2020-2025 Strategic Mandate Agreement
2020-2025 Strategic Mandate Agreement

Signed Between

University of Waterloo

And

Ministry of Colleges and Universities

SIGNED for and on behalf of the Ministry of Colleges and Universities by:

[Signature]
Shelley Tapp
Deputy Minister

Date
August 25, 2020

SIGNED for and on behalf of University of Waterloo by:

[Signature]
Dr. Feridun Hamdullahpur
President and Vice-Chancellor

Date
August 31, 2020

This agreement focuses on performance-based funding associated with the institution’s differentiation envelope and enrolment corridor funding. Special purpose/other institutional grants are not included as part of this agreement.

The Government remains committed to SMA3 (2020-25) and implementing the performance-based funding model for colleges and universities approved as part of Budget 2019.

Given the uncertainty regarding future impacts of the COVID-19 outbreak on the SMA3 metrics, the Ministry will delay the planned activation of performance-based funding for two years --Year 1 (2020-21) and Year 2 (2021-22) of SMA3. To determine how to link SMA3 metric performance to institutions’ funding beyond Year 2, each year the Ministry will engage institutions through the SMA3 Annual Evaluation process to assess SMA3 metric performance for the current year; and, evaluate potential COVID-19 impacts on the SMA3 metrics for future years. This will include a review of the performance-based funding starting point proportion. Metric data collection, evaluation, and publication will proceed through the SMA3 period as planned.

The agreement may be amended in the event of substantive economic or policy changes that would significantly affect the SMA deliverables. Any such amendment would be mutually agreed to in writing, dated, and signed by both signatories.
Introduction

Preamble

This Strategic Mandate Agreement between the Ministry of Colleges and Universities and the University of Waterloo is a key component of the Ontario government’s accountability framework for the postsecondary education system.

The Strategic Mandate Agreement (SMA):

- Outlines provincial government objectives and priority areas for the postsecondary education system
- Describes the elements of Ontario’s performance-based funding mechanism, including the university’s annual performance-based funding notional allocation for the five-year SMA3 period
- Establishes the corridor midpoint that will form the basis of enrolment-related funding over the five-year SMA3 period
- Supports transparency and accountability objectives, and
- Establishes allowable performance targets for 10 metrics upon which institutional performance will be assessed.

This SMA is for the fiscal period from April 1, 2020 to March 31, 2025.

Ontario’s Objectives

SMAs are bilateral agreements between the ministry and the province’s publicly-assisted colleges and universities and are a key component of the Ontario government’s accountability framework for the postsecondary education system. This cycle of agreements is focused on promoting accountability through transparency and a focus on performance outcomes. The following objectives underline SMA3:

- Increasing trust and accountability through transparency and improved performance outcomes in Ontario’s postsecondary education system
- Reducing red tape by striking an appropriate balance between accountability and reporting through streamlined processes and a reduced number of metrics
- Incentivizing colleges and universities to redirect resources and invest in initiatives that result in positive economic outcomes
- Encouraging alignment of postsecondary education with labour market outcomes, and
- Incentivizing differentiation and specialization to support increased efficiencies.
Institutional Profile

The ministry recognizes the importance of supporting a differentiated system, and recognizing institutional specializations, as a means of enhancing efficiencies in the postsecondary education sector.

The Institutional Profile is intended to describe how the university’s institutional mission and strategic goals support the priority areas of the Ontario government, as identified in this agreement. Institutions may also wish to include narrative related to the post-COVID-19 context for the institution.

The University of Waterloo supports Ontario’s efforts to increase accountability in the postsecondary education system through the Strategic Mandate Agreement process to ensure that publicly assisted postsecondary institutions are providing the positive economic outcomes the students and people of Ontario need, as well as training people for the jobs of the future.

The University of Waterloo’s mission, as articulated in the University of Waterloo Act is to advance learning and knowledge through teaching, research, and scholarship, nationally and internationally, in an environment of free expression and inquiry.

As a signatory to the Magna Charta Universitatum, the University of Waterloo upholds four fundamental principles: moral and intellectual independence of teaching and research; the inseparable nature of teaching and research; freedom in research and teaching; and the affirmation of the vital need for different cultures to know and influence each other in the constant pursuit of universal knowledge.

At Waterloo, we navigate complex changes guided by our strategic plan, nimble culture, and shared connection to the human values of curiosity, courage, engagement, and belonging.

We are committed to continuous improvement in teaching and learning. We are committed to supporting fundamental research as well as collaboration across research disciplines. We will empower future-ready talent who will realize their fullest potential through rich student experiences that Waterloo is uniquely positioned to provide. It is at the intersection of these three theme areas that Waterloo produces talent and knowledge to drive societal, environmental and economic well-being. We will leverage our global network to power international and interdisciplinary innovations as our brightest minds build relationships with policymakers, community members, and business people from around the world. We know the most urgent issues of our time, from climate change to automation and an aging population, call us to work across disciplines.

The University of Waterloo will:

- Build on our global leadership in co-operative education to provide every undergraduate and graduate student with expanded options in experiential learning.
- Empower students to leverage diverse learning experiences by creating more flexible learning pathways.
- Be a global powerhouse for commercializing research, developing new enterprises and supporting business growth.
- Leverage Waterloo’s extensive network connections and academic strengths to deliver a dynamic framework of learning-integrated work for professionals seeking to thrive and lead.
- Align our research strengths deliberately with important global challenges.
- Lead globally and nationally at the interface of society, health and technology.
- Create a sustainable, supportive environment for living, learning, working, and discovery that is worthy of our students and University community.
With a vast employer network, grown through our co-operative education program, Waterloo will continue to give our students an advantage as they push their talent beyond conventional boundaries, and ensure our diverse professors and programs remain connected to the world beyond the classroom. This broader connection will continue to inspire our researchers and enrich our globally renowned entrepreneurial ecosystem, enabling Waterloo to mobilize change, creating local and global impact.
Performance-Based Funding
Notional Annual Allocation

For the 2020-2025 SMA cycle, the University of Waterloo’s annual allocation of performance-based funding has been calculated by the ministry in accordance with the university funding model and Ontario’s Performance-based Funding Technical Manual. The University of Waterloo’s notional allocations will not be impacted by previous year performance, and will follow a graduated activation plan as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Differentiation Envelope</th>
<th>Performance-based Grant</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020-21*</td>
<td>$63,953,704</td>
<td>$62,800,023</td>
</tr>
<tr>
<td>2021-22*</td>
<td>$90,543,287</td>
<td>$87,920,032</td>
</tr>
<tr>
<td>2022-23</td>
<td>$117,133,662</td>
<td>$113,040,041</td>
</tr>
<tr>
<td>2023-24</td>
<td>$143,724,036</td>
<td>$138,160,050</td>
</tr>
<tr>
<td>2024-25</td>
<td>$157,019,223</td>
<td>$150,720,054</td>
</tr>
</tbody>
</table>

* Activation of performance-based funding will not be in place for 2020-21 and 2021-22. Thereafter, activation for the following years will be determined through the SMA3 Annual Evaluation process.

**Further details on calculations are available in Ontario’s Performance-based Funding Technical Manual. The Performance-based Grant has been capped at the system-average annual proportion and residual funding remains part of the Differentiation Envelope. Notional allocation represents the Performance-based Portion of the Differentiation Envelope capped to the system-wide average.

***The notional allocations presented above are estimates based on 2019-20 final operating grant totals.

Institutional Weighting Strategy

The performance-based funding mechanism in this SMA enables institutions to assign metric weightings to reflect institutional strengths and differentiated roles in the postsecondary education system. Assigned metric weightings will impact performance-based funding on a metric-by-metric basis per the table below. Metric details are described in the following section.

<table>
<thead>
<tr>
<th>Metric</th>
<th>2020-21</th>
<th>2021-22</th>
<th>2022-23</th>
<th>2023-24</th>
<th>2024-25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Employment Rate in a Related Field</td>
<td>30%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>Institutional Strength/Focus</td>
<td>10%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Graduation Rate</td>
<td>15%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Community/Local Impact – Student Enrolment</td>
<td>15%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Economic Impact (Institution-specific)</td>
<td>15%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Research Funding &amp; Capacity: Federal Tri-Agency Funding Secured</td>
<td>15%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Experiential Learning</td>
<td>--</td>
<td>--</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Research Revenue Attracted from Private Sector Sources</td>
<td>--</td>
<td>--</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Graduate Employment Earnings</td>
<td>--</td>
<td>--</td>
<td>15%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Skills &amp; Competencies</td>
<td>--</td>
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<td>5%</td>
<td>5%</td>
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</tbody>
</table>
Priority Areas and Performance Metrics

Summary

To support improved performance in key areas aligned with the Ontario government’s priorities and objectives, the allowable performance targets will be set against metrics that measure institutions’ effectiveness in addressing the evolving needs of the labour market, enhancing the skills and competencies of our students, and supporting a postsecondary education system that strengthens Ontario’s economic competitiveness.

The combination of established targets and assigned metric weightings will be used for institutional assessment of performance through the SMA3 Annual Evaluation process.

Skills & Job Outcomes

This priority area seeks to measure and evaluate the university’s role in supporting student and graduate outcomes and alignment with Ontario’s economy. Metrics measure institutional commitment to areas of strength and specialization; students’ preparation with the skills essential for employment; experiential learning opportunities; graduation; and positive labour-market outcomes for graduates, through the following performance indicators:

- Graduate Employment Rate in a Related Field
- Institutional Strength/Focus
- Graduation Rate
- Graduate Employment Earnings
- Experiential Learning
- Skills & Competencies

Economic & Community Impact

This priority area seeks to measure and evaluate the university’s role in supporting Ontario’s economy. Metrics measure the attraction of federal research funding; funding from private sector sources; the positive economic impact on local economies brought by students at an institution, and the differentiated ways institutions demonstrate economic impact, through the following performance indicators:

- Community/Local Impact of Student Enrolment
- Economic Impact (Institution-specific)
- Research Funding & Capacity: Federal Tri-Agency Funding Secured
- Research Revenue Attracted from Private Sector Sources

Productivity, Accountability & Transparency

To support the Ontario Government’s objective of enhanced transparency and accountability, institutions will provide reporting data in the following areas which will not be tied to performance funding:

- Faculty Activity
- Faculty Compensation
Skills & Job Outcomes
Performance Metrics: Narrative

Metrics will be initiated over three years as new data is collected and validated. For 2020-21, allowable performance targets are calculated using historical data as per the Performance-based Funding Technical Manual.

For the remainder of the SMA3 cycle, allowable performance targets will be calculated annually as per the Performance-based Funding Technical Manual using the most recent historical data available for the University of Waterloo and included as part of the SMA3 Annual Evaluation process for performance-based funding. See appendix for details regarding historical data and annual allowable performance targets.

For the Skills and Competencies metric being initiated for performance-based funding in 2022-23, the Ministry of Colleges and Universities will apply a ‘participation weighting’ of 5% of annual performance-based funding notional allocation for all institutions. Institutional targets will not be set for this metric in SMA3. Participation will be validated and included as part of the SMA3 Annual Evaluation process for performance-based funding.

Graduate Employment Rate in a Related Field

<table>
<thead>
<tr>
<th>Metric initiated in 2020-21</th>
</tr>
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</table>

Proportion of graduates of undergraduate (bachelor or first professional degree) programs employed full-time who consider their jobs either “closely” or “somewhat” related to the skills they developed in their university program, two years after graduation

Narrative

The University of Waterloo’s historically strong performance in graduate employment in a related field reflects the institution’s commitment to delivering a quality and relevant educational experience to its students. Waterloo’s quality education is strengthened by the institution’s commitment to career readiness through experiential education including its world-class co-op program and the new experiential education certificate, EDGE, as well as its work to facilitate student entrepreneurship and career exploration.

The impact of Waterloo’s focus on preparing students for life after graduation is evident in Waterloo’s top performance on multiple employability metrics. According to the QS Graduate Employability Rankings in 2019, the University of Waterloo ranked second in Canada and 25th in the world for graduate employability. QS ranked Waterloo first in Canada and 69th in the world for employer/student connections measuring the number of employers coming to campus for networking events with students.

With a Graduate Employment Rate in a related field consistently above 90% since 2011, Waterloo ranks among the top five Ontario institutions in this metric, Ontario University Graduate Survey. With Waterloo’s continued focus on co-op and other forms of experiential education on campus, Waterloo is confident of its continued strong performance in graduate employment in a related field.

Waterloo’s co-op program combines world-class academic programming with global leadership in co-op and experiential education to help students put the skills they are developing in their programs to use in a work environment. In some cases, students are out in the workforce, putting their learning into practice after as little as four months of academic study. Continuing to alternate between academic and work terms throughout their degree allows students to graduate with as much as two years of work experience and further refine their career goals. Students have the opportunity to work with different employers having multiple hands-on opportunities to see how the knowledge and skills they are learning in the classroom can be applied directly in industry. Waterloo’s
The co-op program provides opportunities for students to gain experience across a wide variety of industries with the largest share of co-op students working in professional, scientific and technical services (27%), manufacturing (15%), and finance and insurance (12%) industries. In June 2018, a research project completed by Waterloo analyzed data from over 8,000 recent co-op graduates (graduated between 2015 and 2018) and found that these students collectively worked with 5,165 different employers on their co-op work terms. Of those, 88.4% of graduates worked with three or more different employers, (68.6% of graduates worked with four or more employers), and 68.4% of graduates worked in three or more industries, demonstrating the breadth of work experience co-op graduates have when they join the workforce upon graduation.

Source: Ministry of Colleges and Universities - Ontario University Graduate Survey

### Institutional Strength/Focus

| Engineering, Mathematics and Computer Science |
| Proportion of enrolment (FFTEs, domestic and international, all terms for undergraduate students and Summer and Fall terms for graduate students) in an institution's program area(s) of strength |
| Metric initiated in 2020-21 |
| Narrative |

The University of Waterloo has a wide variety of program areas of strength across all six of its Faculties: Applied Health Sciences; Arts; Engineering; Environment; Mathematics; and Science. The 2019 QS Subject Rankings recognized fifteen Waterloo programs by ranking them in the top 100 in the world.

Waterloo is recognized as the global leader in co-operative and experiential education across all programs.

The University is a trailblazer of innovative new programs and delivery methods including its approach to business education. Unlike many other business programs, students graduate from Waterloo with two areas of expertise: a deep knowledge of a subject (major) along with knowledge and skills in marketing, finance, accounting, and entrepreneurship. With the combination of business skills and their major, students can tie together business knowledge and disciplinary expertise to excel in a variety of fields, for instance helping biotech firms commercialize their research, marketing a company's products to a global audience, raising funds to help a clean energy company grow, or promoting a major league team's run for the championship through one of the specialized hybrid business programs. According to Maclean’s 2020 ranking of business programs, Waterloo ranked 8th despite not having a separate school of business. Waterloo’s innovative, interdisciplinary, flexible business programming makes the program accessible to students regardless of their program of enrolment and therefore impacts a much larger fraction of its graduates than would a traditional business program, however the total associated enrolments don’t fit into the discrete standardized program classification groups that are required for reporting this metric.

For the purposes of this agreement, Waterloo has chosen Engineering, Mathematics, and Computer Science as our area of institutional strength and focus.

Waterloo’s Faculties of Engineering and Mathematics (which includes Waterloo’s School of Computer Science) are committed to leading education and research, and both are ranked in the 2020 QS Subject Ranking as among the top 100 such programs worldwide. Student demand for admission to these programs is matched only by industry demand for its graduates. Graduates from Waterloo’s engineering and mathematics programs are in high demand after graduation with employment rates of 95% for the 2016 graduating cohort two years after graduation (96.0% in Engineering, 97.8% in Computer Science and 94.5% in Mathematics), and with 87.1% of those graduates earning a salary of $50,000/year or more. Graduates from these programs also have extremely low OSAP default rates at 0.6% (2016 graduating cohort) in comparison to the Ontario average for all disciplines at 3.3% (Ontario discipline averages of 1.6% for Engineering, 0.6% for Mathematics and 2.8% for Computer Science). In 2018/19, external
Research funding in Engineering and Mathematics from Canadian and international partners exceeded $117.8 million, a strong indication of both Faculties’ extensive industry partnerships and the excellence of our engineering and mathematics research programs.

Waterloo remains committed to continuing its excellence in engineering, mathematics and computer science education and working to meet enrolment growth pressures, including growth in high-demand programs like mechatronics and biomedical engineering, computer science and innovative programs such as architectural engineering.

*Source: Provided by Institutions, validated by University Statistical Enrolment Report (USER)/Ministry of Colleges and Universities*

## Graduation Rate

<table>
<thead>
<tr>
<th>Proportion of all new, full-time, year one university students of undergraduate (bachelor or first professional degree) programs who commenced their study in a given fall term and graduated from the same institution within 7 years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Metric initiated in 2020-21</strong></td>
</tr>
</tbody>
</table>

Narrative

The University attracts top students and provides them with a rich learning environment that pairs globally recognized academic programs with unparalleled experiential programs, all within an innovative and entrepreneurial ecosystem. Waterloo makes significant investments in the supports it provides to students to retain students all the way through to graduation, including the establishment of the Student Success Office, guaranteeing on-campus residence for all first-year students, flexible learning pathways, and increasing investments in supporting student mental health. These supports ensure Waterloo students have access to the services they need in order to be successful.

Waterloo’s success in these endeavours is evident in its retention rates. Waterloo is second in the province in the proportion of its first year students in a given fall term who returned to the institution in the subsequent fall term, as reported in CUDO (Common University Data Ontario). This retention rate also outpaces the performance of comparator universities according to results compiled through the Consortium for Student Retention Date Exchange (CSRDE), [https://uwaterloo.ca/performance-indicators/students/retention](https://uwaterloo.ca/performance-indicators/students/retention).

It is also important to note that many Waterloo students participate in our co-op program, which adds as much as two years to the length of their undergraduate program. Even with this additional time, Waterloo’s seven-year graduation rate has remained stable over many years, ranging from 79.0% to 81.1%. Consistently higher than the Ontario system average, [Waterloo’s graduation rate is comparable to the rates of several top-performing colleague institutions in Ontario](https://uwaterloo.ca/performance-indicators/students/retention). Without any adjustment to account for the longer time to complete a co-op degree, Waterloo continues to perform well with a graduation rate among the top five in the province.

*Source: University Graduation Rate Data Collections*
Graduate Employment Earnings

<table>
<thead>
<tr>
<th>Median employment earnings of university graduates, two years after graduation</th>
<th>Metric initiated in 2021-22</th>
</tr>
</thead>
</table>
| Narrative | The University of Waterloo demonstrates strong performance in graduate employment earnings. The data compiled in the Education and Labour Market Longitudinal Platform (ELMLP) show that the median employment income of Waterloo graduates employed full-time two years after graduation has exceeded $55,000 since 2010. This data is consistent with the findings of the Ontario University Graduate Survey which show that more than 60% (63% of the 2015 graduating cohort and 66% of the 2016 graduating cohort) of students completing an undergraduate degree at Waterloo earn more than $50,000 two years after graduation. The results for graduates from Waterloo’s undergraduate co-op programs are even more impressive, with four out of five graduates earning more than $50,000 two years after graduation (82%, 2016 cohort). Waterloo’s graduate programs have similarly strong employment earning outcomes. Median earnings two years after graduation for students completing masters and doctoral degrees have exceeded $60,000 since 2010.

This overall strong performance in graduate earnings reflects the outstanding calibre of students Waterloo attracts, the high quality of education delivered by the University of Waterloo, and the strength of its experiential learning programs in which students complete up to two years of work experience before graduation.

In addition to conventional earnings as reported through Statistics Canada and tax linkage data, Waterloo graduates also contribute to the economy through entrepreneurship activities. According to Pitchbook, Waterloo ranks 21st internationally among universities for venture capital-backed entrepreneurs and first in Canada. The 2019 ranking reflected 433 entrepreneurs who collectively raised $10.63 billion in venture capital investment. In many cases students who choose to launch their own startup companies after graduation end up employing many other Waterloo graduates as their companies grow and prosper. Often foregoing salaries in the earliest stages of their companies, these entrepreneurs contribute to the success of Waterloo startups but are not captured in the employment income data collected by the ELMLP. The ELMLP also does not capture earnings for Waterloo students who work outside of Canada. Even with these exclusions, Waterloo continues to deliver strong results in the earnings its graduate secure after graduation.

Source: Educational and Labour Market Longitudinal Platform/Statistics Canada

Experiential Learning

<table>
<thead>
<tr>
<th>Number and proportion of graduates in programs, who participated in at least one course with required Experiential Learning (EL) component(s)</th>
<th>Metric initiated in 2021-22</th>
</tr>
</thead>
</table>
| Narrative | The University of Waterloo is a world leader in co-operative and experiential education. Over 70% of undergraduate students admitted in Fall 2019 chose to pursue a co-operative education degree. These students participate in the world’s largest co-op program, completing up to two years of paid work terms working with over 7,000 employers in 65 countries. For students who choose not to participate in co-op, Waterloo offers a new experiential education certificate, EDGE, to help students develop their professional skills, explore career options and learn how to market themselves to employers while completing work and community experiences. Between these two programs, every undergraduate student has the opportunity to complete a work-integrated learning (WIL) experience as part of their degree program. Student learning is further enhanced by program specific work-integrated learning experiences such as internships and practicums and by rich in-class experiential opportunities such as community and industry engaged projects. From its very founding, Waterloo has maintained its commitment to integrating workplace experience with its strong academic programs.
Waterloo’s experiential learning strength is also reflected in the university’s low OSAP default rates, in part because students have the opportunity to earn income in their co-op work terms to help offset the costs of their education. Waterloo has the lowest OSAP default rate of any university in the province with 0.7% in 2018 as compared to an average of 2.8% for all Ontario universities.

While all quality experiential learning opportunities are valuable, it is important to note that the vast majority of Waterloo’s experiential learning experiences are workplace based. These “gold standard” high-intensity, work-integrated learning programs are the most likely forms to lead directly to the desired outcomes of student skill development and employability. When assessing, evaluating and counting experiential learning, quality, intensity, and authenticity are important characteristics in achieving these intended outcomes. High intensity WIL programs are also much more likely to drive economic contributions for industry and support employers in recruiting and retaining needed talent.

When employers evaluate Waterloo students on their work term performance, 95% rate Waterloo students as “very good”, “excellent” or “outstanding”. Additionally, a recent Waterloo study showed that 72% of employers felt that their most recent student had made a significant contribution to their team, 81% indicated they would be likely or very likely to offer a position to their most recent student in the future, and 86% indicated they would be likely to recommend their most recent student to a colleague. This study also found that 93% of co-op employers reported a positive return on investment from hiring a co-op student with 79% indicating that they got “more” or “much more” than they invested. Not only does WIL prepare students for the future of work and lifelong learning, it also facilitates the transfer of knowledge from university to industry, further fueling innovations and adaptations. Waterloo’s co-op model of multiple term-long full-time paid employment experiences truly is the gold standard of work-integrated learning.

Source: Institutions

<table>
<thead>
<tr>
<th>Skills &amp; Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education and Skills Online: Random sample of students (domestic and international)</strong></td>
</tr>
<tr>
<td><strong>Metric initiated in 2022-23</strong></td>
</tr>
<tr>
<td><strong>Narrative</strong></td>
</tr>
<tr>
<td>The University of Waterloo is committed to continuous improvement in the work it does to grow and strengthen the skills and competencies of all Waterloo students. Recent initiatives introduced at Waterloo include the integrating communications courses into all undergraduate programs, launching the EDGE Experiential Education Certificate program in 2017, expanding the capacity of our Writing and Communication Centre and increasing its contact hours with students and launching the GRADventure program in support of graduate students professional skills development. Continuing this commitment to improving the skills and competencies of our students, the University of Waterloo looks forward to working with government to implement the Skills and Competencies metric beginning in 2022-23, by using the Education and Skills Online assessment tool.</td>
</tr>
</tbody>
</table>

Source: Education and Skills Online Assessment, Organisation for Economic Co-operation and Development (OECD)
Economic & Community Impact
Performance Metrics: Narrative

Metrics will be initiated over three years as new data is collected and validated. For 2020-21, allowable performance targets are calculated using historical data as per the Performance-based Funding Technical Manual.

For the remainder of the SMA3 cycle, allowable performance targets will be calculated annually as per the Performance-based Funding Technical Manual using the most recent historical data available for the University of Waterloo and included as part of the SMA3 Annual Evaluation process for performance-based funding. See appendix for details regarding historical data and annual allowable performance targets.

Community/Local Impact of Student Enrolment

<table>
<thead>
<tr>
<th>Metric initiated share in the population of the city (cities)/town(s) in which the institution is located</th>
<th>Narrative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metric initiated in 2020-21</td>
<td></td>
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</tbody>
</table>

In 1957, innovation and entrepreneurship brought University of Waterloo into being, as a group of business leaders imagined a new university built to tackle some of the world’s most daunting challenges. In the age of the Cold War and the space race, when a single computer filled a room, discoveries in science, medicine, and engineering were coming fast and furious. Industry leaders in Kitchener-Waterloo knew moving forward meant more than just training people in the technology of the day, but looking forward to how technologies were evolving, and providing education that was grounded in research and discovery; an education relevant for the present and the future.

This remains true today. A 2019 study by Deloitte pointed out, “the technologies and innovations spurred by the University’s spin off companies provide job opportunities and help to advance the standard of living for all Canadians.” Deloitte’s findings demonstrate that the University of Waterloo’s economic and social drivers are particularly critical in Waterloo region. Indeed, “the University was consistently viewed as a leader and beacon to the community with a reach that extended beyond simply teaching students,” and “[t]he University’s strong reputation as a centre for entrepreneurship, and globally competitive research capabilities has become synonymous with the region generally and contributed to a strong regional brand that can help the region compete for investment.”

The Deloitte report’s conservative estimate of the economic impact of Waterloo on the province’s GDP, found that Waterloo generated just over $2.8 billion dollars, creating over 20,000 full-time equivalent jobs.

The University of Waterloo makes significant contributions to economic impact not just in its home communities of Waterloo, Kitchener, Cambridge, and Stratford, but across Ontario, throughout Canada, and at a global level. As the 2019 Deloitte study found, the University of Waterloo is “successfully contributing to innovation and entrepreneurship… a critical issue for Canadian economic competitiveness.” Beyond this evaluation of annual economic impact, Deloitte also emphasized “the University’s active role as a bridge between the Canadian academic and business communities,” a partnership that was fundamental in the original formation of the University of Waterloo.

The University of Waterloo is a magnet for students from across the world seeking an excellent education. In Fall 2019, 950 new undergraduate students from Waterloo Region demonstrated their recognition of Waterloo’s strength in choosing to enrol at the University of Waterloo rather than studying elsewhere in Ontario, Canada, or beyond. In the same year, Waterloo also attracted 5,135 new students from regions of
Ontario beyond Waterloo Region, 474 new students from other provinces and territories, and 1,084 new students from outside Canada, demonstrating Waterloo’s broad appeal.

It is clear that Waterloo’s track record on innovation and entrepreneurship boosts the local economy while making Waterloo a preferred destination for local, provincial and international students, all contributing to the substantial economic impact that the university has on the Region of Waterloo.

Source: University Statistical Enrolment Report (USER), Ministry of Colleges and Universities, Census Data/Statistics Canada

Economic Impact (Institution-specific)

<table>
<thead>
<tr>
<th>Total Annual Earnings by UW Students on Work Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metric initiated in 2020-21</td>
</tr>
<tr>
<td>Narrative</td>
</tr>
</tbody>
</table>

Waterloo has chosen “total earnings by co-op students on work terms” as its institutional metric of economic impact.

Total earnings by co-op students on work terms includes all reported earnings from employment in Canada and the United States, for the full 16 weeks of a co-op work term (stipends, travel allowances and other gratuities are excluded). With one of the world’s largest Co-operative Education programs, this measure clearly shows Waterloo’s differentiated strength and direct economic benefit across Ontario and beyond. Co-op work term earnings have a clear economic impact on not only the students who have an opportunity to earn a salary, but also on the employers for which they work, and the communities in which those companies are based.

According to Waterloo’s most recent Economic Impact Study, completed by Deloitte in 2019, the total benefit to employers that have hired a co-op student was approximately $525 million in 2018/19, with a total contribution of $567 million to Canada’s GDP. Provincially, 4,230 full-time equivalent jobs were created or sustained across Ontario and an estimated $92 million added to Ontario government revenues. The Deloitte study also noted that “Waterloo’s co-op program is a truly differentiated feature of the University’s impact to the economy”. By participating in Waterloo’s co-op program, employers receive not only direct economic and productivity benefits, but also use the co-op program as a tool through which they can develop a pipeline of world-class talent, introduce a source of new ideas and perspectives, and contribute to social and corporate responsibility initiatives.

In 2018/19, Waterloo students reported $285.6 million in earnings. Earnings by co-op students on work terms outside of North America are not included in this measure. Subject to wider economic conditions, Waterloo expects this strong performance to continue. As acknowledged by MCU on the cover page to this agreement, the COVID-19 outbreak has had a significant impact on the Ontario economy, which is projected to continue over the coming years. As a measure of overall economic impact, total earnings by Waterloo co-op students are expected to reflect the general state of the Ontario labour market and economy. As such, co-op earnings are expected to contract before recovering to pre-COVID-19 levels. Together with the Ontario government, Waterloo is committed to ensuring its students are equipped with the skills and competencies required to make significant economic impacts while helping to rebuild and strengthen the Ontario economy.

Source: Waterloo Works
Research Funding & Capacity: Federal Tri-Agency Funding Secured

<table>
<thead>
<tr>
<th>Metric initiated in 2020-21</th>
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</thead>
<tbody>
<tr>
<td><strong>Narrative</strong></td>
</tr>
</tbody>
</table>

The University of Waterloo is one of Ontario’s research powerhouses. As a comprehensive, research-intensive university, Waterloo researchers embrace all forms of scholarship from curiosity-based inquiry to reflective scholarship and applied research. As noted by Donna Strickland, Waterloo Professor and Nobel Laureate in Physics, “[t]he combination of curiosity and rigorous inquiry will lead to our next great invention, either directly or by furthering our knowledge of how the world works”. Waterloo’s strong research culture is further accelerated by its vibrant and dynamic fundamental research foundation, deep industry and community partnerships, co-operative education, and entrepreneurship. Since its early days, Waterloo has undertaken ground-breaking research that has fueled new ideas and technologies, and a vigorous spirit of entrepreneurship has led the way in fostering a partnership of research excellence and commercialization. Two of Waterloo’s seven signature commitments outlined in its Strategic Plan focus on Waterloo’s commitment to research: to be a global powerhouse for commercializing research, developing new enterprises and supporting business growth, and to align research strengths deliberately with important global challenges. The University of Waterloo champions world-changing, perspective-altering, life-improving research and is shaping the future by tackling global challenges that will impact our world for generations.

Research is an integral and intensive area at Waterloo. In 2018-2019, Waterloo attracted more than $258 million from public and private sources to fund research across a spectrum of challenges. Waterloo's strength in research excellence is supported by partnerships with industry, creating opportunities that generate new knowledge and further Canada’s economy. Waterloo provides public reporting on its research performance through its annual performance indicators, available on the university’s website. For example, over the past five years, Waterloo has increased its total research funding by 43% growing from $181 million in 2014/15 to $258 million in 2018/19. Waterloo's Tri-Agency funding has likewise increased by 37% from $70.3 million in 2014/15 to $96.3 million in 2018/19. Furthermore, Waterloo ranked first amongst comprehensive institutions for the size of peer-adjudicated research grants from SSHRC, and second for both the size of research grants from NSERC/CIHR and the number of publications produced.

Using the definition adopted for this metric, Waterloo has consistently earned approximately 8% of the total Tri-Agency funding received by Ontario universities. Among institutions without a medical school, Waterloo is a consistent top performer.

Source: Tri-Agency Institutional Programs Secretariat
Research Revenue Attracted from Private Sector Sources

<table>
<thead>
<tr>
<th>Research revenue attracted from private sector sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metric initiated in 2021-22</td>
</tr>
<tr>
<td>Narrative</td>
</tr>
</tbody>
</table>

The University of Waterloo embraces and imbues innovation. The University of Waterloo has been named by Maclean’s magazine as Canada’s most innovative university for each of the past 28 years, reflecting Waterloo’s focus on innovation, entrepreneurial opportunities, and research excellence. Waterloo is committed to creating 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. One way our commitment to impact and application of our research is realized is by fostering a culture of innovation and entrepreneurship that includes encouraging our researchers to work with industry and other private sector partners directly to mobilize research to application and commercialization.

Waterloo has many examples to demonstrate innovation in its work with industry partners. Approximately one-third of Waterloo’s research funding is in partnership with industry. This highlights the mutually beneficial relationship Waterloo enjoys with the private sector. Industrial funding enhances the ability of Waterloo faculty members to engage in research that is of immediate relevance and can also be used as a match to secure funding from various Tri-Agency programs. Waterloo has one of the highest proportions of publications with industry in Canada, at 5.6%. This top performance is illustrated in the Leiden ranking where Waterloo places in the top three universities in the U15 for the % of publications co-authored with industrial partners. Waterloo’s collaboration with industry is also demonstrated by the growth in total sponsored research funding awarded directly from industry and from funds that require matching funds from partnerships with industry, which has increased by 70% from $20 million in 2013/14 to $34 million in 2018/19.

Waterloo is also a leader in its commitment to entrepreneurship and the innovation of its students. Waterloo-based ventures’ survival rates are above the industry standard at around 90% (91.0% in 2017 and 2018). Waterloo-based ventures have had great success being accepted into prestigious accelerators including Y Combinator, HAX or TechStars. In 2018/19, Waterloo had 10 ventures accepted into Y Combinator; all of whom returned to grow their businesses in Canada.

Over the past 11 years, the University of Waterloo’s flagship entrepreneurship program, Velocity, has supported more than 300 companies which have raised $1.26 billion in investments. In 2019, Velocity launched a startup investment fund to connect early-stage startups to the capital needed to grow their business while offering investors a simple way to invest in startups in a variety of sectors.

The University of Waterloo was among the top-ranked post-secondary institutions in the world, and the only Canadian institution to make the top-ten list, when it came to graduates who create startups that have achieved unicorn status, launching six ventures valued at more than $1 billion.

The University of Waterloo consistently performs well compared with other Ontario universities in receiving funding dollars from industry. Among universities without a medical school, Waterloo is a top performer in garnering research revenue from private sector sources.

Source: Council of Ontario Finance Officers (COFO)
Productivity, Accountability and Transparency
Reporting Metrics – Attestation

This priority area of the Ontario government supports the government’s goal of increasing trust and accountability through transparency and improved performance outcomes in Ontario’s postsecondary education system.

These metrics are not tied to funding, and are used to measure and report on the following indicators:

- Faculty Activity
- Faculty Compensation

Faculty Activity

Information regarding University of Waterloo Faculty Activity will be made publicly available in Year 3 (2022-23).

Faculty Compensation

Information regarding University of Waterloo Faculty Compensation will be made publicly available in Year 3 (2022-23).
Enrolment Profile

In addition to the performance-based funding outlined in sections above, institutions will receive enrolment-related funding through a funded corridor ‘midpoint’ to provide funding predictability to institutions. These enrolment corridor midpoints for universities were established as part of the 2017-20 Strategic Mandate Agreements (SMA2), and account for adjustments related to graduate expansion and teacher education achieved targets.

Corridor Midpoint

For funding purposes **79,114.47** Weighted Grant Units (WGUs) will be the corridor midpoint value for the five-year period from 2020-25 for the University of Waterloo. Enrolment-related funding will be will distributed consistent with this level of enrolment and subject to the funding framework set out in the *Ontario University Funding Formula Reform Technical Manual, May 2017, Version 1.0*. Funding eligible enrolments are defined by the *Ontario Operating Funds Distribution Manual*.

### 2019-20 Midpoint (A) 2019-20 Funded Graduate Growth (Master’s) (B) 2019-20 Funded Graduate Growth (Doctoral) (C) 2019-20 Teacher Education Growth (D) 2020-25 SMA3 Midpoint (A+B+C+D)

<table>
<thead>
<tr>
<th></th>
<th>2019-20 Midpoint (A)</th>
<th>2019-20 Funded Graduate Growth (Master’s) (B)</th>
<th>2019-20 Funded Graduate Growth (Doctoral) (C)</th>
<th>2019-20 Teacher Education Growth (D)</th>
<th>2020-25 SMA3 Midpoint (A+B+C+D)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>77,551.10</td>
<td>754.68</td>
<td>808.70</td>
<td>-</td>
<td>79,114.47</td>
</tr>
</tbody>
</table>

Note: The midpoints presented in this table were established using final 2019-20 enrolment data.

Projected Funding-Eligible Enrolments

Below is the University of Waterloo’s projection of funding-eligible enrolments as of February 2020.

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>2021-22</th>
<th>2022-23</th>
<th>2023-24</th>
<th>2024-25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate FFTE</td>
<td>27,700</td>
<td>27,900</td>
<td>28,000</td>
<td>28,100</td>
<td>28,300</td>
</tr>
<tr>
<td>Master’s FFTE</td>
<td>1,900</td>
<td>1,900</td>
<td>1,900</td>
<td>2,000</td>
<td>2,000</td>
</tr>
<tr>
<td>Doctoral FFTE</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Total FFTE</td>
<td>30,600</td>
<td>30,800</td>
<td>30,900</td>
<td>31,100</td>
<td>31,300</td>
</tr>
</tbody>
</table>

Note: This table reports on Fiscal Full-Time Equivalents. These include all terms for undergraduate students and Fall and Summer terms for graduate students.

Projected International Enrolment

Below is the University of Waterloo’s projection of funding-ineligible international student enrolments as of February 2020.

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>2021-22</th>
<th>2022-23</th>
<th>2023-24</th>
<th>2024-25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate FFTE</td>
<td>7,400</td>
<td>7,700</td>
<td>8,000</td>
<td>8,300</td>
<td>8,700</td>
</tr>
<tr>
<td>Master’s FFTE</td>
<td>1,200</td>
<td>1,200</td>
<td>1,300</td>
<td>1,300</td>
<td>1,400</td>
</tr>
<tr>
<td>Doctoral FFTE</td>
<td>900</td>
<td>900</td>
<td>900</td>
<td>900</td>
<td>900</td>
</tr>
<tr>
<td>Total FFTE</td>
<td>9,500</td>
<td>9,800</td>
<td>10,200</td>
<td>10,500</td>
<td>11,000</td>
</tr>
</tbody>
</table>

Note: This table reports on Fiscal Full-Time Equivalents. These include all terms for undergraduate students and Fall and Summer terms for graduate students.
Federated and Affiliated Institutions

SMAs are established with the colleges and universities in Ontario receiving direct operating funding support from the Ministry of Colleges and Universities.

For the purposes of these agreements the 27 federated/affiliated institutions in Ontario are considered part of the primary institution and will not have their own standalone agreement.

As part of this agreement, the ministry encourages all primary institutions to discuss the impacts of the 2020-25 Strategic Mandate Agreement and performance-based funding with federated and affiliated institutions.

The ministry is requesting that institutions confirm that they have discussed SMA3 with affiliated/federated institutions:

Attestation Signature

*Information regarding the Strategic Mandate Agreement (2020-25) has been discussed with applicable affiliated or federated institutions:*

Conrad Grebel University College
Renison University College
St. Jerome’s University
St. Paul’s University College

________________________                                                     ______________________
Dr. Feridun Hamdullahpur     Date
President

August 31, 2020

Date
Appendix: Historical Data, Targets and Results

The following table will be refreshed annually by the ministry to display results from SMA3 Annual Evaluation process and update Allowable Performance Targets (APT) for the current year. The SMA3 Evaluation will occur every year in the Fall-Winter and the updated appendix will be made publicly available the following Spring. Please note that greyed out fields indicate metrics that will be initiated in later years of SMA3.

It should be noted that historical data reflects pre-COVID-19 context. Actual values achieved during the SMA3 period may include COVID-19 pandemic impacts.

<table>
<thead>
<tr>
<th>SMA3 Metric</th>
<th>Historical Data</th>
<th>University of Waterloo</th>
<th>SMA3 Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Graduate Employment in a Related Field</td>
<td>91.55%</td>
<td>92.54%</td>
<td>93.76%</td>
</tr>
<tr>
<td>2. Institutional Strength/ Focus</td>
<td>41.50%</td>
<td>41.54%</td>
<td>41.63%</td>
</tr>
<tr>
<td>3. Graduation Rate</td>
<td>80.84%</td>
<td>80.59%</td>
<td>81.13%</td>
</tr>
<tr>
<td>4. Community/ Local Impact of Student Enrolment</td>
<td>48.58%</td>
<td>50.13%</td>
<td>51.31%</td>
</tr>
<tr>
<td>5. Economic Impact (Institution-specific)</td>
<td>$240,500,000</td>
<td>$261,400,000</td>
<td>$285,600,000</td>
</tr>
<tr>
<td>6. Research Funding &amp; Capacity: Federal Tri-Agency Funding Secured</td>
<td>$52,180,707</td>
<td>$54,908,373</td>
<td>$54,346,406</td>
</tr>
<tr>
<td></td>
<td>8.18%</td>
<td>8.25%</td>
<td>8.01%</td>
</tr>
<tr>
<td>7. Experiential Learning</td>
<td>#</td>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td>8. Research Revenue Attracted from Private Sector Sources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Graduate Employment Earnings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Skills &amp; Competencies</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>