



uOttawa

Faculté des sciences
Faculty of Science

FACULTY OF SCIENCE

STRATEGIC PRIORITIES

2023 - 2025

MESSAGE FROM THE DEAN

For over 50 years, the University of Ottawa's Faculty of Science has been a catalyst for transformational change in our community and abroad, inspiring discovery, creativity and innovation. We rank among the top science faculties in Canada and internationally. We are a dynamic and ambitious Faculty, research-driven, committed to innovative teaching and learning, and fully engaged in Ottawa's entrepreneurship and innovation ecosystem. Our vision is transformative and our academic and research missions are bold.

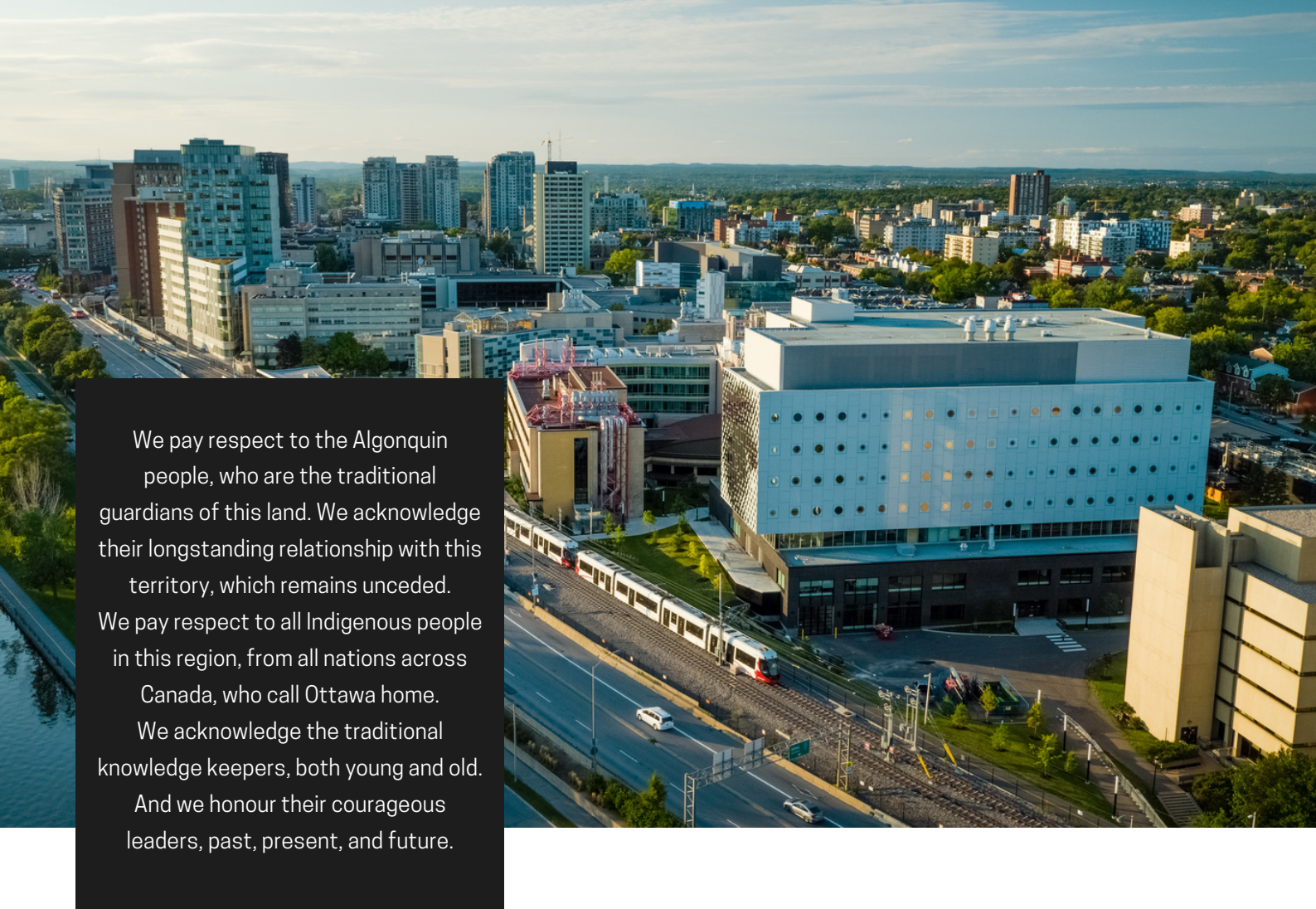
Together, we will harness the power of science to change our society by tackling many of its greatest challenges through research, innovation, strategic partnerships and a commitment to providing high-level education and training for this and the next generation of students.

I am proud to share with you the Faculty's strategic priorities for 2023–2025. Complementing Transformation 2030, our strategic priorities build on our existing and emerging strengths by identifying areas for growth. These priorities will enable us to continue to increase our research intensity, interdisciplinarity and innovation, while enriching the learning experiences of our students, fostering the professional development of Faculty members, and engaging with our communities by providing continuing education opportunities in the sciences. Above all, we want to make the Faculty of Science a stimulating and rewarding working and learning environment for students, support staff and professors.

I would like to thank the department chairs, vice-deans and leaders of the Faculty of Science for the development of the strategic priorities and the elaboration of this plan. I'm thrilled about what the prospects are for our Faculty, and look forward to sharing them with you.



Louis Barriault
Dean
Faculty of Science



We pay respect to the Algonquin people, who are the traditional guardians of this land. We acknowledge their longstanding relationship with this territory, which remains unceded. We pay respect to all Indigenous people in this region, from all nations across Canada, who call Ottawa home. We acknowledge the traditional knowledge keepers, both young and old. And we honour their courageous leaders, past, present, and future.

CONSULTATION

The Strategic Priorities were developed from:

- Strategic planning documents generated by the Faculty of Science Vice-Deans for their portfolios in 2021
- A retreat in May 2022 of the Faculty of Science Department Chairs with the Dean and the Vice-Deans
- Feedback solicited from the Departments, the Undergraduate and Graduate offices, and Faculty of Science services, December 2022–January 2023

MISSION

To expand our
leadership as a
centre of
excellence in
research and in
science education
in both official
languages.



STRATEGIC PRIORITIES

The strategic priorities of the Faculty of Science are grouped into four areas:



Education

- Enrich the learner experience
- Expand innovative education programs



Research

- Build on current strengths
- Advance our emerging research priorities
- Enhance our state-of-the-art research infrastructure



Innovation & Entrepreneurship

- Foster an entrepreneurial environment
- Expand the incubation and acceleration of innovative research opportunities and partnerships



Engagement

- Nurture a diverse, inclusive and equitable environment
- Expand professional development opportunities
- Engage with our communities



EDUCATION

Enrich the learner experience

Providing learners with a rich, diverse, and stimulating environment remains a priority of the Faculty of Science. By coordinating with other Faculties, we will increase the availability of transdisciplinary micro-credentials that allow undergraduate students to develop skills in specific areas, enhancing employability. Recognizing the bilingual character of uOttawa, we will continue to increase the offering of upper-year courses in French, thereby broadening the availability of bilingual programs. We will promote opportunities for students to expand their horizons by visiting other institutions or laboratories, both nationally and internationally. Finally, we will make our learning environment more welcoming and productive by streamlining administrative processes to the benefit of staff and students, optimizing the use of teaching laboratories to relieve current bottlenecks, and increasing student engagement outside of classroom activities.

Goals

1. Increase the availability of transdisciplinary micro-credentials
2. Improve the graduate course experience
3. Broaden our bilingual programs
4. Promote opportunities for student mobility
5. Foster sustainable management of human resources and optimize use of physical resources

Expand innovative education programs

Education in today's world must be agile, responding to emerging priorities, incorporating the benefits of new technology, and adapting to the needs of diverse learners. In the Faculty of Science, this means developing programs that accelerate entry into graduate programs, and creating interdisciplinary graduate concentrations or programs in new interdisciplinary areas such as quantum science, biomolecular sciences, data science, or computational neuroscience. It also means harnessing the power of new technologies, such as online delivery and virtual reality, to allow a greater diversity of students to succeed. Doing this with a focus on excellence in science education requires that we develop a community of teaching that encompasses both instructors and the technical staff that support our education activities.

Goals

1. Adapt teaching methods and technologies to allow a greater diversity of students to succeed
2. Increase the availability of accelerated MSc programs
3. Create new interdisciplinary graduate concentrations and programs
4. Increase the availability of professional courses
5. Develop a community of teaching to enhance pedagogical development in science education

18

undergraduate programs

4

undergraduate microprograms

10

MSc and PhD programs





RESEARCH

Build on current strengths

The Faculty of Science is a pillar of uOttawa's research strength. To maintain our research excellence, we must strengthen support for our existing researchers while continuing to attract the best and brightest researchers, support staff and learners on which our research activities depend. We can increase the visibility and impact of our research achievements by enhancing, where appropriate, knowledge mobilization and technology transfer. We can support research excellence by diversifying our funding sources, for example by taking advantage of opportunities for industry-partnered funding as well as international funding sources, private foundations, and charities. These strategies will allow us to continue to build our core research strengths.

Goals

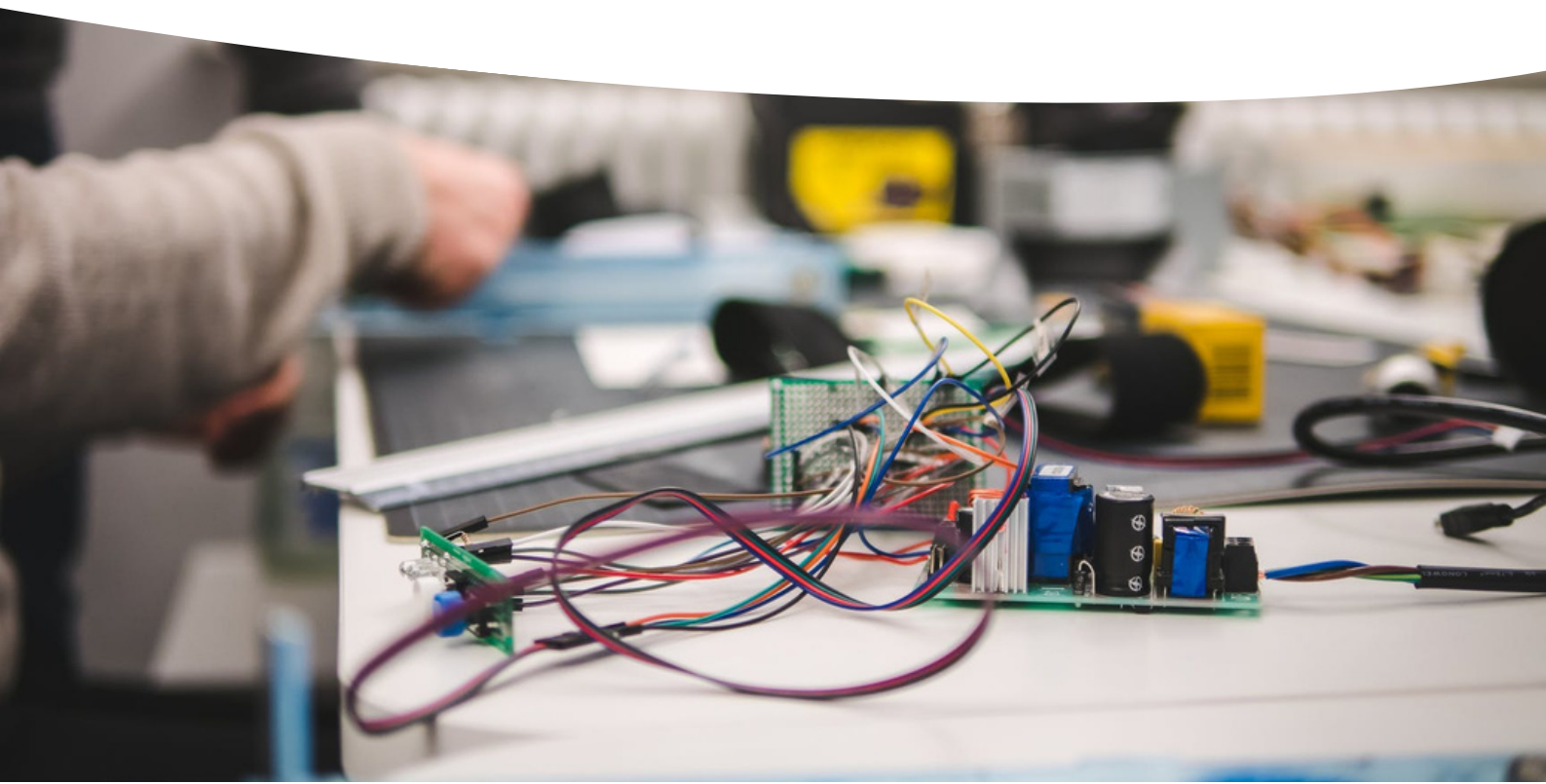
1. Recruit, integrate, mentor and retain world-class researchers, learners and staff
2. Diversify funding sources
3. Enhance knowledge mobilization, technology transfer, and outreach activities

Advance our emerging research priorities

Current research areas of strategic priority include the science of light for materials synthesis and technology; the environment, resources and climate change; dynamics and the molecules of life; and information analytics, communication and protection. To further research in these areas, which are often interdisciplinary, as well as in our core strengths, we need to develop major team and infrastructure grants that will provide the significant funds that are needed for new spaces, facilities and equipment. Cutting-edge research also depends on bringing together people – researchers, support staff and students – from different backgrounds and perspectives. To foster such interactions, we will cultivate interdisciplinary and collaborative research opportunities. At the same time, we will re-purpose existing space to create meeting areas that will facilitate collaboration and allow events that raise our visibility to be held within the Faculty of Science.

Goals

1. Develop major team and infrastructure grants in the areas of strategic priority
2. Develop and support meeting and event spaces
3. Cultivate interdisciplinary and collaborative research opportunities





Enhance our state-of-the-art research infrastructure

We cannot remain on the leading edge of research without state-of-the-art laboratories, core facilities, and equipment. Equally important are the highly trained and experienced staff that provide technical expertise and administrative support to our research endeavours. Although growth of the Faculty has fueled our research success, it has also strained our resources, particularly in terms of space. Thus, we must develop processes to assess and optimize our use of space and resources, while at the same time, renewing and supporting critical infrastructure.

Goals

1. Optimize and renew existing research space and infrastructure
2. Promote critical infrastructure to secure support and ensure access to state-of-the-art equipment, technology and expertise

12

core facilities linked to the
Faculty of Science

223

research laboratories run by
professors

63

teaching
laboratories



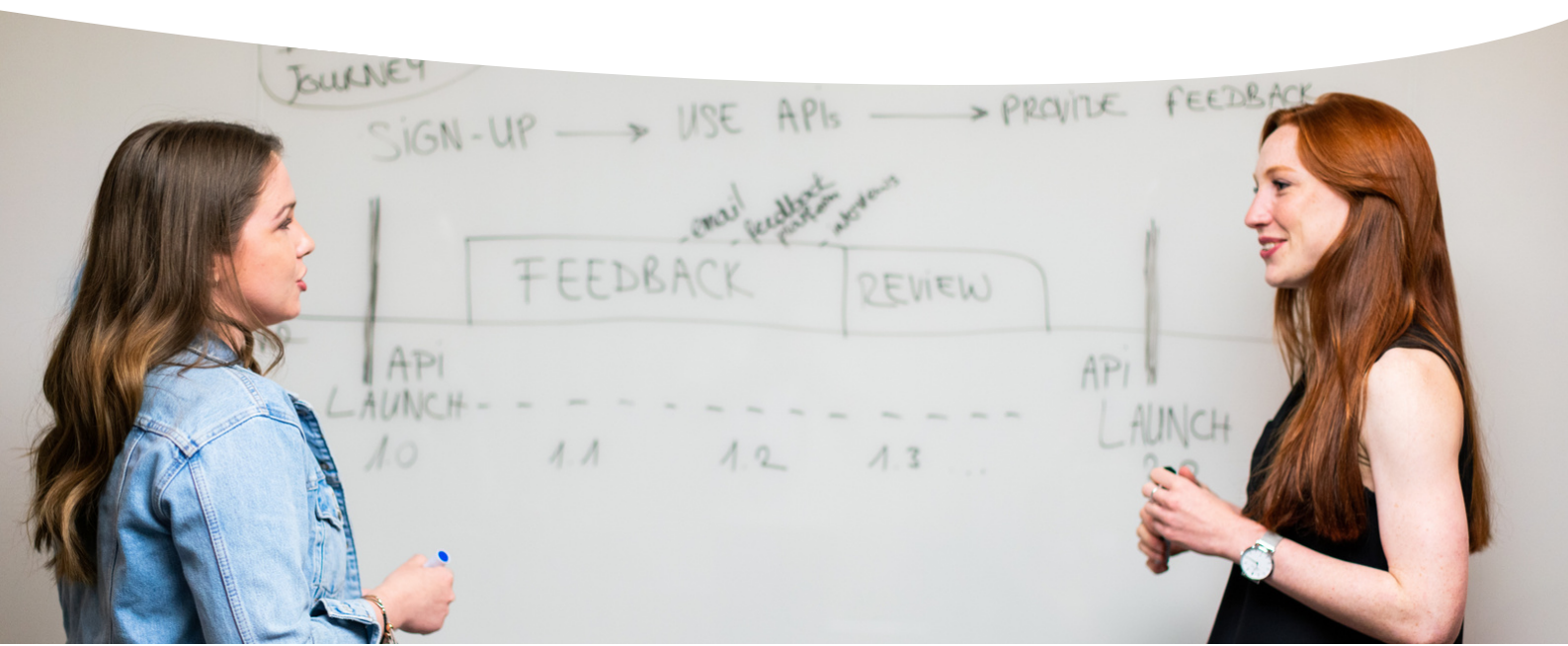
INNOVATION & ENTREPRENEURSHIP

Expand the incubation and acceleration of innovative research opportunities and partnerships

The development of our innovation pipeline can be supported by income generated through strategic partnerships and the commercialization of research, but these activities demand resources, such as space or specialized equipment. Often, however, these resources are only needed for a short but critical period. Through strategies such as USIR agreements (for the Use of Services, Infrastructure and Resources), we can manage resources in an agile fashion, making it briefly available for incubation while protecting long-term research needs. In addition, we will continue to expand and deepen connections with the emerging entrepreneurship ecosystem in the Ottawa region.

Goals

1. Optimize space management to foster innovation and incubation
2. Enhance connections with the developing innovation and entrepreneurship ecosystem in the Ottawa region





Foster an entrepreneurial environment

Innovation and entrepreneurship enhance the value of our research findings and increase our visibility but do not occur in a vacuum or without effort. To develop our innovation pipeline, we need to foster an entrepreneurial environment from the bottom up. We will provide current and future learners with the opportunity to develop entrepreneurial skills through innovative programs. For example, the Graduate Entrepreneurship Experience Program (GEEP) supports graduate students who wish to explore entrepreneurship opportunities, and we will increase awareness and use of this novel program while developing mechanisms to similarly support faculty and staff (e.g. the Bridge Fund). Making researchers aware of existing programs that support innovation, partnerships with industry, and entrepreneurship will allow them to take advantage of these opportunities. Importantly, we will support those involved in innovation and entrepreneurship by developing, implementing and enforcing best practices for the management of risks and conflicts associated with the commercialization of research.

Goals

1. Broaden mentoring programs supporting innovation and entrepreneurship
2. Develop, implement and enforce best practices for the management of personnel, finances and risks associated with the commercialization of research
3. Partner with other faculties to develop innovative undergraduate and outreach programs

2

programs in support of research
commercialization efforts

6

spinoff companies

5

graduate student
entrepreneurs



ENGAGEMENT

Expand professional development opportunities

Mentoring and professional development provide support to the members of the Faculty of Science and enable them to reach their full potential. Similarly, the Faculty of Science benefits from collaboration among members and team-building within and across units and services. These are essential elements in creating and sustaining a respectful, professional, and productive environment for faculty, staff and learners. Fostering a collegial, supportive culture that is grounded in continuous improvement and striving for excellence involves taking steps to promote growth and advancement for all members of the Faculty of Science.

Goals

1. Establish a faculty-wide culture of mentoring and peer-mentoring
2. Provide development opportunities for career advancement
3. Support staff in enhancing their expertise and skills





Nurture a diverse, inclusive and equitable environment

The Faculty of Science is committed to creating and nurturing a working and learning environment that is diverse, inclusive and equitable. To achieve concrete progress, we must first examine all aspects of our activities – teaching, service, research, innovation and research commercialization – through the lens of diversity, equity and inclusiveness so that we can document the success of the steps we take. We will emphasize the hiring of individuals from designated groups to increase representation across the Faculty. We must in addition develop tools that evaluate excellence in an inclusive fashion, and apply them to increase the diversity of candidates nominated for recognition in teaching, research and service activities. We will organize workshops for teaching personnel to increase awareness and implementation of inclusive teaching practices. We will foster a culture of appreciation that takes into account equity, diversity and inclusion because this leads to greater satisfaction and productivity for faculty, staff and learners.

Goals

1. Assess the current environment to allow progress in achieving EDI (Equity, Diversity, and Inclusion) goals to be evaluated
2. Develop approaches that foster an inclusive culture of evaluating excellence
3. Emphasize the hiring of francophone and bilingual professors and support professors in achieving active bilingualism
4. Coordinate nominations to recognize a diverse pool of candidates in teaching, research and service

Engage with our communities

The Faculty of Science commits to engaging with the continuum of learners that pass through our physical space. By reaching out to schools, we will nurture a scientific mindset within a diverse pool of future students. By increasing student engagement outside of classroom activities and maintaining connections with our graduates, we will foster a sense of belonging while students are here and even after they leave the Faculty of Science. Recognition of our alumni will increase their visibility as models for current students. Finally, we will engage with the broader community in our region by providing opportunities for continuing education in science.

Goals

1. Maintain connections with our graduates
2. Increase the visibility of high-profile alumni and alumni awards
3. Reach out to schools to cultivate a diverse 'future' community
4. Increase the availability of continuing education opportunities

25K

science alumni

316

participants in the Science
Mentorship Program

21

Science Alumni Award of
Excellence recipients since 2015





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