


STRATEGIC MANDATE AGREEMENT

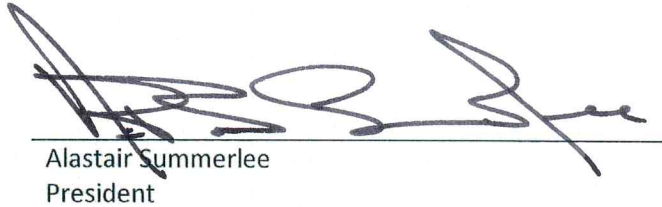
Carleton University
Ministry of Advanced Education and Skills Development
2017-20

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 Carleton University by:


Alastair Summerlee
President

Date

3. 8. 17.



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Preamble

This Strategic Mandate Agreement between the Ministry of Advanced Education and Skills Development and Carleton University 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.

Carleton University Vision, Mission and Mandate

Carleton University acknowledges the location of its campus on the traditional, unceded territories of the Algonquin nation.

Mandate Statement

Carleton continues to be faithful to its historical roots, albeit in a changing world. Our university was founded by and for the community to provide programs, services and opportunities for students and to undertake research that enables our graduates to become highly qualified participants in a constantly evolving economy and society, and in so doing contribute to a prosperous province, strong nation, and better world. Carleton's Strategic Integrated Plan incorporates a unifying focus that places the university squarely on the path of realizing its original mandate: sustainable communities leading to global prosperity. This embodies a multi-faceted conception of sustainability that links Carleton's national, provincial and international engagement with its roots and commitments to the National Capital Region and Eastern Ontario.

Mission Statement

Carleton University is an independent, collegial university dedicated to the advancement of learning through disciplinary and interdisciplinary teaching, study and research; the creation and dissemination of knowledge; the engagement of its students in experiential learning at home and abroad; and the betterment of its community. It is centred in Ottawa, and serves the people of the National Capital Region, Ontario, Canada, and the world.

Vision Statement

Carleton University will be known nationally and internationally as a leader in collaborative and interdisciplinary teaching and learning, research and governance. Our students, faculty and staff will be critically engaged, productive citizens and highly qualified contributors to the 21st century. At Carleton, we encourage creative risktaking, enabling minds to connect, discover and generate transformative knowledge. Through education, research, experiential learning, service and innovation, and through the building of sustainable communities, we can foster new ideas and future leaders to create a more sustainably prosperous future for Canada and the world. Carleton aspires to be an intellectual hub for technological, social, and cultural innovation within the National Capital Region and Eastern Ontario.

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

Carleton aspires to be an intellectual hub for technological, social, and cultural innovation within the National Capital Region and Eastern Ontario, while participating in networks of international scholars dedicated to solving major world challenges. This goal is rooted in Carleton's institutional identity as being established to educate and train students to contribute to a changing economy; an identity that has always differentiated Carleton as it has evolved from a small college to a large, thriving, and innovative comprehensive, research-intensive university. Building on Carleton's well-established experience of collaborating with governments, industries, businesses, organizations, communities, and individuals, we will further the economic, social, and cultural well-being of the region. Currently, these aspirations are focused on several key initiatives that are critical to the prosperity of the region and the province, including:

- A high technology hub in partnership with industrial partners centred on smart systems and communications including growth of 5G wireless technology, sensors, and vehicle automation;
- A hub for entrepreneurship and social and cultural innovation in partnership with social and cultural organizations, Algonquin College and the City of Ottawa;
- A regional development council to support economic, social, and cultural development in the eastern Ontario region and a hub in Cornwall.

Each of these initiatives will provide opportunities for innovative research and learning opportunities for students, including experiential learning allowing them to engage directly with industrial, business, government, and community organizations to get real-world experiences and skills development in new areas of vital growth and application in Ontario's 21st century economy.

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

Carleton University is dedicated to offering students a comprehensive range of academic and personal support, beginning with the application process, and continuing over the course of their university experience and after graduation.

Carleton University offers a student experience highlighted by engagement and collaboration, combining learning experiences both inside and outside the classroom. In particular, these characteristics are reflected in its academic programs and its numerous experiential learning opportunities.

Academic Programs

Carleton has been very successful in launching new programs that reflect its distinctive research and multidisciplinary strengths, and provide students with a truly collaborative experience, working to solve real-world problems. Many of these new programs are unique and may not be offered elsewhere in Canada.

Through a recent university-wide initiative, academic units can offer selected undergraduate students accelerated pathways towards a Masters degree — a highly attractive opportunity that helps retain some of Carleton’s most talented students and reduces the cost of education for these students.

Student Experience, Knowledge Mobilization and Experiential Learning

Carleton offers a wide range of programs and services designed to support student learning, provide transformational and enriching student experiences and engage students in the Carleton community and beyond. Carleton offers students multiple opportunities to engage with the community through presentation of their work and volunteer service within the community, and has created a co-curricular transcript which helps students evaluate their learning. The university has also expanded the opportunities for students to gain international experiences.

Professional Development and Employability

Carleton students gain a wealth of knowledge and skills during the course of their university experience, contributing to their employability, their ability to create enterprises and employ others, or their future success

as they continue their education. The university offers a wide spectrum of services, ranging from co-operative (co-op) education with opportunities in nearly every field and department across the curriculum, to career services and centrally coordinated graduate professional development programs.

At Carleton we provide information and support for job opportunities on- and off-campus, and we have greatly expanded offerings of professional development and career opportunities for students. The university continues to increase co-op opportunities for students by increased job development, student support, expanding the programs offering a co-op option and innovative programming like the internships offered with Shopify. We continue to support students in entrepreneurial activities such as 'Lead to Win', in collaboration with the City of Ottawa

Examples of Institutional Initiatives

The following are examples of key initiatives that further illustrate Carleton University's approach to enhancing the student experience.

Student Experience, Knowledge Mobilization and Experiential Learning

- **Constituent Relationship Management (CRM):** This project will provide a single, online portal to be used by all undergraduate and graduate students at Carleton University, through all stages of their lifecycle at the institution.
- **Student Mental Health:** Recognizing its crucial role in the health and well-being of its students, Carleton University has developed a comprehensive Student Mental Health Framework (SMHF), with numerous initiatives implemented since the Framework's first phase in 2009.
- Carleton University has been engaged in a wide spectrum of initiatives over the past five years to improve and enhance the graduate student experience. The impact of this institutional investment is reflected in the excellent results of the 2016 Canadian Graduate and Professional Student Survey (CGPSS). Carleton University also has a long-standing history of focusing on the undergraduate student experience as measured through the National Survey of Student Engagement (NSSE) and the Canadian Undergraduate Survey Consortium (CUSC) where overall student satisfaction has been at or above the provincial average.¹
- The university continues to expand experiential learning opportunities and documents these experiences through a co-curricular record. Students are also encouraged to volunteer in the Carleton community and beyond with Campus to Community Days and Alternative Spring Break.
- Carleton offers first-year students in many degree programs the opportunity to explore a topic of their choice in a small two-semester seminar (first-year seminar). Through close study of the topic with their professor, students develop a range of skills that provide the foundation for their success as undergraduates.¹
- Carleton launched a new course available to all undergraduate students, GINS 3200: Experiential Learning Abroad. This academic course is an experiential learning opportunity combining service work abroad with classroom instruction on the Carleton campus.

¹ Surveys showing these results are available at <http://oirp.carleton.ca/main/surveys>.

- Students have the opportunity to participate in Carleton’s Mentorship Network. The Mentorship Network connects peer mentors and mentees across the Carleton campus. The program provides mentorship training, resources, and information for all peer mentors connected to the Network.
- The Science Student Success Centre helps undergraduate students define and achieve their academic, career, and social goals. It is a hub where students can connect with their peers, faculty and staff, and with professionals within the science and engineering fields.
- The Sprott School of Business currently offers Introduction to Entrepreneurship, an experiential course where students may choose to participate in an entrepreneur learning project or a new venture project. Students have the opportunity to engage with active entrepreneurs. Students in all programs may also take a minor in business.
- The School of Linguistics and Language Studies launched Communication Courses for Disciplines and Professions (CCDP) aimed at providing literacy and presentation skills for students in engineering, computer science and information technology.
- The Alumni Association has created a mentorship program aimed at helping students connect with employers.

Professional Development and Employability

- Career and Co-op Services use the MySuccess online platform to connect students with employment opportunities. The platform provides access to online career exploration resources such as Career Cruising and Type Focus.
- The university has recently launched an on-campus job strategy to increase work opportunities on campus and tie them to an analysis of the skills the students gain.
- The university is also pursuing several major strategic academic actions to further enhance employability as a key aspect of the student learning experience, including:
 - Establishing experiential learning as a degree-level expectation in all degree programs at Carleton;
 - Establishing cuPortfolio, an electronic portfolio system supporting the creation of online learning communities as an enterprise system across the university;
 - Creating online modules on career management skills;
- Students also have the opportunity to participate in Carleton’s Peer Helper Program, which facilitates personal and professional growth for students. The Peer Helper Program uses a model of peer-to-peer learning.
- The Grad Navigate Program offers close to 80 workshops per year for graduate students on topics ranging from career planning to teaching and professional skills development. Some workshops are delivered through the university’s full partnership with Mitacs.

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)	60%
Year 1 to Year 2 retention (from the Consortium for Student Retention Data Exchange)	88.2%
Proportion of operating expenditures on student services, net of student assistance (as reported in the Council of University Finance Officers data)	6%

Institution-Specific Metrics	2019-20 Target
Students engaged in the co-curricular record	7,150
Number of First-Year Experiential Opportunities (e.g. first-year seminars, science seminars, business intro) and number of students in first-year courses with laboratories	FYSM+: 1,800 Labs: 3,625
Number of professional development opportunities for graduate students (e.g. workshops and networking events) per year	100

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

Carleton University's approach to innovation in teaching and learning excellence is firmly grounded in the principle of student-centredness. Carleton's instructors create stimulating learning environments and use innovative pedagogies that foster active, experiential and collaborative learning processes. These are "High

Impact Practices” (HIPs) that are evident at both undergraduate and graduate levels in all faculties across the university, and include many of the teaching and learning activities identified² as most effective in ensuring retention, high completion rates, employability and future success.

Carleton offers a wide range of classroom-focused, workplace-focused, and community-focused experiential learning opportunities.

Examples of Institutional Initiatives

Examples of classroom-focused experiential learning at Carleton include:

Undergraduate research initiatives provide students with the opportunity to conduct research under the supervision of a faculty member. Examples include:

- The Discovery Centre facilitates undergraduate research from across the university, providing dynamic workspace and state-of-the-art technology for undergraduate students to collaborate on projects that interest them. Carleton is a member of the Council on Undergraduate Research (CUR) in the United States, and regularly sends students to present their research at the annual National Council on Undergraduate Research (NCUR) conference.
- The Faculty of Science provides opportunities for students to work with faculty and staff in research labs. Undergraduate students receive financial support to attend domestic and international scientific conferences to give oral or poster presentations.
- The Natural Sciences and Engineering Research Council (NSERC) Undergraduate Student Research Awards (USRA) Program allows students to gain research experience in the natural sciences and engineering.
- During its annual Research Month, the Faculty of Public Affairs hosts an Undergraduate Student Showcase, which highlights the best research done by undergraduate students in the Faculty. Participants create posters or multimedia displays and give presentations to the public, including a panel of judges.
- Engineering and Science Summer Undergraduate Research Fellowships: Both the Faculty of Science and the Faculty of Engineering and Design allocate funds to support strong students (80 per cent or better GPA) in experiencing summer research with a faculty member.
- Field experiences, labs and studio work: Many departments in the Faculty of Science and the Faculty of Engineering and Design incorporate field experiences, labs and studio work as regular features of their course design. For example, in the Faculty of Engineering and Design students engage in hands-on design projects throughout their study, culminating in the capstone fourth-year design projects. The main goal of these projects is to have students emulate what is being done in industry. Working in teams, students produce an original design innovation that integrates and applies everything they have learned over the course of their studies.

² Kuh, G. 2008. *High-Impact Practices: What They Are, Who Has Access to Them, and Why They Matter*. Washington, DC: Association of American Colleges & Universities.

The Sprott Competes case-training program offers undergraduate and Master of Business Administration (MBA) students the opportunity to develop a range of essential skills for success in today's business world, through exposure to simulations and Sprott's renowned case-based signature pedagogy. Examples of workplace-focused experiential learning at Carleton include:

- The Sprott MBA Internship: This program allows students to gain experience in the workplace while completing their degrees.
- Bachelor of Computer Science's industrial internships: In a unique model of experiential learning, the Faculty of Science has partnered with industry partner Shopify to offer students a comprehensive work integrated learning experience that begins in year one. Working alongside some of the best developers and computer scientists in the world, students learn by doing; applying the knowledge gained in the classroom to solving real, complex problems. Students graduate with eight semesters of paid work experience, which is double that available in the traditional co-op program.

Examples of community-focused experiential learning at Carleton include:

- Art History's practicum program, offered through its partnership with the Ottawa art community;
- Collaborations between Geomatics students and the Environmental Committee of Ottawa South (ECOS) and the Old Ottawa South Community Association (OSCA) to map Ottawa South;
- The work of students from the Sprott School of Business, who teach the fundamentals of business to grade 5 students through their partnership with the Ottawa Network for Education;
- The international internships done by students in the Bachelor of Public Affairs and Policy Management program at Arthur Kroeger College;
- The African Studies Abroad: Selected Topic (AFRI 3100) summer course run by the Institute of African Studies;
- The "Buckets to Rain Barrels" project in which students from the Sprott School of Business, and the Faculty of Engineering and Design collaborate to develop sustainable water harvesting technologies for villages in Tanzania;
- The Virtual Senate Tour: Under the umbrella of the Faculty of Engineering and Design's Azrieli School of Architecture and Urbanism, students in the Carleton Immersive Media Studio are using cutting edge digital technologies to help the federal government document, rehabilitate, and showcase the historic parliament buildings as part of Canada's 150th birthday festivities.

Carleton University has fully embraced the paradigm of experiential learning as one of the most effective approaches to promoting student engagement, deep learning and success. A proposal has been made to adopt experiential learning as a seventh university-wide, degree-level expectation.

A 2010 survey conducted by the Carleton Community-Engaged Pedagogy Group (CCEP), a grassroots, faculty-based community of practice supported by Carleton's Educational Development Centre (EDC), found that over 2,500 students were involved in community-based experiential learning initiatives with partner organizations from several public, private and not-for-profit sectors, working at local, national and international levels.

One indication of Carleton's commitment is the institutional support given to members of the CCEP, who are currently leading a seven-year, nation-wide Social Sciences and Humanities Research Council (SSHRC)-funded Partnership Grant project — Community First: Impacts of Community Engagement. This project aims to optimize benefits to community organizations that participate in community-based research, community service learning, or other forms of community-campus engagement.

Carleton’s approach to innovation in teaching and learning excellence is supported by our Education Development Centre (EDC), which has a 25-year record of offering a wide range of professional development opportunities to our faculty, contract instructors and teaching assistants. The Ministry of Advanced Education and Skills Development (MAESD) awarded Carleton Productivity and Innovation Funds (PIF) to develop a Blended and Online Teaching Certificate as an open-educational resource for the Ontario postsecondary education network. According to a Higher Education Quality Council of Ontario report³, Carleton is among the Ontario universities that invests the most funds in new faculty orientation. Our professional development offerings are all available to contract instructors who also receive an orientation that is designed specifically for their needs.

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	28
Proportion of programs with explicit curriculum maps and articulation of learning outcomes	95%
Graduation rate (from the Consortium for Student Retention Data Exchange)	72%

Institution-Specific Metrics	2019-20 Target
Percentage of programs with three or more experiential learning opportunities	80%
Percentage of faculty and contract instructors who have participated in teaching development programs offered by the Educational Development Centre since January 2015	42%
Average teaching evaluation score	Maintain at 4.4

³ The HECQO report can be found at <http://www.heqco.ca/en-ca/Research/ResPub/Pages/The-Role-of-New-Faculty-Orientations-in-Improving-the-Effectiveness-of-University-Teaching-%E2%80%93-Part-1-University-Sector-.aspx>

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

Carleton has built on its founding principles to become arguably the most accessible campus in Canada. Carleton's tunnels – originally intended to provide access to maintenance staff – were expanded and opened for faculty, staff and student use in the 1960s, enabling persons with disabilities (PWD) to move freely from building to building throughout the seasons. The following decade saw residences constructed that accommodated students with disabilities (SWD).

The establishment of the Paul Menton Centre (PMC) in 1990 provided a central location for the development of accessible programs, services and awareness on campus and beyond. PMC became an accessibility leader in the built environment and has set the standard for other Canadian universities through the development and distribution of the Accessibility Audit Checklist (1994).

The PMC is also leveraging Carleton's entrepreneurial expertise — such as the university's award-winning Lead To Win business incubator and the Technology Innovation Management (TIM) program⁴ — to help students with disabilities create their own companies. Other student support service offices also deliver programs and support to persons with disabilities in collaboration with the PMC. Scheduling and Examination Services provides accommodation needs to both students and instructors during scheduled tests and exams through the McIntyre Exam Centre. Housing and Residence Life Services are committed to providing barrier-free facilities. As buildings are updated, the needs of PWD are taken into consideration.

Launched in 2012 by Carleton and PMC, the Research, Education, Accessibility and Design (READ) Initiative is a campus-wide initiative dedicated to access and the inclusion of persons with disabilities on campus, in the community and around the world.

Carleton University's Aboriginal Education Council was established in October 2013 with a mandate to promote, guide and oversee the implementation of Carleton's Aboriginal Co-ordinated Strategy. Carleton University creates an open and welcoming environment that encourages Aboriginal peoples and communities to establish a connection to fully participate in campus life. This includes cultivating a safe space for creative and critical inquiry, where the shared history and separate histories of Aboriginal peoples and Canadians may be explored.

⁴ In November 2015, Lead To Win was recognized as one of the best university incubators in North America by UBI Global.

The university prioritizes a safe and respectful environment for students, faculty and staff.

Carleton University is committed to offering access to academic programs. The Enriched Support Program (ESP), offered by Carleton's Centre for Initiatives in Education, offers students whose high school grades do not reflect their academic potential or who are apprehensive about returning to school after an absence, an opportunity to prove their academic ability in a structured university environment. After the ESP year, students who attain the necessary grade point average in their ESP courses are eligible for acceptance into a full-time degree program. The Aboriginal Enriched Support Program (AESP) is a stream of the ESP, offering alternative admission opportunities — as well as academic and social support — to First Nations, Métis and Inuit students in their first year of university studies.

The university encourages applications from mature applicants. This admission pathway is designed for students who are not able to meet the normal admission requirements, but who can demonstrate that they have completed the required prerequisites. Additionally, students who have not been admitted to a degree program are able to take degree-credit courses with a view to qualifying for admission, improving professional qualifications, or gaining transfer credit.

Carleton University collaborates with various organizations and facilitates a number of events designed to encourage more women to participate in STEM fields. These organizations include Virtual Ventures, Carleton University Women in Science and Engineering (CU-WISE) and Science Rendezvous. We also make a conscious effort to hire a female engineering graduate as a high school recruiter every year.

Examples of Institutional Initiatives

- **Attendant Services Program:** Carleton University's Attendant Services Program provides 24-hour, year-round support — from light housekeeping to personal hygiene — to students with physical disabilities living in residence. The service expanded to include Algonquin College in 2001. Students comprise 90 percent of the attendants.
- **The Ontario Council of Universities and the Government of Ontario** collaborate each year to hold the Innovative Designs for Accessibility (IDeA) competition for students. For the past five years, the brightest young minds from across Ontario have competed to resolve accessibility barriers in society. Carleton University students have won first place in every competition since the inception of the contest.
- **2014 International Summit on Accessibility:** Carleton University partnered with the City of Ottawa and the Ministry of Economic Development, Trade and Employment to develop and deliver the first International Summit on Accessibility. The conference brought leaders from around the world together with more than 500 professionals in the accessibility sector.
- **In November 2016,** the day-long National Youth Forum was hosted at Carleton University. This event was a part of a series of consultations the government is holding between July 2016 and February 2017 with youth with disabilities and youth who have life, work or academic experience related to disability.
- **In collaboration with PMC, Career Services** launched Accessible Career Transitions (ACT), a program that offers tailored career development assistance to students and alumni with disabilities.

- Targeting undergraduate and graduate students, the From Intention to Action (FIT: Action) program was designed to prevent drop-out for students who are experiencing significant stress, as well as to promote mental health and prevent distress from escalating towards mental illness.
- The Centre for Student Academic Support (CSAS) offers services online so that students who are taking courses online do not miss out on the tools and skills to help them succeed at Carleton.
- The New Sun Joy Maclaren Adaptive Technology Centre provides adaptive technology to Carleton students with reading and vision disabilities so that they can consult texts online in formats that are accessible to them.
- Our Aboriginal Centre, Ojigkwanong, has expanded in size and is now located in the heart of campus. Designed by Douglas Cardinal and opened in fall 2013, it offers a truly welcoming space for our Aboriginal students and the community. Ojigkwanong plays a central role in helping to realize other elements of the Aboriginal Co-ordinated Strategy.
- Carleton University has been designated by MAESD as the Ontario University to offer a Master's program in Indigenous Policy and Administration, providing Carleton with an opportunity to build on the recognized strength of its programs in public policy and administration.
- The Centre for Aboriginal Culture and Education (CACE) supports Aboriginal (First Nations, Inuit and Métis) students through their academic journeys at Carleton University. CACE aims to increase the recruitment and retention of Aboriginal students, faculty and staff at Carleton by ensuring Aboriginal cultures, traditions, and worldviews are respected and represented on campus.
- The Indigenous Youth Futures partnership is a seven-year program of partnered research that brings together Indigenous and Western approaches to promoting youth resilience and prosperity in First Nations communities.
- Virtual Ventures is a not-for-profit organization run under the Faculty of Engineering and Design that offers nationally recognized technology and engineering programs for youths in grades one to 10. A part of their programming is focused on promoting STEM fields to girls.
- CU-WISE is a group of enthusiastic undergraduate and graduate students who encourage and support women to pursue an education or career in STEM.
- The Women in Engineering Stay Program is an event hosted on campus that provides prospective students with a unique opportunity to experience life as a Carleton Engineering student and celebrate what it means to be a woman engineer.

Metrics and Targets

System-Wide Metrics	2019-20 Expected Value
<i>Number and proportion of the following groups at an institution:</i>	
Indigenous students	650/2.7%
First generation students	3,000/12.3%
Students with disabilities	2,311/9.6%
Francophone students	773/3%
Share of OSAP recipients at an institution relative to its total number of eligible students	49.3%
Number of transfer applicants and registrations, as captured by the Ontario University Application Centre	981 – applications 90 - registrations

Institution-Specific Metrics	2019-20 Target
Number of students registered with the Paul Menton Centre for Students with Disabilities	Maintain
Number of non-conventional students in Enhanced Support Program and Aboriginal Enhanced Support Program	315

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

Carleton's Strategic Integrated Plan (SIP) and its Strategic Research Plan (SRP) envision that Carleton University be known as a university that promotes research excellence and connectedness and is recognized as a leader in research that focuses both on tangible outcomes and the development of knowledge with longer-term impacts. In the SRP, our emphasis on communities means positioning our research activities to be outward facing. By building connections and promoting system-wide leadership, Carleton is well positioned to have a

transformational effect on the dialogue, paradigms, and systems-based approaches to building sustainable communities locally, nationally and globally.

To maximize our impact within scholarly realms, as well as other forums of knowledge mobilization Carleton:

- Promotes a research excellence culture across campus to support researchers, stimulate collaboration and ensure organizational effectiveness.
- Expands and strengthens multi-disciplinary partnerships and clusters locally, nationally and globally to advance research and scholarship. These partnerships include our community, government, industry and alumni.
- Engages graduate and undergraduate students in our research, thereby training future generations. This also allows students to develop hands-on skills, contribute to real-world problem solving, and gain experience through internships and co-op placements.
- Fosters a campus culture that supports internationalization and global learning, to attract and retain global talent and leverage our location in a global capital city.
- Supports our junior faculty to become the leaders of tomorrow.

Examples of Institutional Initiatives

Carleton promotes a research excellence culture across campus to support researchers, stimulate collaboration and ensure organizational effectiveness.

- Scholarly Communications: Carleton University recognizes the need to implement a framework to promote research excellence and facilitate the evolution of scholarly outputs into outcomes and impact. In this context, the Office of the Vice-President (Research and International) and the MacOdrum Library have implemented key initiatives and support systems to support research by faculty and graduate students in the areas of open access, research data management, and research information standards (Carleton has taken a lead position in the establishment of an ORCID Canadian framework).
- Information Management and Data Storage: Information Technology Services is expanding its services to researchers by providing appropriate data storage solutions to enable researchers to securely store and manage their data. This service will provide the required backup and access rights and comply with existing and emerging standards. Information Technology Services, the Office of the Vice-President (Research and International), the Faculty of Science and the Faculty of Engineering and Design are collaborating to launch Research Computing Services (RCS), which provides researchers with the support, expertise and resources necessary to conduct research computing. RCS personnel will support and assist researchers in using Advanced Research Computing (ARC) and high-performance resources available on- and off-campus. This support includes tutorials, training, workshops as well as assistance with porting and optimizing existing code.

Expand and strengthen multi-disciplinary partnerships and clusters locally, nationally and globally to advance research and scholarship. In keeping with our institutional metrics, these partnerships include our community, government, industry and alumni.

Carleton's Global Water Institute

- This Institute grew out of the recognition that more than 30 researchers across campus are working on matters closely related to the availability (resources and policy), safety (waste water and drinking water), security and accessibility of water domestically (Aboriginal communities) nationally (Great Lakes) and internationally (global health).

- Carleton and the Jarislowsky Foundation invested \$4 million to create the Jarislowsky Chair in Water and Global Health. The university is also searching for a replacement CRC Tier 2 to complement the existing expertise. Other partners involved in this initiative include the South African academic chairs program and more than 25 industrial partners in Canada, US, Europe and China.
- Key sources of funding include the Canada Research Chairs program, NSERC, IDRC, Carleton University and the Jarislowsky Foundation.

Astro-Particle and Underground Physics

- In keeping with Carleton's commitment to basic as well as applied research, we have a longstanding commitment to maintaining our world-leading position in physics. Our publication record in these areas and our leadership roles in both the ATLAS and SNO projects solidify our position in the Canadian and indeed the world physics communities.
- Carleton has invested more than \$1 million in retrofits of the physics building in the past two years. We have identified two new positions in support of the Canadian Particle Astrophysics Research Centre Canada First Research Excellence Fund led by Queen's University and have allocated our most recent Canada Research Chair Tier 1 to this endeavor. Carleton supports ATLAS, SNOLAB and TRIUMF research with internal resources annually amounting to hundreds of thousands of dollars.
- Key partners in this endeavor include the European Organization for Nuclear Research (CERN), SNOLAB, and TRIUMF.
- Key sources of funding include the Canadian Foundation for Innovation (CFI), Canadian Research Chairs and NSERC; more than \$10 million has been received by these groups in the past 3 years.⁵

Intelligent Systems

- During the past decade, Carleton invested heavily in expanding the areas of computer, software, wireless and broadband communication. This expertise has grown and expanded to include cyber security, wireless (5G), robotics, autonomous systems, sensors, digital media and data analytics.
- Eight years ago, Carleton invested in the new Canal building to house the expanded programs in this area and host the Alcatel, Blackberry, Texas Instruments, Mitel and Telus labs, amongst others. No fewer than six CRCs have been added to the faculty in these areas and recently a Cisco/NSERC senior chair in the area of Internet of Things was awarded. The new ARISE (Advanced Research and Innovation in Smart Environments) building will provide a collaborative space in ICT, health tech and clean tech linked to intelligent systems. Industrial consortia such as ENCQOR; CENGEN; and their partners such as Ericsson, Ciena, Cisco, Juniper, Nokia and QNX are all working on new projects for this space.
- Partners principally include large numbers of industries spanning wireless companies, communications, software, aerospace, automotive and space and defense organizations as well as municipalities and developing concepts for smart cities.

⁵ This includes funding from CFI (\$6,385,485) and NSERC (\$3,925,572).

- Funders in this endeavor are mostly Industry (of all sizes) and federal programs.

The Migration and Diaspora Studies (MDS)

- This initiative grew out of researchers' – in FPA, FASS, and their international colleagues – growing concern for the plight of refugees and migrants worldwide. Their internationally-recognized research advances Carleton's strategic goal of contributing to global prosperity.⁶
- The MDS Initiative encompasses individual and joint research activities in the humanities and social sciences that focus on the social, cultural, economic, and political implications of the movement of people. In October 2015, Carleton University recognized MDS with an award for building connections across the university that have had a sustained impact both over time and across research programs.
- Key sources of funding and partnerships include TD Bank, SSHRC, Carleton University, Banting Postdoctoral Program, Mitacs, Province of Ontario, Immigration, Refugees and Citizenship Canada, Global Affairs Canada, United Nations High Commission for Refugees in Canada, CARE Canada, Oxfam Canada, Oxfam Quebec.

Student Engagement in Research: Research Linked Interdisciplinary Programs (in addition to those included under Sections 1 and 5) include:

Carleton Sustainable Energy Research Centre (CSERC)

- This multi-disciplinary research team builds on our long-standing expertise in public policy and energy research. Carleton University's Faculties of Public Affairs and Engineering and Design undertake research and offer students a choice of academic programs to prepare for their role as the next generation of professionals and leaders who will address sustainable energy issues and develop practical real world solutions. Canada will need both innovative engineering and progressive policies in sustainable energy over the next decade to address and profit from these emerging challenges.
- Carleton provided a start-up grant of \$300,000, plus three new positions to launch this Centre and continues to hire in this area, including the allocation of a CRC Tier 1 and a CRC Tier 2.
- CSERC's faculty members are academic leaders who are engaged in meaningful partnerships across sectors, including governmental agencies, private sector, academe and non-profit.
- In the past five years alone, this group has secured approximately \$30 million in research funding, including the \$2 million CFI-funded solar house, NRCan, Industry, and Tri-Agency funding.⁷ This theme fundamentally supports our commitment to climate change, Indigenous studies and Northern research found across the campus.

Data Sciences Program

⁶ Examples include a recent Carleton news release at <https://carleton.ca/fpa/2017/professors-play-key-roles-inworld-refugee-council/>; Dr. James Milner is currently Research Director for the [World Refugee Council](#), Senior Fellow at the [Centre for International Governance Innovation](#) (CIGI), and Research Associate at the [Refugee Studies Centre](#), University of Oxford. He is often asked to brief member states and non-governmental organizations at the United Nations in NY on issues of refugees and migration. Another faculty member of MDS, Daiva Stasiulis served as the Chair of the United Nations Expert Group Meeting on Violence against Migrant Workers in connection with her research on foreign domestic workers.

⁷ This includes 10 per cent from industry, 35 per cent from federal sources and 50 per cent from the Strategic Investment Fund.

- In keeping with our focus on developing breadth in research and programs we have capitalized on our research strengths across all five faculties, including scholars of journalism, geography, economics, computer science and engineering who focus on data analytics. Carleton has a long and impressive pedigree in engineering and computer sciences and our approach to building pan-campus initiatives allows us to offer unique research opportunities for students of all disciplines.
- Carleton has invested in the Data Science program over the first three years. Current partners include IBM, Cisco, INTERSET, Invest Ottawa, Canarie and CATA Alliance, among others. Funders include private industry (internships), Mitacs and NSERC/SSHRC/CIHR.

Research, Education, Accessibility and Design (READ)

- Carleton is one of Canada's most accessible campuses, with a focus on student accessibility both physically and academically. Carleton also hosts considerable strength in biomedical engineering, medical devices, and industrial design. Because of this, the READ initiative expanded beyond student accessibility to create a research centre focusing on accessibility issues.
- Carleton has allocated a CRC Tier 2 to biomedical engineering and has funded the READ initiative over its first five years.
- Current partners include: Ottawa hospitals, Council of Canadians with Disabilities, OpenConcept Consulting, David Berman Communications, Canadian National Institute for the Blind, Squire Society, Tetra Society of North America, E 4 Abilities Centre Ottawa, and international partners. This theme supports our emphasis on healthy aging, patient monitoring, preventative medicine and our growing health sciences programs in general.
- Most recent funding includes \$1.65 million from the NSERC Collaborative Research and Training Experience Program.

Forensic Psychology

- The Forensic Psychology Research Centre partners with Canadian organizations such as the Royal Canadian Mounted Police (RCMP) and Correctional Service of Canada as affiliates and with international researcher affiliates. There are a number of other colleagues across Carleton from the School of Business, Criminology, and Information Technology who are actively engaged with this work. No other university in Canada provides the depth or breadth in forensic psychology that Carleton University has both at the undergraduate and graduate levels.⁸
- All forensic faculty members have research programs that are externally funded by Tri-Council funding or other types of government contract work. As well, four of the eight faculty members have CFI-funded laboratories that are used to conduct leading-edge research.

⁸ The PSYC Cycle Program Review from 2014-15, which was evaluated by External Reviewers included the following statement on p.12: *"The Forensic Psychology research area is one of the strongest experimental programs in Canada. Forensic faculty are known for both their strong lab research (e.g., Pozzulo, Eyewitness testimony; Nunes, Sex offender research) as well as their more applied contributions, such as Serin's work on Risk Assessment, quickly becoming the international standard, and Bennell's work in the area of police psychology, including collaborations with the RCMP and researchers in the UK."*

- Current research is being applied to parole decision-making across Canada, the U.S., and New Zealand. Canada’s policing agency, the RCMP, is using work from forensic psychology researchers at Carleton to better understand use-of-force in the field. Moreover, research around violent offending and female offending is routinely used to better understand program needs for prevention, intervention, and overall reduced offending. Consultations occur globally regarding best practices for child witnesses-victims. This work further recognizes the excellence in cognate departments such as law and legal studies, journalism and communication.

Metrics and Targets

System-Wide Metrics	2019-20 Target
Tri-council funding (total and share by council)	\$17.2M. 3.35% share (3 year average)
Number of papers (total and per full-time faculty)	1.6 per faculty (5 year average)
Number of citations (total and per paper)	8.5 per paper (5 year average)

Institution-Specific Metrics	2019-20 Target
Total research funding excluding tri-council funding	\$40M
Number of formal research partnerships (including industry, government, international and not-for-profit organisations)	375

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

Carleton University was founded in 1942 by community leaders who wanted to establish a university to educate and train students for the jobs and needs of the post-war economy. As a result, Carleton has always had very strong community roots and yet, because of its location in Canada's national capital, Carleton has always worked in the national and international context while supporting the economic, social and cultural development of the National Capital Region and Eastern Ontario. In today's global economy, Carleton is focused more than ever before on its global as well as its local reach, and this is emphasized in the strategic focus of our Strategic Integrated Plan, namely "Sustainable Communities – Global Prosperity". As a university community, we strongly believe that global prosperity cannot be achieved unless it is based upon sustainable communities, and we have been working to ensure that this belief is translated into action.

Carleton University's research, academic programming and community engagement have a strong focus on innovation and economic development as pillars of community sustainability. We have continued to build upon the strong historical relationship between Carleton and the regional economy by highlighting our particular strengths in supporting key economic sectors such as information and communications technologies, public service, journalism, communications, financial services, health sciences, social work, architecture and design, business innovation and entrepreneurship, biomedical technology, engineering, engineering physics, and global and international affairs. Carleton undergraduate students in all fields are offered a minor in entrepreneurship.

This is an important commitment to providing educational opportunities for a changing employment market. The Technology Innovation Management (TIM) Program at Carleton is a unique Master's program, providing the knowledge, skills and contacts for students with startup ideas to bring them into being. In 2013, Carleton University's regional economic impact was estimated at just under \$3 billion per year (Doyletech 2013; OIRP 2013).⁹

In addition to programs that provide students with the knowledge and skills to make direct contributions to Ontario's economy and innovation agenda, Carleton has a significant and distinctive track record of community-engaged research and knowledge mobilization. For over 15 years, the Carleton Centre for Community Innovation (3CI) has played an important role as a university research centre linking faculty, students and communities on issues of economic development, benchmarking to prepare for natural resource development, and impact investing. Carleton University is also one of the founding anchor institutions, along with the Brazilian organization COEP, in the creation of a new international network, the Better Futures Network. The Network focuses on research and engagement concerning the link among improved livelihoods, citizenship, communities and universities.

Over the past three years, Carleton has delivered on its plan to establish a Leadership Initiative on Regional Economic Prosperity and Sustainable Development in Eastern Ontario. This initiative was launched with the establishment of the Eastern Ontario Regional Economic Development Task Force. Through this task force, we have engaged with senior leaders from other post-secondary institutions, communities, and from all economic sectors across the region to chart a course to build economic prosperity and sustainability.

Carleton has a number of very successful programs that generate new companies and foster entrepreneurship within the region, including the well-established Lead To Win start-up incubator program and Carleton Entrepreneurs, an accelerator program in the Sprott School of Business. Carleton Entrepreneurs is dedicated to supporting student entrepreneurs from across the university as they launch and grow their new ventures under

⁹ Doyletech Corporation. Report on Carleton University Project on Founders Database and Case Studies in Research Outcomes. Prepared for Carleton University. (Ottawa: 2013); Office of Institutional Research and Planning, Carleton University, November 2013.

the expert mentorship of successful alumni of the program. We have also introduced a Master of Entrepreneurship as a new degree path in the well-established TIM program. One of the major features of the new Nichol Building, which will house the Sprott School of Business, is an Entrepreneurship Centre, which will provide a physical space to bring together these programs and initiatives and create an entrepreneurship hub by which Carleton will expand its impact upon the regional economy.

Also, the new ARISE (Advanced Research and Innovation in Smart Environments) Building, currently under construction and funded through the federal government's infrastructure program, will feature a Centre for Industrial Innovation in Energy, Water, and Environmental Research and Development. The new building will also house a Centre for Knowledge Mobilization and Social Entrepreneurship, working with regional industries and organizations to create partnerships in social and technological innovations.

Under SMA1, Carleton has also initiated a new community engagement project called Carleton Connected. Carleton Connected will provide an online portal for external organizations and communities to access Carleton's many resources and opportunities for community engagement. The portal will provide resources for faculty to help them engage with external campus partners. Carleton Connected will provide opportunities for students to become engaged with community-based research and service learning experiences. These are a few of the concrete initiatives that demonstrate Carleton University's commitment to jobs, innovation and economic development.

Examples of Institutional Initiatives

Carleton University is working in partnership with the City of Ottawa, the municipalities of Eastern Ontario — in particular, Cornwall — and the high-tech sectors in Kanata and Orléans.

- The Eastern Ontario Regional Economic Development Task Force is composed of representatives of the mayors, wardens, economic development officers, universities (Carleton, Ottawa, Queens and Trent) and colleges (Algonquin, La Cité, Fleming, Loyalist, and St. Lawrence).
- The Task Force has identified workforce development, the improved use of vacant factories or factories used only for storage as part of a robust regional development plan, and the proposed Micro-Co-Op Emporium at Carleton University as priorities. The Micro-Co-Op Emporium will improve opportunities for co-op placements with small- to medium-sized high-tech companies.
- The Task Force is planning a think-tank exercise on the municipal workplace of the future. The goal is to help identify the skills and competencies needed so that education and training initiatives can be designed accordingly and has identified possible funding sources and attracted the interest of municipalities in other regions of Ontario.
- Pending approval of the Board of Governors, the development of the Dominion/Chalmers Church property will become a hub for cultural and social innovation and performance. This historic facility will provide a downtown location for concerts, engaged teaching and learning, research, outreach and partnerships with community groups and other institutions like Algonquin College. This centre will provide work experiences for students at both Carleton and Algonquin.
- An innovation centre in Kanata would expand and extend current activities on campus and in the ARISE building, especially in the areas of communications, computer, mechanical and aerospace engineering and transportation, research on water and clean technologies in environmental engineering, science and

policy. This centre would be developed on the initiative of businesses in Kanata and would include Algonquin College, the University of Ottawa and Carleton University.

- Orléans is the site of the VENUS Cybersecurity Corporation, a partnership between Carleton, the City of Ottawa, the federal and provincial governments, and industry. Developed under the leadership of Dr. Tony Bailetti at the Sprott School of Business, VENUS is a not-for-profit organization designed to make Canada a leader in cybersecurity.
- An example of Carleton's support of a community is Cornwall where we have undertaken a number of activities with a panoply of community groups and organizations demonstrating the complexity of civic engagement and community and economic development.
 - St. Lawrence College: A large number of pathways have been negotiated between the College and Carleton. An additional joint program is currently under discussion.
 - The River Institute: Collaboration between the Department of Biology and the Institute has resulted in research initiatives and summer programming opportunities.
 - The Entrepreneurship and Innovation Centre: This is a proposed venture with the municipality, the NAV Centre, and Carleton University. The goal of the Centre is to create and develop businesses in the region, especially in the high-tech and aerospace fields.
 - Aerospace and the NAV Centre. This most significant collaboration is about joint research and shared teaching, short-term goals in teaching include the offering of certificates and diplomas in areas of shared interest
- Engagement with First Nations, Métis and Inuit Communities: Through its Aboriginal Education Council, Centre for Aboriginal Education and Culture and its undergraduate and graduate programs, the university is actively engaging with proximate Algonquin First Nations and the Mohawk Council of Akwesasne. The Kitigan Zibi First Nation and the Native North American Traveling College (based in Akwesasne) have collaborated in delivery of our Graduate Diploma in Indigenous Public Administration. Since 2010, Carleton has had a Visiting Elder program to engage the community in learning about First Nations, Métis and Inuit culture and to support students. The Carleton University Institute on the Ethics of Research with Indigenous Peoples (CUIERIP) has engaged Indigenous community members as teaching faculty since it was established in 2014. CUIERIP is unique within Canada, as suggested by annual funding from the Tri Council Secretariat on the Responsible Conduct of Research and SSHRC. It is a hands-on education initiative designed to foster good practice in in research with First Nations, Métis and Inuit peoples.
- Carleton Experiential Learning Advisory Group (CELAG): Under this initiative, Carleton is establishing an employers' advisory group to increase communications between the university and employers, to provide advice on how we can better meet the needs of employers, and create opportunities on how employers can access the talent pool on campus and create experiential learning opportunities for students. It is hoped to establish the Employers' Forum in the fall of 2017.

Metrics and Targets

System-Wide Metrics	2019-20 Target
Graduate employment rates	6 month: 85% 2 years: 92.7%
Number of graduates employed full time in a related job	87%

Institution-Specific Metrics	2019-20 Target
Number of companies with Carleton origin (since 1975)	575
Number of students in entrepreneurship courses/programs	670

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 **53,273.31** Weighted Grant Units (WGU) will be the corridor midpoint value for Carleton University. This value was determined using the institution’s actual enrolment (expressed as WGUs) from the 2016-17 academic year. Carleton University 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 Carleton University

	Projected 2017-18	Projected 2018-19	Projected 2019-20
Undergraduate Full-time Headcounts	18,790	19,093	19,268

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 Carleton University

	Target 2017-18	Target 2018-19	Target 2019-20
Masters	1,926	1,992	2,022
PhD	713	744	783
Total	2,638	2,736	2,805

Note – Allocation shown in FTEs

Projected International Enrolment

	Projected 2017-18	Projected 2018-19	Projected 2019-20
Undergraduate Full-time Headcounts	2,397	2,439	2,490
Masters Full-time Headcounts	738	784	832
Doctoral Full-time Headcounts	178	176	171
Total Enrolment Full-time Headcounts	3,313	3,399	3,493

Note: International enrolments include all funding ineligible international students.

International Enrolment Strategy and Collaboration

International engagement and a global perspective are crucial components of Carleton's academic and research mission. Carleton strives to continually expand its internationalization efforts and enhance its international reputation through multiple efforts, such as the:

- Formation of international academic and research partnership networks, and the promotion of global exchange of knowledge and ideas;
- Recruitment of highly qualified international students and faculty members;
- Formation of and participation in international research teams and networks;
- Provision of international exchange and other global study opportunities to Canadian students, and to international students from other institutions in our international network.

International student enrolment is a key element of Carleton's overall strategy. Carleton receives thousands of international applications annually, which allows us to admit exceptional students worldwide on a selective basis. Key factors that influence Carleton's recruitment activities include student mobility and demographic information, consideration of the Canadian and university trends, changes in how students gather their information and make decisions, the competitive climate of international student recruitment and the practical considerations of staffing, travel risks and accessibility of activities.

The criteria for selecting international markets for recruitment activity are based on a number of factors. These include an analysis of global student mobility statistics, statistics demonstrating national trends in incoming foreign students, priority markets identified by Global Affairs Canada and Carleton's own application and enrolment figures. Each year, undergraduate and graduate enrolment strategies are reviewed and approved by senior management at Carleton University. We ensure a diverse student population by actively recruiting in more than 40 countries and into programs where we have capacity without limiting space for domestic students.

Carleton's goal is to increase undergraduate international student enrolment overall by three per cent each year. This moderate growth allows us to ensure that we have appropriate support and services for our international students. At the graduate level, Carleton recruits top international students into programs where capacity exists beyond domestic enrolment. These students, in turn, enhance the university experience we can offer to our domestic students due to their diverse cultural backgrounds, different perspectives and life experiences. Moreover, they provide an additional source of highly qualified researchers, which allows Carleton to continue to foster global research relationships.

Strategic Areas of Program Strength and Expansion

Program Areas of Strength

1. Environment and Sustainability
2. Public Policy, Administration, and Governance
3. Information Technology
4. Human Behaviour and Development
5. Advanced Technology and Design
6. Business, Entrepreneurship, and Innovation
7. Media, Communications, and Culture
8. Global and International Studies
9. Life and Health Sciences
10. Law and Social Justice

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

Program Areas of Expansion

1. Global and International Studies
2. Information Management and Digital Media
3. Business, Entrepreneurship, and Governance
4. Advanced Technology and Innovation
5. Community Engagement, Engaged Communities

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	12.72%
• Net Operating Revenues Ratio	13.61%
• Primary Reserve Ratio	265 days
• Interest Burden Ratio	0.83%
• Viability Ratio	4.91

7.0 Institutional Collaborations and Partnerships

Carleton University has a history of providing a range of learning opportunities to ensure student access through partnerships, pathways and collaborative programs. At the undergraduate level, we have 195 well established transfer pathways with all 24 Ontario Colleges, including 26 with our neighbour, Algonquin College. Several of these pathways allow students access with advanced standing to popular programs such as Criminology and Criminal Justice, Child Studies, and Social Work. A newly created articulation agreement with Algonquin College's three-year Business Diploma and the Bachelor of Commerce at Carleton allows students to begin their studies with third-year standing.

In partnership with Fleming College, students who complete the one-year Ontario College Certificate in the Fleming General Arts and Science—University Transfer program are admitted into Carleton's Bachelor of Arts with second-year standing.

In 2015, Carleton University and St. Lawrence College signed a memorandum of understanding to collaborate in program delivery, credit transfer, applied research, entrepreneurship and other activities. At the same time, 14 pathway agreements were signed in programs that included social service worker, police foundations, law clerk, environmental technician early childhood education. The two institutions continue to explore opportunities for other collaborative programs.

All of these general and specific pathways are designed to not only provide access but also shorten time to completion for students transferring from Ontario colleges to Carleton.

The joint collaboration between Carleton University and Algonquin College for delivery of the Bachelor of Information Technology (BIT) programs provides students with both practical experience and a solid theoretical background. The programs are distinctive in that students study at both institutions every week of the four years of the programs, thus benefitting from a constant and intense cross-fertilization of the practical and theoretical. The four programs offered as part of this degree (Interactive Multimedia and Design, Network Technology, Photonics and Laser Technology, and Information Resource Management) also offer opportunities for industrial placements (co-op). Carleton and Algonquin are currently exploring the potential for an Honours Bachelor's program in Built Heritage that will concurrently fulfill the requirements for Algonquin's heritage diplomas and leverage the international profile of the research and teaching being conducted at Algonquin's Perth campus. The two institutions are also exploring the development of a Bachelor's Program in Applied Museum Studies.

Carleton's strong relationship with Algonquin College extends beyond initiatives to promote diploma-to-degree transfer. The Make the CUT (College/University Transition) program is designed to assist students with learning disabilities or Attention Deficit Hyperactivity Disorder make a successful transition from secondary school to college or university. This joint initiative between Carleton University and Algonquin College is also offered in collaboration with the Ottawa-Carleton District School Board, the Ottawa Catholic District School Board, the Upper Canada District School Board, the Catholic District School Board of Eastern Ontario, the Renfrew County District School Board and the Renfrew County Catholic District School Board.

Carleton University and the University of Ottawa have the largest number of joint graduate programs in

Ontario.¹⁰ Nearly all the graduate programs of the two universities in Science and Engineering are joint programs, as is the doctoral program in Economics. These are offered through 10 Joint Ottawa-Carleton Institutes, the Ottawa-Carleton Geoscience Centre, and the recently established Ottawa-Carleton Graduate School of Economics. An additional joint program has recently been approved to commence by the Ontario Universities Council on Quality Assurance: a joint doctoral program in Biomedical Engineering. The inter-institutional cooperation between Carleton University and the University of Ottawa provides students with an unparalleled selection of course offerings and access to research expertise on both campuses, nurturing an impressive range of research collaboration and co-supervisions across the two institutions. For instance, the Ottawa-Carleton Institute for Electrical and Computer Engineering has, to our knowledge, the largest concentration of research faculty in this area in Canada. The research contributions of graduate students in all these programs constitute a major catalyst to research excellence and innovation.

Carleton's Office of Quality Initiatives (OQI), is its centre for organizational excellence and development. OQI enables positive change and innovation by providing continuous improvement leadership through frameworks, tools, processes, and advising to advance Carleton's achievement of strategic goals and departmental objectives. Services include benchmarking, lean transformation, process review, and service excellence, among others. A recent related initiative in partnership with the University of Sheffield has resulted in the creation of the Higher Education Leadership Forum (HELFF). HELFF brings delegates from international universities together in order to share, learn and inspire leadership development in new and innovative ways in the context of the complexity of Higher Education. The aim of the Forum is to promote international collaboration in the field of developing leaders and leadership systems in higher education; to build stronger connections, share leading practices and learn from others; and to establish an international community of engaged higher education leadership development specialists. In 2017, the Higher Education Leadership Forum has attracted 85 participants from 36 institutions from across Canada, the U.S., the U.K., Australia and Singapore.

Carleton also works cooperatively with Algonquin College with regards to its Attendant Services Program. It is funded by the Ontario Ministry of Health and Long Term Care through the Champlain Region Local Health Integrated Network. Carleton also works with the University of Ottawa in sharing software purchases and future software developments.

Dominican University College

Carleton University has been affiliated with Dominican University College,¹¹ a fully bilingual institution, since May 2012. This is a unique relationship in the Ontario university system since it combines two very different institutional cultures in a manner that expands the institutional differentiation of both universities. The affiliation supports services that promote the Francophone community in Ontario. Additionally, it maintains the financial sustainability of a small and specialized liberal arts institution.

Dominican University College is an active member of the consortium of Francophone and bilingual postsecondary institutions. It participates in an initiative called Politique d'aménagement linguistique (PAL) to promote Franco-Ontarian culture. The affiliated university has also recently joined the ONCAT membership to develop innovative student pathways across postsecondary institutions.

¹⁰ Please see the following document on the Ontario Universities Council on Quality Assurance website:

<http://oucqa.ca/wp-content/uploads/2017/05/OCGS-Approved-Graduate-Programs-in-Ontario-by-University.pdf>

¹¹ See www.dominicanu.ca

Through these systems and the global Dominican network, Dominican University College offers students a diverse and strong education in the liberal arts, more specifically, in philosophy and theology. It attracts students from countries around the world.

To provide students access to high-quality learning opportunities in specialized programs in philosophy and theology, the Dominican University College has created partnerships with a number of like-mandated institutions both provincially (Saint Paul University, University of Sudbury and Glendon College) and internationally (Dominican School of Philosophy and Theology, Berkeley and Anger, France). The aim of these partnerships is to facilitate students' access to philosophy and theology courses offered in French throughout Ontario, regardless of their location. This is particularly relevant in these two specialized educational domains, where French academic resources are rare.

Dominican University College offers a variety of programs which are significantly different from those available at Carleton, or other universities in the National Capital Region. It is the only institution in Ontario with fully accredited bilingual programs at the undergraduate as well as the Masters and Ph.D. levels in both philosophy and theology. These programs are complimentary to those of Carleton University and other universities in the region. The strategic networks nurtured by the Dominican University College with colleagues in other professional areas, such as healthcare, law, applied ethics, and economics represent added value for both institutions and students. This is especially significant given the need for providing the philosophical, ethical and historical context for the knowledge-based economy of today and the future.

Ottawa: The Education City

Algonquin College, Carleton University, La Cité Collégiale and the University of Ottawa will work on a pilot for the next three years to develop a unique learner-driven partnership focusing on flexible, personalized delivery and career pathways. Stackable, non-degree credentialed offerings will focus on developing the skills required to meet the highly skilled workforce needs of business and industry in Ottawa and the Ottawa Valley.

We intend to be innovative and conceive of ways of sharing our location and unique strengths to achieve common goals of excellence in academic pursuits, increase transferability opportunities and the management and operations that underpin them while pursuing partnerships with eCampus Ontario and ONCAT. Students will be connected more than ever to work-integrated learning, pathways to employment and labour market information through a unique partnership with Magnet, LinkedIn and the Ottawa Local Employment Planning Council.

One of the results of these partnerships and collaborations will be short, outcomes-based delivery providing stackable badges and certificates. Our faculty members will be brought together to explore better understanding of the curriculums of each of our institutions. We are proposing new ways of teaching and joint programming.

All four postsecondary education institutions in the City of Ottawa have demonstrated a commitment toward working with Indigenous communities on the Truth and Reconciliation Commission's calls to action. This partnership will work to embed Indigenous ways of knowing in its framework for the benefit of all students.

This will be the first umbrella partnership between four institutions in one city, offering college and university courses in the Canada's two official languages. It will turn Ontario's second-largest city into a living lab for flexible, personalized postsecondary education program delivery and career pathways. We would be pleased to

work with government on this pilot in order to inform postsecondary education policy for the benefit of students and to meet the current and future needs of industry.

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.