible for students from diverse communities to thrive and succeed.

Institutions will also be recognized for creating equitable access opportunities that can include multiple entrance pathways and flexible policies and programming, with the focus on students who, without interventions and support, would not otherwise participate in postsecondary education. Examples include outreach to marginalized youth, transition, bridging and access programs for adults with atypical education histories and who do not meet admission requirements.

Institutional Approach to Improving Access and Equity

The University of Waterloo remains committed to providing access and opportunities to all students, particularly to students from diverse and historically under-represented populations. Waterloo strives to ensure equitable student access through such initiatives as expanding and improving online and technology-enabled learning

opportunities, implementing programs that encourage women to pursue and succeed in the science, technology, engineering and math (STEM) disciplines, offering support and engagement opportunities for Indigenous students, facilitating English-language support programs for students whose first language is not English and providing scholarships, bursaries and paid co-op opportunities to help make a university education more financially accessible to all students.

Examples of Institutional Initiatives

Online/Technology-Enabled Learning

The University of Waterloo recognizes that deep, lasting and comprehensive learning comes from more than textbooks and blackboards. As an institution that has long been a leader in computer science and technology, Waterloo is building on this expertise to make postsecondary education more effective and more accessible to students, staff and faculty, as well as to learners across Ontario and beyond.

Waterloo is a leading provider of technology-enabled learning opportunities, expanding its footprint in online learning and providing leading-edge technology-enabled courses and modules.

Waterloo's track record for developing and implementing technology-enabled programs speaks for itself. A Canadian pioneer in distance education, Waterloo launched its correspondence program in 1968 as an entrepreneurial reaction to new teacher certification requirements. Since this early time in Waterloo's history, Waterloo has made continuous progress toward its goal of providing access to top-quality courses and programs to students across the province and around the globe.

Today, as home to one of the province's largest online learning programs, Waterloo offers more than 530 online courses, six fully online Bachelor degree programs and 13 online graduate programs, with several more in development¹¹. Furthermore, Waterloo's Centre for Extended Learning offers pre-university courses, professional development opportunities and online certificate programs, thus providing a diverse array of learning opportunities to students who would otherwise have limited access to the more traditional pathway in postsecondary learning. A total of 499 online courses and 39 online programs have been made available through Waterloo's Centre for Extended Learning to students across Ontario through eCampusOntario¹², with more in development.

The use of new technologies for program delivery offers an enormous opportunity to reach a wide variety of learners both across Canada and around the world and to deliver programs to graduates and professionals where they live and work. At Waterloo, technology-enabled learning extends from students in the first year of their degree to alumni and others pursuing continuous professional learning throughout their careers. For many

¹¹ As reported in the University of Waterloo's Strategic Mandate Agreement report back, section 2e, https://uwaterloo.ca/institutional-analysis-planning/sites/ca.institutional-analysis-planning/files/uploads/files/sma_report_finalsubmitted_30nov2016.pdf

¹² eCampusOntario, <https://www.ecampusontario.ca/Online-Colleges-Universities/426/university-of-waterloo>

learners, it erases geographical challenges, lessens financial burdens and provides access to students who may require the flexibility of a more non-traditional approach to postsecondary education.

The University of Waterloo has also shared its online expertise and leadership in the establishment and expansion of eCampusOntario, with the shared goals of collaboratively advancing online and technology-enabled learning, including exploring new and emerging technologies to enhance learning within Ontario institutions.

Technology-enabled learning lends itself to a wide range of multi-institution collaborations. Waterloo has undertaken a number of new initiatives on its own and in collaboration with partner institutions to embrace technology-enabled learning. The following examples highlight a few of Waterloo's initiatives:

- Waterloo, together with Carleton University and the University of Ottawa, partnered to enhance the already successful eTextbook, Open Data Structures by adding approximately 80 interactive and accessible videos and online exercises. Each interactive module is self-contained, so that it can be used as a resource by instructors working from any textbook.
- Waterloo is developing an evaluation model for assessing the institutional impact of credit online courses and programs and will be sharing the model and methodology with other institutions across the province.
- Waterloo's Foundations for Academic Success project aspires to improve student engagement with academic material by exploring mobile learning to better resonate with the current student population. The objective is to develop strategies for enhancing student academic integrity, knowledge and understanding by employing open access mobile technology with an innovative pedagogical approach.

Indigenous Student Access and Support

Building on the existing programs and services that engage Indigenous youth in the university environment, St. Paul's University College is piloting the Entrepreneurship for Sustainable Indigenous Community program. The program will teach 60 to 75 selected Indigenous high school learners a combination of entrepreneurial design thinking and problem-solving skills required to begin to tackle significant problems, with a view to creating a business or self-funding service concept. In addition, Waterloo has established a Provost's Advisory Committee on an Indigenization strategy, in response to the Truth and Reconciliation Call to Action.

HeForShe

HeForShe is a global effort to engage men and boys in removing the social and cultural barriers that prevent women and girls from achieving their potential and together positively reshaping society. UN Women, the United Nations entity for gender equality and the empowerment of women, created the initiative, which was launched in September 2014.

As part of this initiative, the UN HeForShe initiative launched the IMPACT 10x10x10 framework, which involves 10 heads of state, 10 CEOs, and 10 university presidents to advance gender equity. Waterloo is currently the only Canadian organization involved in the IMPACT 10x10x10 framework¹³. Waterloo has been invited to help lead HeForShe because of its commitment to gender equity. Specific commitments include: boosting female

¹³ United Nations HeForShe initiative, <http://www.heforshe.org/en/impact>

student participation in STEM experiences and academic careers; building the pipeline of future female leaders in traditionally male-dominated disciplines; enhancing female faculty representation to improve the campus environment today and drive towards parity in the future; and attracting and advancing female leaders into senior academic and administrative university positions.

Many of the jobs for future generations will require a background in STEM. Yet, current projections indicate there will not be enough qualified professionals to fill these positions.¹⁴

People with knowledge and understanding of STEM will shape our future, and Waterloo recognizes the importance of striving for a more representative and diverse talent pool in the STEM disciplines. Waterloo actively encourages young women and other underrepresented groups to get involved in STEM fields. It offers exciting programming to attract young women into STEM disciplines and offers support to ensure their success during their studies. Some examples of these successful programs at Waterloo include: four-year scholarships, Go ENG Girl, Go Code Girl, IMPACT girls summer camp, Engineering Science Quest, Catalyst Women’s Conference, and BigCSters computer science group, among others.

English Language Supports

The University of Waterloo offers support to new Canadians and international students through an International student experience team, an international peer community, and more formal English-language programs that aim to address English language barriers that would otherwise impede access and academic success for students from different language backgrounds.

Student Financial Support

Waterloo is dedicated to providing its students with the financial support they need. In Canada, Waterloo is the top university for the percentage of its operating expenditures dedicated to student scholarships and bursaries¹⁵. Additionally, as a leader in co-op education, Waterloo’s Centre for Career Action provides support and resources for students to secure paid co-op placements, summer jobs, and/or part-time work that all help to ease the financial burden of paying for postsecondary education.

Metrics and Targets

System-Wide Metrics	2019-20 Expected Value¹⁶
<i>Number and proportion of the following groups at an institution:</i>	
Indigenous students	109; 0.4%

¹⁴ Smithsonian Science Education Center, <https://ssec.si.edu/stem-imperative>

¹⁵ As reported in the 2017 Maclean’s University Rankings, print edition, page 98

¹⁶ Due to the difficulty in estimating these demographic values, Waterloo is reporting our average over the previous three years.

First generation students	3,500; 13%
Students with disabilities	2,100; 8%
Francophone students	230; 0.4%
Share of OSAP recipients at an institution relative to its total number of eligible students	69%
Number of transfer applicants and registrations, as captured by the Ontario University Application Centre	430; 40

Institutional Metrics	2019-20 Target
Percentage of undergraduate courses offered in more than one term, or in more than one mode	At or above 27%
Average Ontario Student Assistance Program (OSAP) debt of graduating Waterloo students	At or below \$30,000
Female participation in undergraduate Engineering and Mathematics programs	At or above 20%

4.0 Research Excellence and Impact

This section captures institutional strengths in producing high-quality research on the continuum of fundamental and applied research through activity that further raises Ontario's profile as a globally recognized research and innovation hub. It also acknowledges that research capacity is strongly linked with graduate education.

Institutional Approach to Research Excellence and Impact

The University of Waterloo is a research-intensive university. Home to more than 35 Senate-approved research centres and institutes¹⁷ and 103 funded research chairs¹⁸, Waterloo is engaged in research across a wide range of disciplines.

As one of the top 10 postsecondary institutes in the world for water research¹⁹, a trailblazer in quantum research²⁰, the home of Canada's largest Engineering²¹ and Mathematics²² Faculties and a recognized global

¹⁷ University of Waterloo Office of Research, <https://uwaterloo.ca/research/research-excellence/senate-approved-centres-and-institutes>

¹⁸ University of Waterloo Strategic Plan, <https://uwaterloo.ca/strategic-plan/in-action/transformational-research?tab=all&tableau=0#tabs-nav>

¹⁹ Lux Research Inc., Top Academics and Institutions in Water Research 2013. (as cited in https://uwaterloo.ca/water-institute/sites/ca.water-institute/files/uploads/files/c011856_water_institute_annual_report_lowres_accessible.pdf)

leader for computer science²³, Waterloo's research strength runs deep. For nine consecutive years, Research Infosource has ranked Waterloo as Canada's top comprehensive research university, with \$180.9 million in total sponsored research in 2014-2015²⁴.

The Quacquarelli Symonds (QS) ranking lists Waterloo's computer science and mathematics programs among the top 50 in the world²⁵. Waterloo's engineering program ranks among the top 75 in the world, according to the Academic Ranking of World Universities (ARWU/Shanghai)²⁶. Waterloo consistently ranks among the top Canadian institutions in all major international rankings — one of the few to do so without a major medical school²⁷.

Experience shows that learning is enhanced when it is offered within a research-intensive environment. Waterloo continues to ensure that strong researchers have the tools they need to be talented teachers. Waterloo researchers redefine what is known about the world, shedding new light on existing problems and expanding our understanding of the universe. From fundamental discovery to validation and implementation, Waterloo continues to deliver high-impact, transformational research.

Examples of Institutional Initiatives

Waterloo is home to nationally and internationally recognized researchers — including 52 Canada Research Chairs. Waterloo's reputation for excellence has also helped the Faculty of Science attract two leading international researchers through the Canada Excellence Research Chairs program in water and in quantum science research²⁸. Waterloo also received over \$91 million through two Canada First Research Excellence Fund (CFREF) proposals, one in transformative quantum technologies, and another in water research.

Students come to Waterloo to learn how to lead in a distinctive university culture that encourages risk-taking, discovery, real-world experience and drive. Innovative new research programs developed through extensive partnerships and collaborations offer undergraduate and graduate students research experience with a diverse range of industry, academic and government organizations.

Waterloo is also expanding research opportunities for undergraduate and graduate students, including through research-focused work-terms. Waterloo will align current and future resources to support areas of research where there is the greatest potential for world leadership, including, but not limited to, quantum science, water,

²⁰ University of Waterloo Institute for Quantum Computing, <https://uwaterloo.ca/institute-for-quantum-computing/about>

²¹ University of Waterloo Faculty of Engineering, <https://uwaterloo.ca/engineering/>

²² University of Waterloo Faculty of Mathematics, <https://uwaterloo.ca/news/news/waterloos-faculty-mathematics-launches-anniversary>

²³ University of Waterloo School of Computer Science, <https://uwaterloo.ca/stories/waterloo-ranked-1-school-canada-computer-science-engineering>

²⁴ Research Infosource, https://www.researchinfosource.com/top50_univ.php

²⁵ Quacquarelli Symonds (QS), <https://www.topuniversities.com/university-rankings/university-subject-rankings/2017/mathematics>

²⁶ Academic Ranking of World Universities (ARWU/Shanghai), <http://www.shanghairanking.com/World-University-Rankings/University-of-Waterloo.html>

²⁷ University of Waterloo Strategic Plan, <https://uwaterloo.ca/strategic-plan/in-action/global-prominence-and-internationalization?tab=all&tableau=8#tabs-nav>

²⁸ Government of Canada, Canada Excellence Research Chairs, <http://www.cerc.gc.ca/home-accueil-eng.aspx>

and aging. Waterloo will continue to support transformational research across all six of its Faculties — Arts, Applied Health Sciences, Engineering, Environment, Mathematics, and Science — as well as through its many dedicated research institutes.

Waterloo will more closely link research with experiential learning and entrepreneurship through integrated opportunities, including research work terms, research into entrepreneurship and continued partnerships with industry. These initiatives will see students work hand-in-hand with industry, business, government, non-governmental agencies and academics to integrate discovery into new processes, policies, products and opportunities for exploration. Brought back into the classroom, this experiential learning benefits both faculty and fellow students.

Waterloo is also pursuing a new model of research collaboration that will help to close the gap between on-campus research and discovery potential and external innovation needs. By creating a focal point for new and expanded engagement of researchers, students and startups with community and industry partners, the intention is to accelerate knowledge mobilization and commercialization while tackling some of the world’s biggest challenges within a new interdisciplinary approach to engagement.

Metrics and Targets

System-Wide Metrics	2019-20 Target
Tri-council funding (total and share by council)	SSHRC – At or above \$5M CIHR – At or above \$5M NSERC – At or above \$5M Overall share – At or above 7.5%
Number of papers (total and per full-time faculty)	Maintain performance
Number of citations (total and per paper)	Maintain performance

Institutional Metrics	2019-20 Target
Proportion of publications with international co-authors	At or above 30%
Industry-leveraged funding dollars	At or above \$40 million

5.0 Innovation, Economic Development and Community Engagement

This section recognizes the unique role institutions play in contributing to their communities and to economic development, as well as to building dynamic partnerships with business, industry, community members and other colleges and universities. It focuses on regional clusters, customized training, entrepreneurial activities, jobs, community revitalization efforts, international collaborations, students, partnerships with Aboriginal Institutes and a program mix that meets needs locally, regionally and beyond.

Institutional Approach to Innovation, Economic Development and Community Engagement

The University of Waterloo is more than a leading institution for innovation and learning. It is proud to contribute to the success of the community and has a rich history of giving back to make the community a better place. In doing so, Waterloo:

- Leads signature events and programs that strengthen relationships between Waterloo and the community
- Partners with public officials and community leaders to identify and resolve issues of concern to the community
- Develops collaborative relationships to advance Waterloo's mission and strategic plan
- Promotes Waterloo as a resource to the community

The University of Waterloo enables entrepreneurial approaches in teaching, learning and scholarship — educating, inspiring and employing people who lead change. As a driving force behind Canada's innovation agenda, Waterloo will continue to enable and lead national and international conversations as host of the annual Waterloo Innovation Summit (WIS), which brings together industry, investors, academics and policy-makers.

Waterloo will expand entrepreneurial initiatives and learning opportunities for students, faculty and staff by adding new academic programs and funding support. Inspired by its culture of innovation, Waterloo's strategic plan is a call to build its reputation as an entrepreneurial university, a university recognized as an engine of Canadian entrepreneurship and as a model for others to follow in entrepreneurship education, support and research

Examples of Institutional Initiatives

Industry-Relevant Connections

The University of Waterloo continues to be the most industry-engaged university in Canada²⁹. On top of almost 20,000 co-op work terms³⁰, Waterloo also engages with industry in collaborative research in such areas as next generation computing, advanced manufacturing, transportation, and water. In each of the last three years, approximately 30 per cent of Waterloo's external research funding has been generated from partnerships with industry³¹.

Entrepreneurship

From classrooms to global communities, from research labs to innovative startup ventures, entrepreneurship at Waterloo is defined by a burning desire to make things better. Entrepreneurial spirit is part of Waterloo's DNA, from the long-standing intellectual property policy that ensures creators retain control of their ideas, to leading-edge academic programs promoting venture creation and intrapreneurship, to networks of support and mentorship that enable the commercialization of socially relevant research.

Hundreds of startups, employing thousands of Canadians³², trace their roots to Waterloo and are a testament to its ability to inspire entrepreneurial thinking and the ambition needed to drive economic and societal change.

Waterloo exists within one of the world's emerging technology clusters supporting the innovation ecosystem within the Waterloo Region. Through the work of Velocity, the Conrad Business, Entrepreneurship and Technology Centre, the Accelerator Centre, Research Entrepreneurs Accelerating Prosperity (REAP), student clubs, Engineering Capstone projects, GreenHouse, the Epp Peace Incubator and others, Waterloo continues to be a national leader in university entrepreneurship and expanded social and economic impact.

From idea to product creation to commercialization, Waterloo is committed to providing the knowledge, tools, space and network that startups and entrepreneurs need for success.

The Waterloo Commercialization Office supports faculty startups and provides student entrepreneurship fellowships that have supported the creation of companies and jobs.

Waterloo's impact on the local economy continues to be diverse, creating jobs in information and communications technology, clean technology, advanced manufacturing, life sciences and digital media.

Continuing to grow entrepreneurship is a critical role for the future development of Canada. More than 99 per cent of all registered companies in Canada are small and medium enterprises³³. Few other Canadian universities

²⁹ University of Waterloo Strategic Plan <https://uwaterloo.ca/strategic-plan/in-action/transformational-research?tab=all&tableau=8#tabs-nav> and <https://uwaterloo.ca/strategic-plan/in-action/transformational-research?tab=all&tableau=9#tabs-nav>

³⁰ Internal University of Waterloo data, <https://uwaterloo.ca/institutional-analysis-planning/university-data-and-statistics/student-data/student-headcounts>

³¹ University of Waterloo Strategic Plan, <https://uwaterloo.ca/strategic-plan/in-action/transformational-research?tab=all&tableau=8#tabs-nav>

³² University of Waterloo Strategic Plan, <https://uwaterloo.ca/strategic-plan/in-action/uniquely-entrepreneurial?tab=all&tableau=5#tabs-nav> and <https://uwaterloo.ca/strategic-plan/in-action/uniquely-entrepreneurial?tab=all&tableau=6#tabs-nav>

can claim the same expertise as Waterloo in educating, building and supporting the next generation of Canadian entrepreneurs, intrapreneurs and social innovators as evidenced by our commitment to engaging our students in all forms of entrepreneurship endeavors. This is a key predictor of future entrepreneurship success of Waterloo students and alumni, and injects an entrepreneurial spirit across the University.

Velocity

Velocity is a leading entrepreneurship program at the University of Waterloo and includes the largest free startup incubator in the world³⁴. Velocity runs programs on campus and in the broader Waterloo region. There are no fees to participate in Velocity programs and Velocity does not take any equity from startups. For students, Velocity augments their education by incubating their natural entrepreneurial spirit. For alumni, Velocity provides an avenue to apply the education they receive from Waterloo in innovative ways as they build startups and launch new products. Velocity is a highly successful startup community, which contributed to the success of companies that include Kik, Thalmic Labs, Mappedin, Sortable and Vidyard.

The Velocity Residence is a dorm for Waterloo students who wish to learn more about building a startup or work on their current companies and Velocity Start is an entrepreneurship discovery space that provides resources to learn about entrepreneurship. These spaces are home to a Makerspace, Problem Lab, and series of workshops, panels and sessions that run each term to help educate students about building a successful business.

Velocity Science is a partnership with the Faculty of Science that continues to grow, providing a discovery lab, mentoring and coaching for any student with a life or material sciences startup.

The Velocity Fund currently distributes \$375,000 a year, thanks to private donors, and was created to provide seed funding and pitch experience to new and promising startups.

The Velocity Garage has expanded to become the world's largest free incubator³⁵ at over 37,000 square feet of workspace and a peer community for up to 120 software, hardware, and science startups. More than 175 companies have started in the Velocity ecosystem and together they have seen over \$530 million in investment, and created more than 1,200 jobs³⁶.

GreenHouse

GreenHouse, located on the St. Paul's University College campus, affiliated with the University of Waterloo, is a live-in social innovation incubator. It provides students from all Waterloo faculties with mentorship and coaching in their quest to develop innovative solutions for pressing social, environmental or health problems.

³³ Statistics Canada, Business Register, December 2015, https://www.ic.gc.ca/eic/site/061.nsf/eng/h_03018.html#point1-1

³⁴ University of Waterloo Velocity, <http://velocity.uwaterloo.ca/2016/10/velocity-garage-celebrates-grand-opening-now-the-largest-free-startup-incubator-in-the-world/>

³⁵ University of Waterloo Velocity, <http://velocity.uwaterloo.ca/2016/10/velocity-garage-celebrates-grand-opening-now-the-largest-free-startup-incubator-in-the-world/>

³⁶ University of Waterloo Velocity, <http://velocity.uwaterloo.ca/2016/10/velocity-garage-celebrates-grand-opening-now-the-largest-free-startup-incubator-in-the-world/>

The majority of participants are female³⁷. GreenHouse entrepreneurs who wish to develop their solutions into self-sustaining ventures often continue on in the Velocity ecosystem.

In 2017, St. Paul’s will open a new \$10 million building that includes substantial new discovery space for GreenHouse and 74 single-residence rooms to house any students enrolled in GreenHouse.

Creating a new model for university engagement

Waterloo is working to create a dynamic link between research, experiential education and disruptive startups that will promote greater collaboration with Waterloo’s talent, insight and invention. The intention is to transform how universities interact with industry and government and to build capacity as technology-enabled companies and other organizations look to adopt innovations and insights earlier. Waterloo believes this will attract tech-savvy innovators to the local, provincial and national corporate talent pool by providing them with an opportunity to identify tomorrow’s high-potential disruption opportunities. It is anticipated that this will create a new type of laboratory for innovation and a testing ground for ambitious and entrepreneurial students. It will also provide an education platform for change agents in business and industry and a hatchery for solutions to the world’s most pressing problems. Once established, it is expected that this will be a model that, over time, can be scaled and replicated at other universities as well, creating a potential pan-Canadian network of highly productive innovation collaborations.

Metrics and Targets

System-Wide Metrics	2019-20 Target
Graduate employment rates	At or above 85% (2 Year) At or above 80% (6 months)
Number of graduates employed full time in a related job	At or above 80%

Institutional Metrics	2019-20 Target
Number of current student- and recent alumni ventures supported by Waterloo entrepreneurship programs	At or above 115
Survival rates of Velocity ventures	Exceed industry standard performance as measured by the Kaufmann Institute (currently 60%)
Investment in current student and recent alumni-led ventures	At or above \$100 million

³⁷ University of Waterloo, <https://uwaterloo.ca/about/who-we-are/waterloo-facts>

6.0 Enrolment Strategy and Program Direction

Enrolment Plan and Corridor Midpoints

This section also establishes the agreed-upon corridor midpoint that will form the basis of enrolment-related funding over the course of the SMA period.

Corridor Midpoint

For funding purposes **77,551.10** Weighted Grant Units (WGU) will be the corridor midpoint value for the University of Waterloo. This value was determined using the institution’s actual enrolment (expressed as WGUs) from the 2016-17 academic year. The University of Waterloo will receive funding consistent with this level of enrolment and subject to the policies contained within the *Ontario University Funding Model Technical Manual*, May 2017, Version 1.0.

Projected Funding-Eligible Undergraduate Enrolments

Below is the institutions projected enrolment of funding-eligible undergraduate enrolments for the University of Waterloo

	Projected 2017-18	Projected 2018-19	Projected 2019-20
Undergraduate Full-time Headcounts	27,200	27,500	27,900

Note – for this table, Full-time Headcount should be reported for Fall term only.

Graduate Allocation – SMA 2017-2020

Below are the allocation of funding eligible graduate and PhD spaces for the University of Waterloo

	Target 2017-18	Target 2018-19	Target 2019-20
Masters	2,035	2,099	2,173
PhD	789	832	856
Total	2,824	2,931	3,029

Note – allocation shown in FTEs

Projected International Enrolment

	Projected 2017-18	Projected 2018-19	Projected 2019-20
Undergraduate Full-time Headcounts	6,000	6,200	6,300
Masters Full-time Headcounts	930	930	950
Doctoral Full-time Headcounts	750	740	750
Total Enrolment Full-time Headcounts	7,680	7,870	8,000

Note: International enrolments include all funding ineligible international students.

International Enrolment Strategy and Collaboration

Internationalization is a key element in Waterloo's Strategic Plan. Multiple indicators point to activity with respect to international students on campus, international faculty members, international research funding, international agreements and rankings, international alumni, international donors and outbound international experiences for Canadian students.

It is widely accepted at Waterloo that more fully understanding the complex systems at work in our world requires a collaboration of perspectives and insights. Opportunities and challenges in our world today — whether they are related to artificial intelligence, climate change, social inclusion, or other topics — can be better understood by looking beyond borders where new perspectives can be shared and new insights gained. Waterloo encourages multi-, inter- and trans-disciplinary work, study and research, and encourages collaboration to draw upon a wealth of experiences and expertise at a global level.

Waterloo's international activity centers around three themes:

International students on campus

Waterloo has one of the largest populations of international students (in both relative and absolute terms) in Ontario³⁸. The entire campus community develops as Waterloo improves its cross-cultural understandings and becomes more globally engaged. Waterloo's aim is to continue to be a provincial leader in attracting and supporting the best and brightest in the world to study at the university.

³⁸ Common University Data Ontario, section A7, https://cudo.ouac.on.ca/page.php?id=7&table=4#univ=1,2,3,8,9,11,12,14,16,17,21,22,23,24,25,27,28,29,30,31,32,33,34,42&topic=A&table_hidden=5&y=2015

Outbound international experiences for Waterloo students

Every year, hundreds of Waterloo students travel internationally³⁹. For undergraduate students, this is largely by means of either a co-op work term or a study abroad exchange term. For graduate students, this might be research-related, a practicum, or a field placement. These kinds of international experiences offer multiple benefits and learning opportunities, such as increased cultural awareness and understanding, improved employment prospects and enhanced language skills.

A variety of initiatives are underway at Waterloo to increase international opportunities. The number of international experience awards and the total amount of financial aid available to undergraduate and graduate students is increasing. Waterloo wants to continue to be a leader in delivering meaningful international experiences to its students.

International research

The University of Waterloo's faculty members and students conduct research, often with international partners, having global impacts. The extent of Waterloo's international research scope is evident, as almost \$20 million in international research grants are secured annually by Waterloo researchers and more than 1,000 publications per year are co-authored by a Waterloo researcher and researchers from outside of Canada⁴⁰.

The University of Waterloo will continue to be a model for successful internationalization, to the benefit of students, the campus community, the province and the world.

³⁹ University of Waterloo Strategic Plan, <https://uwaterloo.ca/strategic-plan/in-action/uniquely-entrepreneurial?tab=all&tableau=5#tabs-nav> and <https://uwaterloo.ca/strategic-plan/in-action/global-prominence-and-internationalization?tab=all&tableau=17#tabs-nav>

⁴⁰ University of Waterloo Office of Research, <https://uwaterloo.ca/strategic-plan/in-action/transformational-research?tab=all&tableau=9#tabs-nav> and <http://www.leidenranking.com/ranking/2017/list>

Strategic Areas of Program Strength and Expansion

Program Areas of Strength

1. Entrepreneurship
2. Mathematics
3. Computer Science
4. Engineering and Architecture
5. Quantum Science/Nanotechnology
6. Integrated Business, Accounting, and Finance
7. Health and Well being
8. Environment/Biological Systems
9. Human Behaviour, Institutions, and Interactions
10. Sustainable Societies and Technologies

The proposed areas of program strength are intended to inform program approval processes.

Program Areas of Expansion

1. Engineering, Science, and Architecture
2. Social Innovation, Entrepreneurship, and Sustainability
3. Security and Risk Management
4. Technology, Culture, and Communications
5. Health and Aging

Financial Sustainability

The Ministry and the University recognize that financial sustainability and accountability are critical to achieving institutional mandates and realizing Ontario’s vision for the postsecondary education system. To this end, it is agreed that:

It is the responsibility of the governing board and senior administrators of the University to identify, track, and address financial pressures and sustainability issues. At the same time, the Ministry has a financial stewardship role. The Ministry and the University agree to work collaboratively to achieve the common goal of financial sustainability and to ensure that Ontarians have access to a full range of affordable, high-quality postsecondary education options, now and in the future.

The University remains accountable to the Ministry with respect to effective and efficient use of provincial government resources and student resources covered by policy directives of the Ministry, or decisions impacting upon these, to maximize the value and impact of investments made in the postsecondary education system.

System-wide Metrics	2015-16 Actuals
• Net Income / (Loss) Ratio	3.64%
• Net Operating Revenues Ratio	5.06%
• Primary Reserve Ratio	141 days
• Interest Burden Ratio	0.14%
• Viability Ratio	12.81

7.0 Institutional Collaborations and Partnerships

Tri-University Library System (TUG)

The Tri-University Group of Libraries (TUG) is an example of administrative co-operation among the Libraries of University of Guelph, University of Waterloo, and Wilfrid Laurier University.

The TUG libraries have been informally collaborating for nearly 30 years. Recently they have enhanced their co-operation with a more formalized agreement to work together to leverage rapidly advancing technologies for mutual benefit.

Collaboration with Wilfrid Laurier University

For many years, Waterloo and Laurier have worked co-operatively to develop and improve a cross-registration agreement in support of students at both universities. This agreement allows undergraduate students at both institutions access to courses taught at both universities through a well-established process. This long-standing agreement allows students at both institutions access to a broader set of courses in more disciplines than either university would offer independently.

In addition, Waterloo and Laurier have also partnered in the offering of several joint degrees as well as two double degree co-op programs:

1. Bachelor of Mathematics (BMath, UW)/Bachelor of Business Administration (BBA, WLU)
2. Bachelor of Computer Science (BCS, UW)/Bachelor of Business Administration (BBA, WLU)

Collaborative Graduate Programs

Waterloo partners with Ontario colleague universities in offering several joint graduate programs, combining expertise to offer the best possible programs to Ontario students.

- Waterloo and the Guelph offer joint graduate degrees (Masters and PhD) in both physics and chemistry.
- Waterloo and Laurier partner in offering four joint graduate degrees in geography, as well as joint PhDs in religious studies and global governance.
- Waterloo, Laurier and Guelph have all partnered to offer the tri-university graduate degrees (Masters and PhD) in history.
- Waterloo, together with McMaster, Queen's, Western and UOIT offer the collaborative Master of Engineering (MEng) in Civil Engineering – Nuclear Engineering, through the University Network of Excellence in Nuclear Engineering (UNENE).

Advanced Manufacturing Consortium

McMaster, Western and Waterloo have established a significant critical mass of infrastructure, talent and expertise in the area of advanced manufacturing. Through research partnerships among these institutions and with industry, they will contribute to the resurgence of the Ontario economy by leveraging their collective knowledge and expertise. They will support the Province of Ontario's goal to create an attractive environment for business investment by helping address the needs of a wide range of industries by providing solutions to the challenges they face.

International Partnerships

Waterloo has over 300 agreements with universities around the world⁴¹, including general agreements on educational co-operation, exchange agreements that support student exchange programs, and joint academic program agreements, facilitating opportunities for students to pursue dual, joint and other degree options with international partners. Waterloo makes these agreements strategically, looking for synergies and complementarities across different educational opportunities. These agreements give Waterloo students, staff and faculty members the opportunity to pursue a variety of research, study and other learning opportunities to enrich their educational experience. Waterloo collaborates with many of the top universities in the world (as QS-ranked), including the very top universities in Asia (e.g., National University of Singapore), Australia (e.g., Australian National University) and continental Europe (e.g., ETH Zurich).

Federated and Affiliated Institutions

The University of Waterloo has four affiliated or federated academic institutions, all located on the western portion of the main campus. All four institutions are fully integrated with Waterloo, and each offers a unique small-campus environment and student experience focus that is both complementary to, and complemented by, the wide range of academics and resources available through Waterloo.

Conrad Grebel University College is an affiliate of Waterloo for teaching, research, public education and community life, offering undergraduate Arts courses in History, Mennonite Studies, Music, Church Music and Worship, Peace and Conflict Studies, Religious Studies, and Sociology. Conrad Grebel is home to Waterloo's Music and Peace and Conflict Studies programs. Two Waterloo graduate programs, the Master of Theological Studies and the Master of Peace and Conflict Studies, are also based at Grebel. In addition to wide-ranging research by its faculty, the College's Centre for Peace Advancement is home to several peace-building organizations and has a dynamic social incubator for peace-oriented entrepreneurs. Grebel's residential community priorities reflect its Mennonite heritage of generous hospitality, mutual support, leadership development, exploration of faith and values and social advocacy.

Renison University College is a place to learn and a place to live. Affiliated with Waterloo, Renison offers degree courses in Social Development Studies (Bachelor of Arts) and Social Work (Bachelor of Social Work, Master of Social Work). Renison also offers minors in East Asian Studies, Studies in Islam and Applied Language Studies, as well as a wide variety of other courses in the arts and humanities. Renison supports the international initiatives

⁴¹ University of Waterloo, Waterloo International, <https://uwaterloo.ca/international/partnerships/our-partnerships-connect-world>

of Waterloo with opportunities available to students through the Renison International Office and by providing pathway programs for both graduate and undergraduate students through the English Language Institute.

St. Jerome's University is a liberal arts university that promotes critical thinking, fosters social engagement and inspires reflection and action toward a more just and peaceful society. St. Jerome's University recently completed a \$50 million infrastructure renewal, with the addition of two new buildings to provide the campus with collaborative student spaces, enhanced learning environments, dedicated research spaces, state of the art teaching and technology resources and community spaces designed to support the holistic academic and student experience. St. Jerome's University offers a series of domestic and international service learning opportunities through its Beyond Borders, Peru and local placement programs to provide students direct experience with international service organizations, such as not-for-profit organizations. These placements provide practical exposure to international and local development, service and community.

St. Paul's is a university-college that is not affiliated with any church. It provides an enriched living environment for approximately 250 undergraduate students from all faculties and, in a separate facility, 70 graduate students. The undergraduate residences include four separate Living-Learning Communities, one focused on social impact, one on the environment, one on French language and culture and the fourth focused on women in engineering. The St. Paul's GreenHouse is a live-in social incubator that provides students from all Waterloo faculties with mentorship and coaching in their quest to develop innovative solutions for pressing social, environmental, or health problems. St. Paul's is also home to the Waterloo Aboriginal Education Centre, which provides culturally relevant support services for Indigenous students and facilitates the sharing of Indigenous knowledge across the entire Waterloo community. St. Paul's faculty collaborate in the delivery of the Waterloo's Religious Studies program, in the Bachelors and Masters programs in International Development, and offer elective courses in Indigenous Studies.

8.0 Ministry/Government Commitments

- The SMA2 process has focused on implementing the first stages of the new funding model and demonstrating the ongoing commitment by all colleges and universities to student success. Future growth will only be funded through negotiated changes to an institution's funded enrolment corridor . Through the SMA2 cycle, the ministry will continue to work closely with institutions to ensure all dimensions of the funding model are implemented.
- In a memo to colleges and universities dated March 7, 2017, the ministry committed to using the SMA2 (2017-20) process as a transitional phase to commence the collaborative and joint development of performance metrics and targets, tied to funding, for SMA3 (2020-23). The ministry reiterates this commitment and reaffirms that metrics and targets included in SMA2 are not tied to funding at this time and are a beginning point for further discussions with the sector prior to their application in SMA3. Colleges and universities will have the opportunity to reset and realign metrics prior to the application of metrics in SMA3. The ministry will also engage other stakeholders as part of discussions on a broad metrics strategy.
 - The ministry commits to establishing a joint working group with each of the sectors and to begin detailed discussions in fall 2017 on metrics/targets and to seek input on the performance measurement methodology for SMA3.
- Colleges, universities and the ministry all benefit from processes that are transparent and non-duplicative. The ministry commits to work with colleges and universities to continue to streamline processes and seek opportunities to further reduce red tape (in part through increased access to other tools) , including reducing or eliminating duplicated reporting requirements.
- Through SMA2 discussions, the ministry has heard concerns about the challenges of delivering breadth in programming for Francophone and Francophile students, including the cost and funding of such delivery. Starting in fall 2017, the ministry commits to consulting institutions who have a formal mandate for bilingual and/or French-language delivery to review the delivery of French-Language programming and consider these concerns.
- In 2016, an extension of the existing tuition policy framework was announced to support a major reform in OSAP. The ministry will engage with both the college and university sectors around the next tuition policy framework, including examining the issue of tuition anomalies in certain professional programs as a result of past changes to tuition policy, and, for colleges, examining tuition levels relative to competitive college tuition frameworks in Canada.
- In recent years and during the SMA process, there has been an increased interest in the creation of a new polytechnic designation in the Ontario postsecondary education system. Starting in fall 2017, the ministry commits to undertake a review that examines whether improved benefits for students and employers are sufficient to make such a change. The ministry commits to working collaboratively with institutions across the sectors on this review.
- The ministry commits to continue to work collaboratively with universities to assess the anticipated need for additional graduate spaces related to programs that are currently under development.

- Starting in fall 2017, the ministry commits to undertake a review of the university Northern Grant working collaboratively with universities to examine whether the criteria for access and allocations of the Northern Grant represent an equitable approach.