

Queen's contributions to the UN Sustainable Development Goals

Advancing social impact | 2022-2023



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Advancing social impact

We believe a better future for people and the planet is not only possible – it's our mission.



"Impact – making a tangible difference in the lives of others – is our legacy and our shared vision for the future."

Patrick Deane

Principal and Vice-Chancellor Queen's University

As a leading research-intensive institution, Queen's University is committed to advancing the United Nations' Sustainable Development Goals (UN SDGs). Through research, teaching, and community impact, we are helping to solve the world's most urgent challenges – from climate change to food insecurity to affordable healthcare.

In 2023, for the third straight year, Queen's has ranked among the global top 10 in the Times Higher Education (THE) Impact Rankings, an international ranking of universities that are advancing the UN SDGs within and beyond their local communities. Queen's placed third worldwide and first in North America out of over 1,700 universities in 115 countries.

Queen's University is situated on the territory of the Haudenosaunee and Anishinaabek.

UN SDGs: How we are meeting them

Across the Queen's community, much of our research, teaching, outreach, and stewardship activities are directly tied to the 17 SDGs and their targets. This report provides a snapshot of activity across our community, highlighting our efforts to advance social impact.

We hope it inspires further ideas, actions, and collaborative opportunities and partnerships so that, together, we can better support the United Nations in achieving these goals by 2030.



































Queen's and the THE Impact Rankings

The Times Higher Education Impact Rankings are the only global performance tables that assess universities against the United Nations' SDGs through their research, teaching, outreach, and stewardship efforts. The 2023 rankings reviewed over 1,700 institutions from 115 countries.



1st in the world for Zero Hunger



2nd in the world for Peace, Justice and Strong Institutions



7th
in the world
for Sustainable
Cities and
Communities

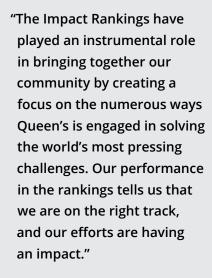


37thin the world
for Partnerships
for the Goals



3rd in the world 1st in North America

2023 Times Higher Education Impact Rankings



Patrick Deane

Principal and Vice-Chancellor Queen's University



Our goals in action

SDG 1: No Poverty

End poverty in all forms, everywhere



Research and innovation

Mobilizing research for social impact

Queen's researchers work in partnership with governments, community groups, and NGOs to advance social and economic policies and discussions critical to Canada's future. Sample projects that focused on addressing poverty and its roots and ripple effects include the annual Queen's International Institute on Social Policy conference, the John Deutsch Institute for the Study of Economic Policy Paper Series, and Queen's Global History Initiative's conference on Poverty and Scarcity in Global History.



Queen's researchers, students, and members of Queen's Senior Leadership meet with the Honourable François-Philippe Champagne, Minister of Innovation, Science and Industry in November 2022 – Queen's regularly engages with government partners as key stakeholders for collaboration and partnership to advance shared goals addressing global challenges

Research on the ground

For the past seven years, Queen's PhD-Community Initiative has brought together teams of PhD students from different programs of study to assist local community organizations in addressing a particular issue or challenge of importance to them. This year's projects included developing an SDG framework for the City of Kingston, mapping support networks for refugee associations, and increasing engagement for community services developed for underserved groups.

In 2022, Queen's launched the <u>Principal's Global Scholars and</u>
<u>Fellows Program</u> to increase its support for students, postdoctoral fellows, and faculty members forcibly displaced by conflict, political instability, violence, and persecution. The program is comprised of two streams to connect undergraduate and graduate students with streamlined admission options and funding to support their learning and to provide displaced faculty members and postdoctoral fellows with one year of support to continue their academic work.

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The Morning Show on CKWS

Queen's PhD students help strengthen growing community initiatives

Click to Watch

Teaching and student life

Supporting women of all ages

The <u>Ban Righ Centre</u> assists women of all ages, especially those who are returning to university to continue formal or informal education. The centre offers supports including student advising, workspaces, napping rooms, free meals, and financial assistance, as well as community-building events and programs.

Increasing access

Launched in 2022, the <u>Major Access Awards</u> offer transformative financial aid for our highest-need applicants so that they are empowered to accept their offer of admission to Queen's.

Recipients are awarded dedicated financial funding of \$10,000 - \$18,000 (depending on program) per year for their four years of study to help them complete their degree.

The <u>Promise Scholars</u> program is designed to reduce financial barriers and increase access to Queen's for local, first-generation students. The program provides dedicated academic, career, and financial supports of between \$60,000 - \$100,000 over four years.

Queen's <u>Commitment Scholars Award</u> celebrates and recognizes demonstrated leadership in, and commitment to, racial justice, social justice, or diversity initiatives by a student in their high school

QuARMS program

"Queen's recognizes that Indigenous peoples and Black Canadians have been historically underrepresented in the medical profession, and that standard medical admissions practices have imposed barriers to these groups. With this new approach to the QuARMS Pathway, we are hoping to reach individuals who may not have considered Queen's or the medical profession otherwise. Our faculty aims to become a leader in Canada in cultural safety, anti-racism, anticolonialism, and anti-oppression in health professions education."

Jane Philpott

Dean, Queen's Health Sciences

or in their community. The award provides dedicated financial, academic, and career support to help students complete their degree. First-year students are also eligible for the **Commitment Bursary** which provides support to students who self-identify as a member of an underserved or underrepresented group through the Admission Bursary application.

Ensuring bottom financial quintile student success

Through a range of anti-poverty programs, we seek to support and admit students who fall into the bottom 20% of household income group (or a more tightly defined target) in the country.

Programs include our <u>Admission Bursary</u>, the <u>Queen's Work Study</u> <u>Program</u>, and <u>Student Academic Success Services</u>.

Community impact

Giving back to those in our community who are in need

The <u>Queen's United Way campaign</u> is the largest workplace campaign for the United Way of Kingston, Frontenac, Lennox and Addington accounting for more than 10% of its overall fundraising target. Each year Queen's staff, faculty, and retirees raise hundreds of thousands of dollars for our local community.

Students offering support

The <u>Community Outreach Commission of the Arts and Science</u>
<u>Undergraduate Society</u> (ASUS) plays a major role in helping students from their faculty connect with community organizations looking for help and make meaningful contributions to the community. More than 300 students volunteer with the commission each year to run fundraising initiatives for local organizations, support food insecurity programs, and assist groups focused on youth mentorship, health and wellness, and animal welfare.

Located in downtown Kingston, <u>Queen's Law Clinics</u> is a professional, multifaceted law clinic that offers local residents free legal services provided by Queen's Law students. To date, 189 students have offered pro bono services to 1,590 community members.



Kingston is HomePartnering for a strong and caring community

Click to Watch



Queen's Law Clinics

Queen's Law is a leader in excellent clinical programs

Click to Watch

Global reach

Opportunities for international students

Queen's is committed to supporting students from across the globe in accessing quality education. We are proud of our long-term agreement with the <u>Karta Initiative</u>, which enables talented, low-income youth from rural India to study at Queen's. In 2022, Queen's hosted six Karta Scholars.

Since 1989, the Queen's local committee of the World University Service of Canada (WUSC) Student Refugee Program has welcomed and supported 36 forcibly displaced students to set up lives in Canada, access funding, acclimate to their new surroundings, and get their bearings as new university students. In 2023, the WUSC National Office recognized **Queen's-WUSC Local Committee** with its annual award for Outstanding Contribution to the Student Refugee Program.

The <u>Principal Wallace Freedom of Opportunity Award</u>, established by Alfred and Isabel Bader in recognition of Queen's 11th Principal, Robert Charles Wallace, offers financial support for students from developing countries who demonstrate financial need. Preference is given to refugee students.

Partnerships with the Mastercard Foundation support a variety of initiatives that enable students to research and learn at Queen's. Through a partnership with the University of Gondar, the <u>UoG/Queen's Mastercard Foundation Scholars</u> program is designed to provide up to 60 of the Ethiopian university's students and faculty members the opportunity to pursue graduate training related to disability in Ethiopia and Africa at Queen's. The <u>Jim Leech</u> <u>Mastercard Foundation Fellowship on Entrepreneurship</u> provides students and recent graduates from African universities within the Mastercard Foundation Scholars Program the opportunity to apply to a free virtual entrepreneurship training program delivered by the Dunin-Deshpande Queen's Innovation Centre.



Queen's-WUSC Local Committee and students in the WUSC Student Refugee Program at the Student Recognition Awards reception

Our goals in action

SDG 2: Zero Hunger

End hunger, achieve food security and improved nutrition, and promote sustainable agriculture



Teaching and student life

Eliminating hunger on campus

The goal of eliminating hunger begins on our campuses, where we have implemented several programs that support students who may be experiencing food insecurity.

The Food Insecurity Advisory Committee was formed by the Provost's Office to monitor current practices and trends and provide recommendations for responses to food insecurity at Queen's. The office also supports the Student Food Collective Coordinator who leads the Student Food Collective, a student-led organization on campus that works to address food insecurity holistically. In 2022, the office released a **progress update** reflecting the efforts of these groups in addressing food insecurity at Queen's.

Swipe It Forward Queen's gives students participating in the university meal plan the option to donate one meal per day (up to five per semester) to a peer in need. Eligible students can anonymously redeem up to 25 meals per term at Queen's dining halls. During the 2022 academic year, more than 4,700 meals were utilized by students in need.

In 2022, Queen's opened the <u>Providing Equal Access, Changing Hunger (PEACH) Market</u> to combat food insecurity and support food recovery by providing students, staff, and faculty with access to healthy food. Untouched food is rescued from across Queen's Hospitality Services' locations and packaged daily for sale at a self-selecting, sliding scale model, or an open rate to allow customers to voluntarily pay whatever they are able. From May 2022 to April 2023 more than 5,700 meals were served.

Sustainable Development Goals by the numbers:

Between May 2022 and April 2023, 69% of food purchased by Queen's Hospitality Services was produced in Canada and with 45% coming from local suppliers within a 500 km radius.





The <u>AMS Food Bank</u> provides members of the Queen's community with a confidential and non-judgmental food service, ensuring that students can stay healthy as they pursue academic achievements.

Learn-to-grow

Queen's has expanded the number of <u>community gardens</u> on campus with the goal of not only providing communal growing space, but of promoting sustainable gardening practices, donating to food reclamation programs, and facilitating initiatives focused on employee wellness.





Between May 2022 and April 2023, Queen's Hospitality Services, through campus partners Queen's Soul Food and Loving Spoonful, donated 27,759 lbs of food to community partners, including Kingston Food Bank - Partners in Mission.



Community impact

Eliminating hunger in our community

Queen's and its students are committed to reducing hunger in the Kingston community. **Soul Food** is a student-run organization that delivers extra food from campus cafeterias to four local shelters every night, as well as to the Kingston Street Truck Mission in the winter.

Supporting local farmers and food producers

Queen's provides events and access to university facilities such as labs, technology, and plant stocks to local farmers and food producers. The programming aims to transfer food knowledge and improve sustainable farming practices. As part of the We Love Local initiative, Hospitality Services runs an annual "Field to Fork" event to raise awareness about local food used in residence dining halls.



Since 2019, Queen's has provided weekly food scrap donations to a local pig farmer. With the goal of donating 300 lbs per week, Queen's has helped to divert 23,316 lbs of scraps from landfill to support local producers.

In 2022, Queen's Hospitality Services and Aramark, the university's food services provider, partnered with a local registered commercial beekeeper to set up a <u>bee farm</u> near Richardson Stadium. The four hives house an estimated 240,000 bees and produce approximately 500 lbs annually of honey which is harvested and used across <u>Queen's food operations</u>, benefiting our campus community while supporting sustainability.

The <u>Queen's Vertical Farming Team</u>, which is the first post-secondary design team of its kind in Canada, is developing a functional, software-automated aeroponic vertical farm in Kingston.

Queen's Honey Bei's Honey

Global reach

Queen's offers a wide range of <u>courses related to food</u> where students can study its production and impact in society around the world. From plant biotechnology, to nutrition, sustainable food systems, and the history of food, students have the opportunity to learn and research the technological, social, economic, and political factors that encompass food globally.

To help reduce global overfishing, Queen's Hospitality Services sources all seafood served at campus dining locations from suppliers with sustainable practices. Aramark, our food services provider, will only procure seafood that has been certified by a recognized third-party sustainable seafood certifier, such as Ocean Wise and the Marine Stewardship Council.



Queen's Art of Research Submission: *Hidden Fruit of the Mata Atlântica* by Sean Vanderluit, MSc Student (Biology), Núcleo Santa Virginia, Parque Estadual Serra do Mar, São Paulo, Brazil

Administration and operations

Reducing food waste

Reducing food waste is an important aspect of food security. Moving forward, diners at **Queen's dining halls** will no longer use trays when collecting their meals. This small action will have a huge impact, expecting to reduce up to 25% of food waste and conserve water and energy from washing processes.

Queen's is a Fair Trade Campus with sustainable and ethical food choices

Our community has access to <u>sustainable and ethical food choices</u> on campus. All our hospitality-run locations prioritize ethical sourcing and are mandated to include Fair Trade options as a designated <u>Fair</u> Trade Campus.

To help the Queen's community make climate-friendly food choices, Queen's launched <u>Cool Food Meals</u> in 2022. Our recipes are analyzed by the World Resources Institute, a global research organization, for their greenhouse gas emissions. Meals that meet a minimum threshold of nutritional quality and have at least 38% lower carbon emissions than the average meal are indicated with the Low Carbon Certified icon at campus food outlets.



Our goals in action

SDG 3: Good Health and Well-Being

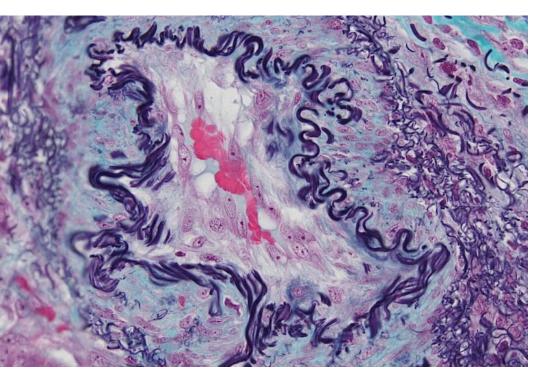
Ensure healthy lives and promote well-being for all at all ages



Research and innovation

Life-changing research

The <u>Canadian Cancer Trials Group</u> (CCTG) is the largest research group at Queen's, with over 140 Queen's faculty and staff, and 85 member hospitals and cancer centres across Canada working with a global network of 20,000 investigators and clinical trial staff. Since 1980, CCTG has supported more than 600 cancer trials to test anti-cancer and supportive therapies worldwide, enrolling 100,000 patients from 40 countries.



Queen's Art of Research Submission: *Elastic Trichrome Stain on Human Colon* by Lee Boudreau, Staff (Canadian Cancer Trials Group), Tissue Bank, Queen's University

Connected minds

Queen's has partnered with York University to pursue a new interdisciplinary research initiative, Connected Minds: Neural and Machine Systems for a Healthy, Just Society. The project led by York received \$105.7 million in 2023 from the Canada First Research Excellence Fund to advance research into a more inclusive metaverse, understand how virtual reality can be leveraged for community organizing, develop neurotechnologies for healthy aging, support Indigenous data sovereignty, and understand how brain function changes when people interact with Al versus other humans. Together, York's leading expertise in human science, disruptive technologies, and social justice will be paired with Queen's established strengths in advanced computing, Al, human health, and ethics to better understand the world's future as a techno-social collective.

Teaching and student life

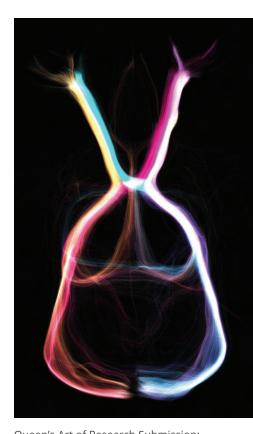
Expanding education

The Queen's Weeneebayko Health Education Program is a partnership between the Weeneebayko Area Health Authority (WAHA), Queen's University, and the Mastercard Foundation to transform healthcare in Northeastern Ontario. The program will prepare Indigenous students for careers in medicine, nursing, midwifery, and other health professions through culturally-informed education while establishing a new training site in Moosonee that will serve coastal community sites, improving patient outcomes and addressing gaps in healthcare delivery.

In 2022, Queen's and Lakeridge Health announced a new joint education and training program designed to address the ongoing family physician shortage in Southeastern Ontario communities.

The Queen's-Lakeridge Health MD Family Medicine Program builds on a long-standing partnership between the two institutions with students studying and training at the Lakeridge Health satellite campus and participating in clinical placements in communities in Southeastern Ontario early in their education.

Queen's Student Wellness Services provides confidential Mental Health Services, including one-on-one appointments with mental health professionals, groups, events, and training. Students can also use the online self-directed tool Therapy Assistance Online (TAO) to design a personal intervention plan or access free 24/7 mental health support through Empower Me.



Queen's Art of Research Submission: More than Meets the Eye by Donald Brien, Staff (Centre for Neuroscience), Queen's University

The <u>Champions for Mental Health</u> program is a student-led initiative developed in 2021 by the Student Mental Health Collective in response to both student feedback and research calling for increased mental health promotion in academic and campus environments. In 2023, more than 60 Queen's faculty, teaching assistants, and staff members were recognized as Champions after being nominated by students for showing compassion, encouraging a sense of belonging, inspiring health-promoting behaviours, and promoting student mental wellbeing.

Sexual health

The Queen's <u>Sexual Health Resource Centre</u> is a confidential, non-judgmental, sex positive, pro-choice, queer positive, non-heterosexist, and feminist information and referral service that provides students with sexual and reproductive education and healthcare services.



Queen's Art of Research Submission: *Aging with Oasis* by Riley Malvern, Staff (Health Services and Policy Research Institute), Queen's University

Community impact

Collaborating on research

Queen's collaborates closely with Kingston General Hospital
Research Institute, the research arm of the Kingston Health Sciences
Centre, and Providence Care, a local health organization. More than
350 investigators at this not-for-profit academic institute are leading innovative research projects that are making a global impact on health and wellbeing.

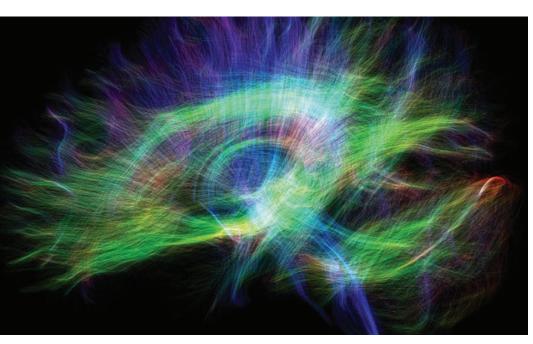
Developed with a group of seniors living in a Kingston-area apartment building, <u>Oasis Senior Supportive Living Program</u> is a unique model of active aging-in-place. Researchers Catherine Donnelly and Vince DePaul from the School of Rehabilitation Therapy at Queen's are leading a research project to evaluate and expand the Oasis model across the country.

Providing health services to the broader community

The <u>Neuroscience Outreach Program</u>, located at the Centre for Neuroscience Studies at Queen's, strives to improve the Kingston community's awareness and understanding of neuroscience. Programmers lead lecture series, educate athletes about concussions and brain safety, perform hands-on experiments with local children, and provide companionship to elderly patients.



Partnering for Health and Wellbeing Click to Watch



Queen's Art of Research Submission: *The Wiring of the Brain* by Donald Brien, Staff (Centre for Neuroscience Studies), Oueen's University

Building community together

Queen's students have a long history of fundraising for causes locally, nationally, and globally. During the past year, student-organized events have raised more than \$650,000 to advance research in cancer care from the **Queen's Cure Cancer Classic** initiative to **Queen's Relay for Life**, both approaching two decades of fundraising, and the inaugural **Queen's Med Fights Cancer hockey game**.



Queen's Art of Research Submission: *Miracle at 12-Seconds – Cure Cancer Classic Charity Rival Gam*e by Jason Zhao, BASc Student (Engineering Physics), Queen's University

Global reach

Advancing health beyond our borders

Queen's is committed to improving the health and wellness of individuals and communities across the globe. The university's International Centre for the Advancement of Community Based Rehabilitation works to mainstream disability and advance the concept of community-based rehabilitation (CBR) practice in collaboration with persons with disabilities. Initiatives aim to improve healthcare and social services for people with disabilities, their families, and their communities in Canada and 15 other countries around the world.

Queen's Health Outreach (QHO) is a student-run non-profit that promotes health through peer-to-peer discussions in classrooms in Canada and around the world. Each year QHO implements programs for students in Belize, Guyana, Kenya, and across Canada that aim to improve individual and community health.

Responding to humanitarian situations

The Refugee Health Initiative is a collaboration between Queen's Family Health Team, Kingston Community Health Centre, and KEYS, Kingston and region's largest provider of comprehensive employment services and services to newcomers, designed to support government-assisted refugee families with ensuring they receive appropriate and necessary care to manage their health and prevent any worsening of health outcomes. Together, they have developed comprehensive resources for healthcare providers, newcomers, and community organizations for the provision of care for refugees from around the world who settle in the region.

Administration and operations

Health and wellness policies

Queen's prioritizes health and wellness in its operations. To protect our community's health and wellbeing, Queen's maintains a tobacco and **smoke-free environment** on all our campuses and properties.

Empowering our people

In 2022, Queen's Human Resources launched a five-year strategic plan, Empowering our People, which identified employee wellbeing as a strategic priority across the Queen's community. Starting with the creation of the Employee Wellness Services unit, Human Resources aims to align supports for employee wellbeing and become a wellness leader in developing and engaging in initiatives that contribute to a healthy and accessible workplace.



Our goals in action

SDG 4: Quality Education

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



Research and innovation

Evidence-based teaching and leadership

The <u>Centre for Teaching and Learning</u> promotes quality teaching and builds teaching and educational leadership capacity in direct support of Queen's students' learning experiences. They support evidence-based, innovative, and sustainable strategic program enhancement initiatives, and encourage and support emerging, grassroots investigations of novel approaches to teaching and learning.

The <u>Principal's Impact Courses</u> program is part of a long-term commitment to transform curricula and enhance already-existing undergraduate courses or develop new courses that support the Queen's Strategy. Successful applicants receive grants providing up to \$10,000 to develop their proposed course meant to boost student learning for impact, promote student research, integrate I-EDIAA principles and practices, strengthen local and global connections, and focus on significant and urgent challenges.



Commitment to research integrity and excellence

Our **Research Integrity Policy** is a foundational commitment to strive for research and scholarly practices that exemplify honesty, truthfulness, fairness, respect, responsibility, and the courage to adhere to these values, according to standards set by the International Centre for Academic Integrity.

Teaching and student life





Queen's University is committed to providing an educational experience that will build upon the principles of fairness and inclusiveness – the hallmarks of our Educational Equity Policy.

Enduring commitment

In 2022, Queen's University Senate approved updates to the Ontario Council of Academic Vice-Presidents' Undergraduate and Graduate Degree Level Expectations to include language explicitly focused on I-EDIAA to emphasize the objectives of a global mindset and research learning to benefit society and the public good in the curriculum.

Queen's Degree Level Expectations connect to program and course learning outcomes, which in turn shape teaching and learning strategies, methods of assessment, and course content.

Accessible learning outside the classroom

Queen's offers learning opportunities outside our classrooms. Students and faculty also have access to **Open Educational Resources**, free digital teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license. These resources provide equal access to quality education by making lectures, books, and curricula widely accessible online for free.

Professional, executive, and continuing education at Queen's

Queen's offers numerous Professional, Executive, and Continuing
Education programs through the faculties of Arts and Science,
Education, Law, and Health Sciences, as well as the School of Doctoral Affairs
Also runs numerous Master's and Doctoral programs. Furthermore,
Smith School of Business and the Industrial Relations Centre executive education, digital learning, and open enrolment courses for professionals at all stages of their career.

Inspiring learning among Indigenous communities

The <u>Indigenous Futures in Engineering at Queen's University</u> program aims to encourage more Indigenous youth to become engineers by promoting math and science in elementary and high schools, offering culturally relevant educational materials for Indigenous youth and their teachers, and enabling access to post-secondary study.

Community impact

Public resources for lifelong learning

Queen's is proud to provide access to educational resources for the community beyond our campus, including access to computers, online courses, and lectures. The University Library welcomes visitors from the community to visit our facilities, access our collections, and borrow books.



How STEM Outreach Creates Future Engineers Click to Watch



Public events for lifelong learning

Queen's hosts regular on-campus events including lectures and community educational sessions that are open to the public. The **Queen's University Events Calendar** highlights events taking place online or in-person at the university.

Additionally, Queen's faculty, staff, and students participate in educational outreach activities in local schools and in the community. The Smith School of Business also offers regular free **Business Insight webinars** for the public on themes relating to business, finance, and leadership.

Inspiring local youth

Queen's faculty and students offer a variety of educational programs in the Kingston community. **Science Rendezvous Kingston** is a family-friendly event that allows community members to meet and talk to Queen's researchers, conduct experiments, and learn about the possibilities of science, technology, engineering, and mathematics (STEM).



Sistema Kingston
Paper to Wood Ceremony
Click to Watch



Sistema Kingston, run by Queen's Faculty of Education, is a free after-school music program serving children from low-income and marginalized communities that focuses on positive social change through the pursuit of musical excellence. In 2022, Bader
Philanthropies, Inc. donated \$533,000 USD to guarantee funding for the next three years of the program, allowing Sistema Kingston to reach more children by expanding its program and providing more practicum placements and hands-on learning opportunities for Queen's Education students.

In 2022, Queen's launched <u>three new summer camps</u> on campus to inspire future leaders in STEM.

The Queen's Health Sciences Outreach and Summer Program provides mentorship and educational opportunities to local high school students who self-identify as low socio-economic status, racialized, 2SLGBTQIA+, immigrant, refugee, persons living with disabilities, or first-generation Canadians to experience life as a student in health sciences through hands-on workshops, lectures, lab visits, simulation activities, and Standard First Aid with CPR-C training during an immersive week-long program.

The <u>Black Youth in STEM</u> summer program, part of <u>Connections</u> <u>Engineering Outreach</u>, is an expansion of the Queen's Black Youth in STEM virtual club for students from grades 7-11. During part one, Black students from the Greater Toronto Area attended STEM workshops over a four-day period with part two inviting the students to stay on Queen's campus for three days, providing the opportunity to learn more about engineering disciplines and life as a Queen's student.

Connections Engineering Outreach also offered a new stream for girls in grades 1-8 as part of their <u>All-Girls Queen's Summer</u> <u>Engineering Academy</u> (QSEA). The all-girls courses, including the Taste of Engineering which is a three-day overnight program on Queen's campus for students in grades 7-8, were designed and taught by an all-female staff with the goal of creating a positive female space to inspire STEM exploration.



Global reach

Partnerships to increase access

In 2022, Queen's, with St. Lawrence College and the City of Kingston, co-hosted an event to launch the new exhibit My Story of Water focused on SDG 6: Clean Water and Sanitation at the Tett Centre for Creativity and Learning. Organized by Muna Taro (translated as "we are coming together"), the exhibit is a collaboration between three organizations based out of Nigeria, 1 Million Teachers, Five Cowries Arts Education Initiative, and Girl Rising. Queen's Faculty of Education partnered in 2018 with 1 Million Teachers, whose CEO is a Queen's alumnus, to assist with program development and to create a practice that supports learning in Nigeria and beyond, while advancing the UN SDGs.



Our goals in action

SDG 5: Gender Equality

Achieve gender equality and empower all women and girls



Research and innovation

Promoting women in STEM

Queen's University's <u>Women in Science and Engineering</u> (WiSE) is a student-run organization that promotes female involvement in STEM disciplines through networking and mentorship opportunities for women in the Queen's and Kingston communities.



Women in Science at Queen's (WiSQ) is an employee resource group for women looking to explore and build upon their careers at Queen's while at the same time helping foster equity within science. Their goals include promoting discussions about gender bias in science; incentivizing the active participation and leadership of women; and establishing a visible, equitable, diverse, and inclusive community promoting the development and retention of women across all scientific disciplines.

Sustainable Development Goals by the numbers:



In the 2022 academic year, 60% of students starting a degree at Queen's were women.



Additionally, 35% of our senior academic staff are women.

Teaching and student life

Educational equity at Queen's

The <u>Senate Educational Equity Committee</u> (SEEC) supports our institutional goal of achieving educational equity at Queen's. Additionally, the Senate's <u>Educational Equity Policy</u> outlines our commitment to and understanding of educational equity, as well as our implementation and accountability processes.

Queen's University recognizes that the values of equity and diversity are vital to and in harmony with its educational mission and standards of excellence.



Policies of non-discrimination against women and transgender people

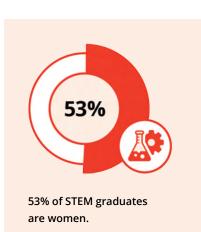
Queen's has several policies that prohibit discrimination, including our Harassment and Discrimination Prevention and Response

Policy and our Policy on Sexual Violence Involving Queen's

University Students. Both policies outline our anti-discrimination measures as well as the processes for addressing harassment and/or discrimination on our campus.

Positive Space

The <u>Positive Space</u> program offers visibility and support to 2SLGBTQIA+ communities. Program participants help to create positive spaces at Queen's by avoiding making assumptions about anyone's sexual orientation or gender identity and by signaling that all are welcome. Positive Space stickers posted at the entrance to work, living, or study areas, and on personal belongings encourage the Queen's community to celebrate the gender and sexual diversity that exists on campus and to work to overcome subtle and overt forms of discrimination and harassment.



Women's mentorship opportunities and educational supports

The <u>Queen's Women's Network (QWN) Mentorship Program</u> offers 10-month mentorship programs for women-identifying employees looking for mentorship from senior academic staff. The Smith School of Business provides MBA <u>mentorship and coaching opportunities</u> for female-identifying groups, which aim to enable more women to ascend to the senior ranks of management.

Queen's is a family-friendly university

As a child-friendly campus, we have implemented resources through our **Queen's University Child Friendly Campus Initiative** that help parents and caregivers on campus to nurture their families while pursuing their scholarly and work responsibilities.

The Office of Support Services and Community Engagement offers supports to students with children by providing comprehensive information on resources available at Queen's and off-campus from education programs to private breastfeeding friendly spaces and change table locations.

The <u>Queen's Daycare Centre</u> provides affordable on-campus childcare. The <u>Queen's Daycare financial assistance program</u> provides subsidized childcare and other financial assistance for students with dependents and/or families, while the <u>Childcare</u> <u>Support Plan</u> provides reimbursement for eligible expenses to faculty and staff.

Community impact

Empowering women in politics

The <u>Queen's Female Leadership in Politics Conference</u> is Canada's premier undergraduate conference which seeks to empower women in politics. The two-day event brings together more than 150 students from across the country and provides participants with the necessary skills and connections they need to succeed.



77% of Medicine graduates are women.



WE-CAN Client Highlights Click to Watch

Supporting entrepreneurs

Over the past three years, more than 1,300 women have been supported by the <u>Women Entrepreneurs Can</u> (WE-CAN) project led by Queen's Partnerships and Innovation in achieving their entrepreneurial goals. Supported by a \$3.2 million grant from FedDev Ontario, WE-CAN empowers women in the Kingston region with the tools, resources, expert mentors, networks, and community building needed to take their businesses to the next level.

Administration and operations

Maintaining high ethical standards

In 2022, Queen's Board of Trustees approved the Improper Acts
Reporting Policy to promote a culture of honesty, transparency, and accountability to maintain high ethical standards in all the university's activities. The policy enables all members of the university community to report what they believe to be an Improper Act, such as the contravention of university policies or regulations and relevant laws, and creating a danger to the life, health, or safety of persons or to the environment, for review and possible investigation, without concerns of reprisal.

Tracking enrolment and representation

To better understand our progress in ensuring equitable enrolment at Queen's, we compile an annual <u>Student Affairs Enrolment Report</u>, which provides information about incoming first-year undergraduate and graduate students, including enrolment information for international, self-identified Indigenous, and first-generation students, as well as retention and graduation rates.

Queen's also regularly tracks our efforts to increase the representation and engagement of students, faculty, and staff from equity-deserving groups through Inclusive Queen's.

Through outreach programs and targeted recruitment, we also encourage applications by women in subjects in which they are underrepresented. Additionally, we track women's likelihood of graduating compared to men's, and develop plans to close any gap. Through these measurements, we are proactively building a campus that welcomes and reflects diverse identities, cultures, and perspectives.





60% of Arts & Humanities/Social Sciences graduates are women.

Our goals in action

SDG 6: Clean Water and Sanitation

Ensure availability and sustainable management of water and sanitation for all



Research and innovation

World-class research improving water quality

Queen's <u>Drinking Water Quality Group</u> is focused on examining the factors and mechanisms that lead to poor water quality in drinking water systems and developing innovative technologies and best practices to protect drinking water in Canadian systems. Their research facilities include the Drinking Water Distribution Lab, a unique research facility in North America located at Queen's that can replicate the full hydraulic, physico-chemical, and microbiological conditions of real distributions systems in a fully-controlled environment, and the Environmental Engineering Laboratories in Queen's Mitchell Hall, which comprises 10,000 square feet of state-of the-art water research space and technology.



Queen's actively promotes conscious water usage on campus and in the wider community.



Protecting the planet

The <u>Vega Medal</u>, sometimes referred to as equivalent to a "Nobel Prize in Geography," is bestowed by King Carl XVI Gustaf of Sweden on behalf of the Swedish Society of Anthropology and Geography. Queen's researcher John Smol was this year's recipient of the lifetime recognition as the most prolific scientist regarding northern lake systems. As a paleolimnologist and foremost expert in the study of long-term global environmental changes to lakes and rivers, Dr. Smol has advanced our understanding of the impacts of pressing environmental issues, such as lake eutrophication, acidification, contaminant transport, fisheries management, and climate change with a special focus on the Arctic.



Teaching and student life



Our local lakes

Diane Orihel, Queen's National Scholar in Aquatic Ecotoxicology, is the co-lead of the pELAstic project, a globally unique large-scale study funded through NSERC's Plastic Science for a Cleaner Future program. Scientists are conducting experiments at multiple scales – from mesocosm to whole lakes – to understand the fate and ecological effects of microplastics in freshwaters. Dr. Orihel and her students are also involved in the **Great Lakes Plastic Cleanup network**, a regional effort to address the around 10 million kilograms of plastic flowing into the Great Lakes.

Community impact

Water management educational opportunities

Understanding the need to engage communities in environmental strategies, Queen's runs ongoing outreach programs for local communities to learn about effective water management. The <u>Beaty Water Research Centre</u> (BWRC) is an interdisciplinary research and education centre that focuses on water governance, use, resources, and quality, and offers programs designed to motivate students and the public to become water stewards in their homes, classrooms, and communities. In addition to their state-of-the-art facility on Queen's campus in Kingston, researchers with BWRC have field facilities located near Perth and Tamworth in Ontario and on Melville Island in Nunavut.



Queen's Art of Research Submission: *Old Fashioned Alchemy* by Alan Chang, MSc Student (Civil Engineering), Beaty Water Research Centre, Queen's University

As a satellite facility of the Queen's University Biological Station, the Elbow Lake Environmental Education Centre offers a wide variety of curriculum-based programs year-round that encourage local primary and high school students to explore and measure local biodiversity through field-based scientific investigation. In 2023, in collaboration with local Indigenous knowledge holders, teachers, and Queen's STEM faculty, Elbow Lake launched the Queen's University Indigenous Land-based Learning STEM (QUILLS) program. A series of five STEM Learning Bundles tailored to grades 7-10, QUILLS aligns with Ontario science curriculum outcomes to teach students about the biodiversity crisis, global climate change, and traditional Indigenous knowledge systems.



Global reach

Inspiring future leaders in water sustainability

LEADERS-CREATE is an NSERC-funded graduate program at Queen's to educate future leaders in water and watershed sustainability. Students engage with leading experts and researchers with an interdisciplinary focus on knowledge mobilization and training related to policy, risk assessment, and integrated management of watersheds.

Understanding sanitation inequalities

Safe water, sanitation, and hygiene (WASH) are critical for human development, yet women and girls are disproportionally affected by inadequate WASH services. The **Empowerment in WASH Index** (EWI) developed at Queen's by researcher Elijah Bisung measures WASH-related interventions and aims to solve gender disparities in access to these basic needs. This pragmatic survey-based tool is currently being developed and piloted in different cultural settings around the globe.



Administration and operations

Water-conscious building standards and policies

The Queen's <u>Conservation and Demand Management Plan</u> applies building standards and policies to minimize water use, energy consumption, and greenhouse gas emissions. Our <u>Building Design Standards</u> also include LEED® (Leadership in Energy and Environmental Design) water targets. Our Custodial Services have also gone green, and now exclusively use <u>certified green cleaning</u> products and reusable microfiber cloths.

Queen's is a bottled water free campus

Queen's University has had a <u>campus-wide ban on bottled water</u> <u>sales and distribution</u> for almost a decade. Instead, we have more than 200 drinking fountains and free bottle-fill stations across our campus, which students can locate using an <u>online map</u>.

Water management

Queen's wastewater is treated by Utilities Kingston's state-of-the-art Ravensview treatment facility which uses biogas collection, allowing the plant to partially power itself from the effluent it receives. Additionally, Queen's <u>internal policies</u> reflect local governance plans and regulations that have been designed to protect local watershed, including through training and support to eliminate contaminants disposal in the municipal sewer and the coordination of hazardous material pickup across campus.



The <u>CAPit</u> energy conservation renewal project completed 1,147 toilet retrofits, 61 urinal retrofits, 353 shower head replacements, and installed 1,523 faucet moderators throughout campus resulting in a water reduction use of 185,000 m³.

Our goals in action

SDG 7: Affordable and Clean Energy

Ensure access to affordable, reliable, sustainable, and modern energy for all



Research and innovation

Leadership in clean energy innovation

The Queen's Centre for Energy and Power Electronics Research (ePower) brings together academic and industrial partners to develop new energy-efficient, cost-effective, and environmentally friendly power electronic technologies. The Centre's director, Praveen Jain, is a trailblazer in the field of power electronics. Holding more than 100 patents and founder of two successful companies, Dr. Jain was recently awarded the prestigious honour of the Killam Prize for Engineering, which recognizes Canada's most inspiring scholars and thought leaders.

Inside Queen's Reactor Materials Testing Laboratory (RMTL), researchers are seeking to learn more about material interactions within nuclear reactors and examining the lifespans of these critical pieces of energy infrastructure. A state-of-the-art facility, the RMTL uses a proton accelerator to introduce damage into materials at a microscopic scale, providing insights into and drawing parallels with the way that materials are damaged within a nuclear reactor. Queen's researchers are also advancing policy discussions around the role of Small Modular Reactors in Canada's energy transition towards a net-zero economy.



Queen's draws upon the remarkable strengths and talents within our university to meet the modern challenge of achieving environmental sustainability.



Queen's Art of Research Submission: Turquoise Light from a Polymer Device under High-Electric Power by Dongze Wang, PhD Student (Physics, Engineering Physics, and Astronomy), Queen's University

Teaching and student life

Incubating future sustainability innovations

The <u>Dunin-Deshpande Queen's Innovation Centre</u> provides incubation programs for startups working on technology that supports a low-carbon economy. The <u>Queen's Innovation Centre</u> <u>Summer Initiative</u> (QICSI) provides training, funding, and office space to early-stage startups.

Leading the way

Queen's Master of Earth and Energy Resources Leadership is designed for professionals in the natural resource industry. Students learn about natural resource management and sustainable energy engineering from a leadership perspective, providing them with the skills and aptitudes needed to tackle the most challenging technical, economic, political, ethical, social, and environmental questions.



The Foundry | Spectra Plasmonics
Click to Watch



Queen's Art of Research Submission: *Salt Cavern Luminescence* by Dr. Jean Hutchinson, Faculty (Geological Sciences and Geological Engineering), Windsor, Ontario

Community impact

Queen's climate commitment challenge

As a part of Queen's Climate Commitment Challenge, the <u>Sustainable</u> <u>Living Series</u> offers free public events and resources to provide education and awareness on sustainability topics, including measuring your carbon footprint and improving your home's energy efficiency.

Queen's Solar Design Team (QSDT) is a multidisciplinary team of Queen's students building an autonomous home on campus to function completely off the grid for research, education, and community events. QSDT hosts public events for all ages and offers educational resources to learn more about integrating sustainable living and the power of solar energy.



Providing research that informs sustainable public policies

Queen's sustainability research is often used by the private and public sectors to inform sustainability initiatives. The <u>Institute for Energy</u> <u>and Environmental Policy</u> (QIEEP) provides research that informs and supports governments in developing energy-efficient technology policies.



Queen's Art of Research Submission: *Lithium Below, Stars Above* by Dr. Christopher Spencer, Faculty (Geological and Geological Engineering), Western Australia



Queen's is working with the Kingston community to make our city and our planet more sustainable. Queen's <u>Institute for Sustainable Finance</u> (ISF) at Smith School of Business is a multidisciplinary network of researchers, private sector leaders, and government policymakers working together to shape Canada's innovations in sustainable finance.

Promoting excellence in research-led education

We are a member of the <u>Matariki Network of Universities</u> (MNU), an international group of leading universities recognized as being premier institutions for advanced learning. Queen's is the lead partner in the organization's Sustainability, Environment, and Resources pillar, which focuses on fostering healthy ecosystems.

Administration and operations

A green campus

As part of its commitment to sustainability, Queen's has a Policy on Environmental Management that aims to exceed its environmental legislation obligations. The Queen's Building Design Standards mandates that all building renovations or new builds are following energy efficiency standards. Meanwhile the Conservation and Demand Management Plan outlines specific measures for upgrading buildings to higher energy efficiency and plans for renewable energy generation.

The Canadian Green Building Council is the association responsible for the delivery of the Leadership in Energy and Environmental Design (LEED®) certification program. Several <u>buildings on Queen's campus</u> are LEED® and LEED® Gold certified, including the School of Kinesiology, Goodes Hall, and the Endaayaan – Tkanónsote residence, in support of Queen's Climate Action Plan.

Our pledge for carbon neutrality

Queen's has signed the University and College Presidents' Climate Change Statement of Action for Canada, pledging to reduce greenhouse gas emissions and enhance research and curriculum in the areas of climate change and sustainability. As part of this commitment, we developed our **Queen's Climate Action Plan** which aims to reduce greenhouse gas emissions by 70% from 2008 levels by 2030 and achieve carbon neutrality by 2040.



In signing on to the Climate Charter for Canadian Universities,

Queen's also made a <u>Responsible Investing Commitment</u> that aligns with international standards including the UN-supported Principles of Responsible Investment. In 2023, we launched our inaugural <u>Responsible Investing Annual Report</u> that provides an in-depth look at the university's progress against our responsible investing commitments.

Queen's pension plan, the University Pension Plan Ontario (UPP), announced a formal commitment and action plan to achieve net-zero portfolio emissions by 2040 or sooner, with an emphasis on decarbonizing the real economy through the UPP Climate Action Plan.

SDG 8: Decent Work and Economic Growth

Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all



Community impact

Partnering for a prosperous economy

Queen's is Kingston's top employer with 1 in 10 jobs in the city found at the university. Additionally, Queen's has supported more than 700 startup companies and entrepreneurs, including 600 in Kingston.

Our <u>economic activity</u> also makes up 11% of our community's local GDP from Belleville to Brockville.

Employment pathways

Queen's <u>Career Gateway Program</u> creates employment pathways and on-the-job learning for opportunities at Queen's for vulnerable persons within the community, including refugees and individuals belonging to equity-deserving groups with limited English-language skills. Participants develop in-demand skills as casual members of the Custodial Support Services team, positioning them as possible candidates for future employment opportunities, and receive paid release time from work to attend language training.

Teaching and student life

Building experience

Queen's offers a wide-range of opportunities for undergraduate and graduate students to build their work experience and develop industry-ready skills from experiential learning to paid internships. In addition to faculty-specific initiatives, eligible students can take part in the QUIP), Summer Work Experience Program (SWEP), and Work Study Program.



Partnering for a Prosperous Economy Click to Watch



Queen's University was selected by Employment and Social Development Canada as a recipient of an Employment Equity Achievement Award in the category of Innovation for the Queen's Equity Appointments Process (QEAP) Application. Queen's also works with our local partners to offer initiatives such as the **Queen's Career Apprenticeship: Kingston** that helps new graduates jumpstart their careers while helping small businesses attract and retain highly skilled talent in Kingston.

In 2022, Queen's launched a series of modules as part of Ontario's **eCampus Virtual Learning Strategy** to integrate experiential learning programs across the university. The goal is to empower individuals, addressing barriers that underrepresented students may face when engaged in a work-integrated learning experience.



Queen's Career Apprenticeship Click to Watch

Administration and operations

Reflecting the Queen's mission, vision, and values

In 2023, Stephanie Simpson became the inaugural Vice-Principal (Culture, Equity, and Inclusion), with oversight of the Human Rights and Equity Office, the Office of the Ombudsperson, the Office of Indigenous Initiatives, and the Complaints and Investigations Office. This new role better reflects and delivers on the Queen's mission, vision, and values, particularly our commitment to I-EDIAA as it is embeded in the Queen's Strategy.

Tracking and promoting employee diversity and inclusion

Queen's Equity Services measures and tracks our <u>employment</u> <u>representation rates</u> to better ensure gender parity, as well as pay scale equity, among our staff.

Going beyond fair pay

<u>Total Compensation</u> for Queen's staff and faculty includes pay, benefits, pension, as well as a wide array of work/life wellness programs. The university strives to provide career enrichment as well as staff learning and development opportunities. Queen's also publishes the <u>salary grids and ranges</u> that are used for salary administration and pay-related decisions as part of its efforts to promote pay equity and transparency.



Queen's is committed to ending discrimination in the workplace, including discrimination based on religion, sexuality, gender, and age.

Supporting job satisfaction and personal growth

Understanding that employees need coaching and regular feedback to succeed, Queen's has implemented the Performance Dialogue Process (PDP) to allow staff at all levels to have regular opportunities for meaningful conversations with supervisors about their work and contributions.

Respecting labour rights

Queen's recognizes unions and labour rights, including freedom of association and collective bargaining for all. Our Human Resources website features a list of the <u>University Unions and Associations</u> and their corresponding collective agreements. The agreements set the terms of employment at Queen's as well as conditions for salary negotiation and conflict resolution.

An equal and diverse workforce

Queen's recognizes and appreciates the value that diversity adds to its activities and initiatives. Through its **Employment Equity Policy**, the university acknowledges its responsibility to maintain an employment equity program that includes processes, plans, and procedures that address historic underrepresentation in the employment of marginalized groups. This includes women, members of visible minorities and racialized groups, Indigenous peoples, persons with disabilities, persons of any sexual orientation or gender identity, and other such groups designated by legislation or otherwise.

An objective of Queen's new Global Engagement Strategic Plan is the creation of an employee resource group (ERG) for staff and faculty who identify as international and newcomers to Canada. In 2023, the **Queen's Global Connect** event served as a stepping stone towards the creation of the new ERG intended to build and strengthen community bonds and further nurture an inclusive, globally-minded campus environment.



Empowering Our People Queen's Human Resources Strategic Plan

Click to Watch



Queen's University Human Rights and Equity Office Click to Watch



An impartial resource for promoting fairness

The <u>Office of the University Ombudsperson</u> is an independent, confidential, and impartial support for the Queen's community. It provides general advice to employees and students about their rights and responsibilities and helps ensure procedural fairness in decision-making.



Outlining our commitment to employment equity

The Human Rights and Equity Office at Queen's developed the **Employment Equity Action Plan 2022-2023**, outlining the university's goals to increase equity in the areas of recruitment, retention, and professional development for the 2022-2023 academic year.

SDG 9: Industry, Innovation and Infrastructure

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

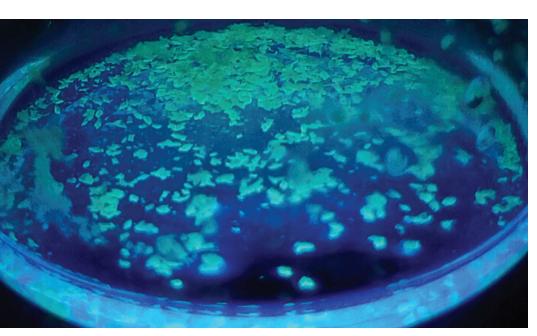


Research and innovation

Leading the way in research

We are proud to be one of <u>Canada's leading universities for</u> <u>research</u>. Queen's is a member of the U15 group of Canadian Research Universities, a collective of the country's most research intensive post-secondary institutions. We are also honoured to have 33 Canada Research Chairs on our faculty.

Queen's has attracted nearly \$620 million in <u>research and</u> <u>development</u> to Kingston since 2013. Our research activities contribute to Kingston's ranking as a top-10 Canadian startup ecosystem by **StartupBlink**.



Queen's Art of Research Submission: Watch Me as I Glow by Paul Lummis, Postdoctoral Fellow (Chemistry), Crudden Lab, Queen's University

New frontiers

In 2022, Queen's launched the new <u>Carbon to Metal Coating</u>
<u>Institute</u> (C2MCI) led by Cathleen Crudden, Canada Research Chair in Metal Organic Chemistry. The international, interdisciplinary institute will advance Dr. Crudden's research in novel coatings to protect critical metals from breaking down supported by a \$24 million grant from Canada's New Frontiers in Research Fund. More resilient metals will reduce the demand of metal extraction processes, lowering greenhouse gas emissions and minimizing the leaching of contaminants into the environment from corroding metals.

Forefront of artificial intelligence

Queen's researcher Parvin Mousavi has been named the Canadian Institute for Advanced Research (CIFAR) Chair of <u>Artificial Intelligence at the Vector Institute</u>. Dr. Mousavi's work exploring the use of computer-assisted diagnosis of diseases using ultrasound-guided interventions is refining the accuracy of low-cost options which will also make care more accessible.



Queen's Art of Research Submission: Ferrofluid Spikes by Ivanna Boras, BASc Student (Physics, Engineering Physics, and Astronomy), Queen's University

Teaching and student life

Innovative curriculum

Queen's supports student innovation through a variety of initiatives at both the undergraduate and graduate levels. The <u>Certificate</u> <u>in Entrepreneurship</u>, <u>Innovation</u>, <u>and Creativity</u> helps students gain a variety of skills in marketing, finance, communications, and business planning to develop an entrepreneurial mindset. Since its inception six years ago, more than 400 students representing 25 countries have completed the <u>Master of Management Innovation</u> <u>and Entrepreneurship</u>. Those students have gone on to create 89 startups and scaleups employing 112 people.

In 2023, a \$2.5 million gift from the Quinn Family Future Foundation to Smith School of Business at Queen's established the new Quinn Environmental, Social, and Governance (ESG) Professorship.

Enhancing the curriculum, the ESG Professorship will further develop the next generation of business leaders and positively contribute to an inclusive, diverse, and sustainable society where organizations respect planetary boundaries.

Queen's Art of Research Submission: *Smith Women in Finance* by Neil D'Souza, MFIN Student (Smith School of Business), Queen's University

Sustainable Development Goals by the numbers:



In 2021-2022, Queen's research income from industry and commerce totaled \$62 million. Additionally, more than 38 university spin-offs established at least 3 years ago are still active.



Start a Business While You Study at Queen's University Click to Watch

Community impact

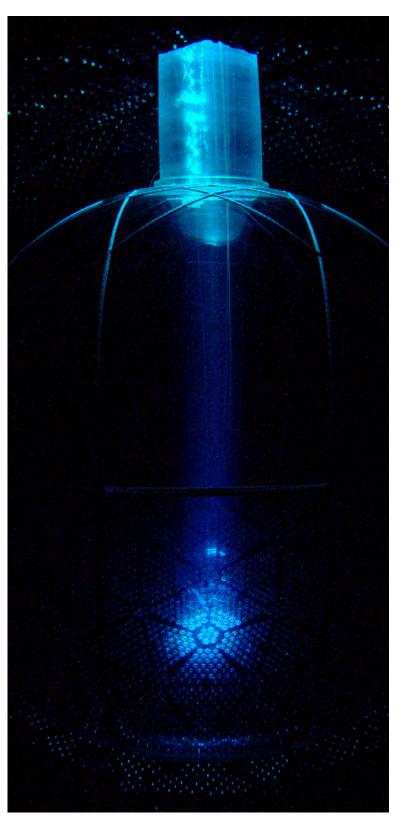
Partners in innovation

Through Queen's Partnerships and Innovation (QPI), we offer services, resources, and programs to support entrepreneurs, including those from Queen's, to accelerate the growth of startups and small to medium-sized enterprises within Kingston and Eastern Ontario.

Dunin-Deshpande Queen's Innovation Centre

The <u>Dunin-Deshpande Queen's</u> <u>Innovation Centre</u> is a panuniversity initiative that encourages and supports the innovation and entrepreneurship activities of students, professors, entrepreneurs, and community members. Programs are vast and include the <u>QIC Summer Initiative Program</u>, <u>QyourVenture Accelerator Program</u>,

The Foundry, Regional Pitch Competition Series, Konnect, The Hive, Rose Innovation Hub, and SparQ Studios Makerspace.



Queen's Art of Research Submission: *The SNO+ Detector* by Dr. Alex Wright, Faculty (Physics, Engineering Physics, and Astronomy) for the SNO+ Collaboration, SNOLAB

Global reach

Empowering thousands of students

Students and recent graduates from African universities within the Mastercard Foundation Scholars Program are eligible for free virtual entrepreneurship training delivered by the Dunin-Deshpande Queen's Innovation Centre. Since 2020, the Jim Leech Mastercard Foundation Fellowship on Entrepreneurship has supported more than 1,200 students, many of them women, on their journey to start or scale their business.

Research addressing the world's most pressing issues

Queen's is home to 22 institutional and faculty-based <u>research</u> <u>centres and institutes</u> that support interdisciplinary networks. Through international collaboration, research, and comparative approaches, they develop international best practices around contributing to the United Nations' Sustainable Development Goals and ask critical questions related to issues ranging from dark matter to divisive societies and energy transition.

Administration and operations

Generating impact

The <u>Queen's Innovation Ecosystem</u> is committed to providing guidance to stakeholders on the knowledge mobilization and commercialization of intellectual property arising from research and innovation activities in a manner that considers the potential to generate economic or social impact for the region, province of Ontario, and Canada. In collaboration with our partners, the Queen's Innovation Ecosystem provides support in the seven key areas of knowledge mobilization and entrepreneurship, funding, mentorship, community, innovation, partnerships, and promotion.



Queen's Art of Research Submission: Platinum Surface Electrochemistry by Derek Esau, PhD Student (Chemistry), Queen's University

SDG 10: Reduced Inequalities

Reduce inequality within and among countries



Research and innovation

A new chapter

Throughout the 2022 academic year, the Black Studies program <u>hosted a series</u> of screenings, conversations, and celebrations to mark the launch of the new interdisciplinary **Black Studies program** at Queen's.

Teaching and student life

Fostering a climate of inclusion

The <u>Student Applicant Equity Census</u>, which is administered to all Queen's applicants, asks prospective students to voluntarily indicate their gender and whether they identify as an Indigenous person, a person with a disability, and/or a racialized person. It also seeks to determine the overall economic makeup of applicants. <u>Responses</u> are not used in the admission selection process, but rather, they support our efforts in the pursuit of educational equity.

Queen's <u>Inclusive Community Fund</u> provides financial support to host programs, events, initiatives, or projects that serve to promote a more inter-culturally informed, tolerant, and inclusive campus community. Established by a \$50,000 annual contribution from the Office of the Provost and Vice-Principal (Academic), the fund is available to any Queen's student or employee.



Queen's is committed to counteracting discrimination in this institution and developing a climate of educational equity that recognizes and respects the equal dignity and worth of all who seek to participate in the life, work, and mission of the university.

The <u>Graduate Inclusivity Fellows</u> initiative advises the School of Graduate Studies and Postdoctoral Affairs on matters related to equity, diversity, inclusion, and Indigeneity, including the development of strategies and programs to improve learning experiences for graduate students and postdoctoral fellows.

Encouraging first-generation students

Queen's supports first-generation students attending university through our <u>First-Generation Admission Policy to First-Entry</u> <u>Undergraduate Programs</u>, which offers additional and alternative admission pathways to full-time undergraduate degree programs.

Supporting aspirations of Indigenous students

Indigenous students face unique challenges while pursuing post-secondary goals. Our <u>Admission Policy For Indigenous</u> <u>Candidates To First-Entry Undergraduate Programs</u> offers Indigenous candidates additional and alternative pathways for admission to full-time undergraduate degree programs.

Finding community

The <u>Four Directions Indigenous Student Centre</u> is a safe and welcoming gathering place for Indigenous students at Queen's. The Centre provides holistic support services including peer mentorship, academic assistance, financial aid, and cultural programming.

The <u>Yellow House</u> on Stuart Street is committed to creating a comfortable and accountable space for students who identify as QTBIPoC through programming and events where feelings of safety, empowerment, and community can be fostered and identity can be celebrated.

Supporting students with disabilities

Queen's Student Accessibility Services (QSAS), in collaboration with instructors and staff, is committed to supporting students with disabilities as they pursue their academic goals. Through encouraging the use of well-implemented Universal Design for Learning (UDL) in combination with individualized academic accommodations, QSAS seeks to remove disability-related academic barriers.

Understanding that students with disabilities face increased financial burdens, Queen's also offers <u>financial assistance</u> and services for students with disabilities.



Welcome to Queen's Click to Watch



Community impact

A call to action

Working with Jaime Black, creator of the REDress Project, Queen's expanded this year's installation to spaces across both main and west campuses. Draped from lamp posts, the nearly 50 red dresses serve as well-known and thought-provoking icons in recognition of countless lives impacted and lost to violence and system neglect. The installation lined Queen's main thoroughfares marking the National Day of Awareness for Missing and Murdered Indigenous Women, Girls, and Gender Diverse People and the university's participation in the Moose Hide Campaign – a nationwide grassroots movement of Indigenous men and boys seeking to end violence against women and children.

Protecting and advancing human rights

The Human Rights and Equity Office (HREO) at Queen's aims to advance human rights, equity, and inclusion by developing and implementing employment and educational equity strategies. The office has four main service offerings: human rights advisory services; equity services; sexual violence prevention and response; and accessibility. Our Human Rights Advisory Services provide advice concerning human rights issues and advocate for practices and policies that address human rights in our community.

Empowering all our members to thrive at Queen's

Inclusive Queen's offers tailored services, programs, and resources to support individuals from a range of cultures, ethnicities, spiritual affiliations, socioeconomic backgrounds, gender identities, and sexual orientations. The program's website is a resource for students, faculty, and staff to learn about initiatives that are transforming Queen's into an institution that empowers all members of its community.

The Queen's Student Accessibility Services (QSAS) supports more than 2,000 Queen's students each year.





Welcome to Student Wellness Services Click to Watch

Administration and operations

Removing barriers to education

The <u>Queen's University Accessibility Policy</u> guides us in identifying, removing, and preventing barriers to persons with disabilities so we can ensure equal access to all that our university has to offer. The <u>Queen's University Accessibility Hub</u> is our central online resource for accessibility, providing supports as well as information on initiatives pertaining to disability and accessibility on campus, including the <u>Building Accessibility and Campus Map</u> that highlights accessible facilities on campus such as accessible entrances, parking lots, places to eat, and emergency phones.

Creating an accessible and inclusive campus

Queen's newest residence, Endaayaan – Tkanónsote, opened in 2022 with its design guided by our goals and values. Aligning with our commitment to I-EDIAA, the residence includes a prayer room with two ablution stations, yoga and meditation room, and outdoor courtyard gathering space designed by local Indigenous artist David R. Maracle. The building was also designed to include more accessible living spaces such as barrier-free rooms, accessible entrance with elevators, accessible washer and dryers on each floor, and a Service Animal washing station.



Addressing systemic employment barriers

In 2022, Queen's approved a new <u>Targeted Hiring Policy</u> to address underrepresentation, remove systemic employment barriers, and improve opportunities, access, and diversity across campus. Targeted hiring is intended to enhance existing institutional <u>Employment</u> <u>Equity Procedures</u>, including the <u>Queen's Equity Appointments</u> <u>Process</u>, and comply with the Ontario Human Rights Code requirements.



SDG 11: Sustainable Cities and Communities

Make cities and human settlements inclusive, safe, resilient, and sustainable



Research and innovation

Working in real time

During the construction phase of the recently opened \$180 million, 1.2 km Waaban Crossing bridge, the City of Kingston approached Queen's to partner in finding tools that could help track the performance of this new major piece of infrastructure. Researchers and students from Queen's Ingenuity Labs installed sensors along the bridge's expansion joints and bearings and are using drones to provide the city with access to real-time quantitative data to help make more informed decisions about the performance and maintenance of the structure in a cost-effective way.

City of the future

Queen's researcher and Canada Research Chair in Youth and African Urban Futures **Grace Adeniyi-Ogunyankin** has been named a Fellow of CIFAR's new program, Humanity's Urban Future. Alongside a team of researchers from around the world, Dr. Adeniyi-Ogunyankin is studying how metropolitan centres have changed over time and space with the goal to engage policymakers, political advisors, and civic actors for future social impact.

Sustainable Development Goals by the numbers:



Approximately 8% of the university's expenditure was on arts and heritage in 2022.



Queen's Art of Research Submission: Third Crossing Bridge by Sushant Neupane, MASc Student (Civil Engineering), Kingston, Ontario

Teaching and student life

Decolonizing and Indigenizing our campus

As part of Queen's ongoing commitment to truth and reconciliation, two new Indigenous gathering spaces have been opened. Inspired by traditional Anishinaabe wigwams, a stand-alone structure has been built near the south end of Tindall Field which incorporates significant Indigenous symbology such as entryways positioned facing east and west with the overall design nodding to the medicine wheel. At the centre of the new Endaayaan – Tkanónsote residence courtyard is a gathering space featuring a six-metre wide stone turtle designed by local Indigenous artist David R. Maracle. Surrounding the turtle are benches featuring the pattern of the Two Row Wampum belt representing the basis of all treaties by the Haudenosaunee people. Both gathering spaces are important places of ceremony, learning, and reflecting for the Queen's community as locations for ceremonial fires, and teaching, learning, and engaging with Indigenous ways of knowing and being.



Student safety

Two programs provide around the clock safety for the members of our community – <u>AMS Walkhome</u> is a service provided by the Alma Mater Society offering safe walks to students, both on the Queen's campus and within the Kingston community, and <u>Safe Walk</u> is run by Campus Security when Walkhome is off duty.

A home away from home

The Queen's <u>Off-Campus Living Advisor</u> has directly supported more than 1,400 students in evaluating off-campus housing, tenant rights and responsibilities, and moving resources.

Community impact

It's all in the data

For the past two years, researchers from Queen's Department of Geography and Planning have been working with municipal partners to investigate the community's resiliency during the COVID-19 pandemic. The project has grown into the online platform Kingston IN Focus which highlights a range of community indicators, including information about the local economy, employment, environment, housing, and cultural heritage. The platform allows community members to delve deeper into the themes, and compare local, provincial, and national data, and relies on advanced computing techniques to perform automatic updates whenever new data becomes available.

Better homes

Queen's is working to support the City of Kingston's new retrofitting program, **Better Homes Kingston**. Students volunteer as program ambassadors and help identify opportunities to improve the city's housing stock. Participating residents enter into a property loan program to complete home renovations that will increase comfort, affordability, and cut greenhouse gas emissions.

All are welcome to Queen's campus

We have and will always welcome the public to use and enjoy many of the university's arts spaces, libraries, museums, and natural heritage lands, such as the Queen's University Library, Miller Museum of Geology, Arthur B. McDonald Canadian Astroparticle Physics Research Institute's Visitors Centre, and sports fields.

World renowned public art gallery on campus

More than a professional art centre and academic and research resource, the <u>Agnes Etherington Art Centre</u> is also a leading, internationally recognized public art gallery. One of its feature exhibits is its <u>Indigenous Art Collection</u> which is comprised of significant works by First Nations, Métis, and Inuit artists from Turtle Island as well as Indigenous artists and communities internationally.

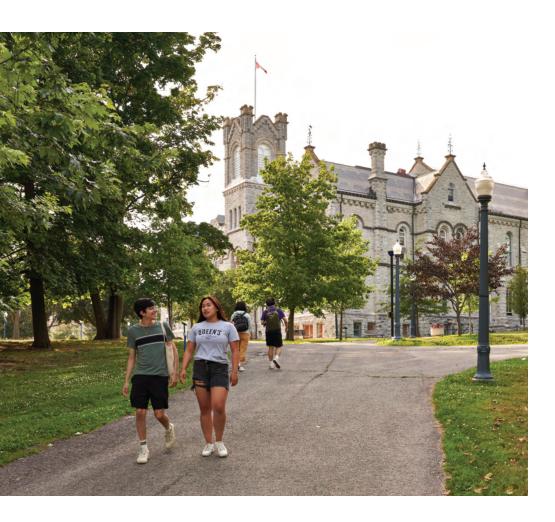


Queen's radio station CFRC celebrated its 100th anniversary in 2022 making it now one of the oldest campus stations in the world. CFRC is unique in Kingston as it encourages volunteers and staff members to have a voice on current issues and initiatives. In addition to covering news, sports, and weather, CFRC also spotlights researchers and diverse populations in the Kingston community.



A campus built among the trees

Many rare trees exist on the Queen's campus, including those native to Canada and those that have been introduced from other parts of the world. The **Queen's University Snodgrass Arboretum** was established in 1999 to recognize these unique species. A **campus map** also allows visitors to take self-guided tours and identify the more interesting specimens.



Performances by internationally acclaimed talent

The <u>Isabel Bader Centre for the Performing Arts</u>, or "The Isabel" as it is fondly known, hosts public performances, bringing local, national, and internationally renowned artists and performers of all genres to the local community, including musicians and performing artists.



Isabel Bader Centre for the Performing Arts Click to Watch

Administration and operations

Driving sustainable commuting

Queen's is committed to reducing our environmental footprint by encouraging positive behaviour change and alternatives.

Our Alternative Transportation Sub-Working Group is mandated to develop solutions for daily commuting in the Kingston area for employees and students with a focus on benefits for the environment, human health, as well as the economy. Current initiatives include the Transpass Program which includes discounted monthly passes, unlimited monthly bus rides, and other incentives for using public transit.

We also participate in the National Commuter Challenge – a week-long competition designed to encourage active and sustainable commuting.

The campus at the city scale

Decisions made by the university have an impact on the surrounding city and community. As such, it is important that there is coordinated planning to ensure mutual benefit between Kingston and the university. The Queen's University Campus
Master Plan outlines Queen's commitment to ensuring our planning decisions complement the vision and policies of the City of Kingston.





Since 2014, over \$20 million has been spent on conservation efforts.

SDG 12: Responsible Consumption and Production

Ensure sustainable consumption and production patterns



Research and innovation

Landfill leakages

Queen's researcher Kerry Rowe was recognized with the inaugural NSERC Donna Strickland Prize for Societal Impact of Natural Sciences and Engineering Research for his life's work devoted to the prevention and remediation of groundwater and surface water contamination disasters related to landfill barrier systems. Dr. Rowe's work has impacted regulations, contaminant remediation, design, and the construction practice of landfills across three continents.

Sustainable Development Goals by the numbers:



In 2022, 31% of Queen's University waste was recycled.

Recovering value from waste plastic

The <u>Open Plastic</u> project led by Queen's researchers is working on the development of novel microbiological technology to support the breakdown of plastic waste into marketable recycled products. This work will support the diversion of plastics away from landfills, saving Canada over \$500 million a year and creating 40,000 future jobs in the clean technology industry.

Teaching and student life

It pays to dine sustainably

Sustainability is incorporated everywhere at Queen's, including in all Hospitality Services' food operations. The Housing and Ancillary
Services Sustainability Framework
includes several initiatives that are effective in reducing waste while dining on campus, including the GOOD TO GO Reusable Container Initiative
and Reusable Mug Program. Students, staff, and faculty members are incentivized to help combat single-use waste by saving money through participation in dining halls and retail food locations.

Take less, waste less

Our <u>Waste Audit Report</u> prepared by GFL Environmental identified opportunities to improve our overall waste diversion rate and expand our recycling program. It also recommended that Queen's continue to raise awareness and education about waste and recycling procedures on campus.

The success of the university's diversion initiatives relies on the cooperation and participation of students, faculty, and staff. The Waste Wizard app is one tool to help anyone on campus determine the best method to dispose of items with the goal to support good recycling.



Queen's has the country's first university-based Sustainability Chef, responsible for our environmentally friendly and always tasty food options.

Community impact

Extending product life

<u>Mindful Move-Out</u> is an initiative supported by Queen's and the City of Kingston which provides supports and resources to help students sustainably and responsibly donate, trade, and recycle items as they move out at the end of the academic year.

The <u>Drop or Swap Event</u> is one of the programs that helps students to donate their furniture, small appliances, kitchenware, electronics, office supplies, clothing, linen, and non-perishable food items to local charities during their move-out period. This year's event collected 4,818 items for donation with an estimated value of \$190,000.



210,452 single-use containers were diverted from landfill between May 2022 and April 2023 through the GOOD TO GO reusable container initiative.



Moving toward zero plastic waste

Our efforts to reduce plastic use continue to pay off. As a **Bottled Water Free Campus** we have minimized plastic bottle waste.

Because we regularly track the amount of waste generated and recycled across our campus, we also know that our awareness and recycling programs have **reduced the amount of waste** produced at Queen's and diverted large amounts of plastic waste from our city's landfills.





Our Bottled Water Free Campus initiatives remove almost 100,000 water bottles from circulation every year.

Administration and operations

Respecting the environment in all we do

We believe we have a responsibility for the safety of the environment as a shared resource. As such, our Policy Statement on Environmental Management commits to exceeding all legislation and formal obligations for protecting the environment. The policy also aims to educate the university community about actions they can take to have the smallest possible impact on the environment.

Sustainability at your fingertips

Sustainable Queen's is a dynamic community, bringing together campus and Kingston partners pursuing climate action and sustainability efforts in all their forms. The <u>Sustainable Queen's</u> website outlines our sustainability initiatives and includes various student resources, research, and reports.



Queen's Art of Research Submission: *Nature's van Gogh* by Hayden Wainwright, MSc Student (Biology), South Frontenac County, Ontario

Sustainable sourcing

Queen's strives to create a culture of sustainability on campus that influences the way we operate. We encourage and support **social procurement** focused on meeting our needs while achieving value for money and generating benefits to the organization, the community, and the economy while minimizing damage to the environment. Our **Procurement Policy** ensures accountable, efficient, transparent, and ethical practices are used to acquire products and services for the university whether by purchase, rental, or lease.

Sustainable dining

Queen's Hospitality Services serve more than 3 million meals a year during regular operations to students, faculty, staff, and the broader community. They are committed to providing the highest quality, guest-centric food and experience while also meeting the needs of our diverse community in a sustainable and financially responsible way. Hospitality Services manages several initiatives across campus to integrate sustainability into their operations and make a positive impact on our university's consumption needs. We are proud to be a <u>Fair Trade Campus</u> and source only <u>sustainable seafood</u> to be served on campus.

SDG 13: Climate Action

Take urgent action to combat climate change and its impacts



Research and innovation

Future resiliency

<u>Evaluation</u> (CASTLE) Innovation Cluster is a research collaboration between Queen's and the Royal Military College of Canada. The team is working on improving the storage of mine waste, ensuring safety

The Climate Adaptive infraStructure Testing and Longevity

and improving resilience of transportation infrastructure, such as roads, railways, pipes, and coastal defense structures, as well as ports and harbours, against the direct and triggered geotechnical hazards of climate change.



Queen's Art of Research Submission: *A New Light* by Robert Cichocki, PhD Student (Civil Engineering), GeoEngineering Lab, Queen's University

Converting carbon dioxide

Queen's researcher <u>Cao Thang Dinh</u> has developed technology to capture and convert CO_2 into valuable chemicals and fuels using renewable energy. As one of the world's main pollutants, the 40 million tons of CO_2 emitted worldwide each year is one of the main contributors to climate change. This technology could revolutionize the sustainability of the production of chemicals, like polymers, and the storage of energy from green energy sources, such as wind and solar.

Teaching and student life

Teaching sustainability for the real world

Queen's recognizes that learning has the power to impact the world around us. As a result, the university offers a range of undergraduate, graduate, and professional programs that incorporate <u>interdisciplinary sustainability studies</u> into the curriculum from courses to experiential learning.

For example, students in Honours Project in Environmental
Sustainability (ENSC 430), offered through the School of
Environmental Studies in partnership with the City of Kingston,
engage with expert researchers and community leaders to develop
proposals to address climate change. The Collaborative Masters
Program in Applied Sustainability offered by Smith Engineering
is an innovative program exposing students to the implementation
of sustainable engineering solutions with a multidisciplinary focus
on both technical education and public policy impacts.

A 'green talent' pipeline

The Queen's Venture Creation, Experiential Learning, and Net-Zero Training (QVENT) project is led by the Experiential Learning Team within Smith School of Business to provide hands-on educational opportunities to students who aspire to contribute to the country's sustainable transition. The four program streams offer course-embedded green industry projects, a new certificate in leading sustainable change towards a net-zero economy, opportunities to support net-zero venture creation, and internships in the net-zero space.

Community impact

Promoting preservation in our campus and community

Queen's students, staff, and faculty participate in many events connecting with the Kingston community throughout the year on the importance of environmental sustainability, from student-led initiatives including the Queen's Sustainability Conference and the <a href=Queen's Conference on Ocean Sustainability, to sponsorship of the Kingston Climate Change Symposium.

Working in partnership

Queen's has formed a <u>Campus and Community Engagement</u> <u>Sustainability Sub-Working Group</u> to champion sustainability-focused innovation and create a unified sustainability culture. Members include local sustainability leaders, municipal representatives, and partner educational institutions, along with Queen's students, staff, and faculty. Goals include leading the development of collaborative sustainable practices that enable the exploration of opportunities and implementation of actions to foster transformative social change with local impact.

Queen's Art of Research Submission: *Research in the Rain* by Emily Mendelson, BSc Student (Biology), Queen's University Biological Station

Sustainable Development Goals by the numbers:



30% of the university's electricity for the 2022 academic year was from low carbon sources.

Global reach

Global cooperation on climate change

Queen's is a member of <u>several global networks</u> with common interests in advancing sustainability and the Sustainable Development Goals. From regional organizations such as the Council of the Great Lakes Region, to the national Sustainable Development Solutions Network Canada, and the global University Climate Change Coalition and the Matariki Network of Universities, Queen's collaborations will help further the impact of our research and innovation for sustainable development.



Queen's Art of Research Submission: *Ponding Patchwork from Permafrost Thaw* by Jordan Beer, MA Student (Geography and Planning), Paul Island, Labrador

Administration and operations

Fighting climate change through responsible investing

Queen's pension plan, the University Pension Plan Ontario (UPP), announced a formal commitment and action plan to achieve net-zero portfolio emissions by 2040 or sooner, with an emphasis on decarbonizing the real economy through the UPP Climate Action Plan.

In signing on to the Climate Charter for Canadian Universities, Queen's also made a <u>Responsible Investing Commitment</u> that aligns with international standards, including the UN-supported Principles of Responsible Investment. The university has also adopted recommendations by the Board of Trustees' <u>Climate</u> <u>Change Action Task Force</u> which mandates responsible investing for Queen's portfolios.



Queen's aims to become carbon neutral by 2040.



Our pledge for carbon neutrality

Queen's has signed the University and College Presidents' Climate Change Statement of Action for Canada, pledging to reduce greenhouse gas emissions and enhance research and curriculum in the areas of climate change and sustainability. As part of this commitment, we developed our Queen's Climate Action Plan, which aims to reduce GHG emissions by 70% from 2008 levels by 2030 and achieve carbon neutrality by 2040.

SDG 14: Life Below Water

Conserve and sustainably use the oceans, seas, and marine resources for sustainable development



Research and innovation

Understanding our rivers and lakes

Our state-of-the-art <u>Coastal Engineering Lab</u> is the largest hydraulics laboratory in Canada. It is also one of the premier facilities for fundamental and applied research and education on a broad range of water issues, especially in the fields of river engineering, lake dynamics, coastal engineering, water supply systems, and landslides.

Maintain local ecosystems and their biodiversity

Located on the shore of scenic Lake Ontario and adjacent to the wetland-rich UNESCO world biosphere reserve of the Frontenac Arch, Queen's University is ideally situated for research into freshwater ecology. The members of our Freshwater Fisheries and Aquatic Sciences Research Group conduct exciting research on a wide array of topics including zooplankton ecology, population biology, ecotoxicology, paleolimnology, invasive species, fish physiology, and reproductive biology.

Transforming conservation practices

Queen's researcher <u>Stephen Lougheed</u> is leading an Alliance project in collaboration with the First Nations Technical Institute, Invasive Species Centre, Mohawk Council of Akwesasne Environment Program, the St. Lawrence River Institute, and Thousand Islands National Park to develop new genomics and aerial drone tools for the conservation and restoration of freshwater resources. By continuously monitoring eDNA for early detection of invasive species and algal blooms, this cutting-edge research will set a benchmark for the intersection of science, technology, and environmental stewardship.



Coastal Wave Pool at Queen's Click to Watch



Queen's Art of Research Submission: Creatures of the Sea by Lily Susin, BASc/BA Student (Geological Engineering and Environmental Studies), Lipsi, Greece

SDG 14: Life Below Water 68

Cross-border collaborative research

A number of Queen's faculty members are part of the <u>Great Lakes</u> <u>Research Consortium</u>. The group, which includes 18 universities in New York and Ontario, are conducting research to improve the understanding of the Great Lakes ecosystem.

Teaching and student life

Developing future leaders

LEADERS-CREATE is an NSERC-funded graduate program at Queen's to educate future leaders in water and watershed sustainability. Students engage with leading experts and researchers with an interdisciplinary focus on knowledge mobilization and training related to policy, risk assessment, and integrated management of watersheds.

Field studies

The <u>Kennedy Field Station</u> (KFS) is a multi-use, watershed facility located in Eastern Ontario on the Salmon River, an important tributary to the Great Lakes. Managed by the Department of Civil Engineering, it serves as an important research centre for our students and as an outreach tool for the university and our partner organizations.

Community impact

Public sustainable fishing programs

Queen's organizes various public events to promote the sustainable management of fisheries, aquaculture, and tourism. Our annual **Elbow Lake Centre Public Outreach Events** include Family Fishing Day in July and Family Ice Fishing in the winter, where participants can learn from fish biologists about fishing techniques and the importance of catch and release.

Our <u>Freshwater Fisheries Conservation Lab</u> also offers multimedia resources for the public and for anglers on everything from how to tell the age of a fish to keeping fish in good health.

Exploring local lakes

We encourage visitors to explore and discover the diverse ecology at our Elbow Lake facilities. The Elbow Lake Trail Guide App helps visitors learn about the wetlands' environmental features and identifies points of interest along the several kilometres of walking trails.

SDG 14: Life Below Water 69

Global reach



Accelerating water innovations

Queen's is a proud member of the <u>Ontario Water Consortium</u>, which is dedicated to researching and advancing the commercialization of innovative water technologies across our province.

Partners in protecting Canada's oceans

As a member of <u>Canada's Ocean Supercluster</u>, Queen's is working with other leading industry and academic institutions across the country to solve our ocean challenges and to sustainably grow Canada's ocean economy.

Administration and operations

Sustainable seafood

Fish stocks around the world are plummeting. To help reduce global overfishing, all seafood sold or served on campus is **sustainably harvested**.

Queen's Art of Research Submission: *Under the Glacier* by Dr. Alexander Braun, Faculty (Geological Science and Geological Engineering), Great Aletsch Glacier, Valais, Switzerland

SDG 14: Life Below Water 70

SDG 15: Life on Land

Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss



Research and innovation

Canada's largest inland field station

For almost 70 years, students have collaborated with international researchers at the **Queen's University Biological Station** (QUBS), one of the premier scientific field stations in Canada. Teams conduct leading-edge research and participate in courses spanning ecology, evolution, conservation, geography, and environmental science. For example, researchers have access through the **Fowler Herbarium** to more than 140,000 plant specimens from Kingston and surrounding areas, the Canadian Arctic, and Russia dating back to the mid-1800s.



The <u>QUBS Mandate</u> focuses on providing opportunities for teaching and research in biology and related sciences. It also promotes using active stewardship and best management practices to conserve local terrestrial and aquatic environments, and biodiversity. QUBS offers several different programs through the <u>Elbow Lake Environmental</u> <u>Education Centre</u> and <u>Eco-Adventure Camp</u> that complement the Ontario Kindergarten to Grade 12 curriculum and provide opportunities for students to explore and measure local biodiversity through field-based scientific investigation.

SDG 15: Life on Land 71

Growing research at Queen's

Students and researchers have access to the <u>Queen's University</u>
<u>Phytotron</u> to conduct plant research and other biological applications. The Phytotron is comprised of six climate-controlled greenhouse compartments and 26 growth chambers housing more than 150 tropical, subtropical, and Mediterranean plant species.

Tracking polar bears

Polar bears have seen their ecology markedly impacted by climate change. Queen's researchers Stephen C. Lougheed, Peter Van Coeverden de Groot, and Graham Whitelaw received government funding to monitor the impacts of environmental change on these majestic creatures. Their project, <u>BearWatch</u>, combined cutting-edge genomics with Inuit traditional knowledge to develop a non-invasive biomarker toolkit and community-based monitoring program.



Queen's Art of Research Submission: *Polar Bear Denning* by Scott Arlidge, MES Student (School of Environmental Studies), Coral Harbour, Nunavut

Community impact

Consulting with Indigenous communities

Given Queen's historical connection to Anishinaabe and Haudenosaunee territories, the university is committed to strengthening connections with local Indigenous communities.

Our partnerships with Indigenous communities and organizations are an essential asset in developing our Indigenous-focused academic programs, research, and policies at Queen's.

SDG 15: Life on Land 72

The Indigenous Community Research Partnerships (ICRP)

is an online, open repository of educational resources authored by Queen's Group for Ethics and Engagement in Indigenous Community Research Partnerships and designed to assist researchers who are new to research with Inuit, Métis, and First Nations communities, or who are researchers-in-training. The training resources will operationalize required regulatory policy requirements and research directives, ensure equitable inclusion of Indigenous and Western-oriented knowledge in research systems, and, in the case of Indigenous-specific enquiry, to privilege or give primacy to Indigenous ways of knowing and doing.



Indigenous Community Research Partnerships Click to Watch

Global reach

Urban planning beyond our borders

The <u>School of Urban and Regional Planning</u> collaborates with public and private organizations across Canada and the world to exchange ideas and develop ongoing research and training programs that aim to meet the challenges of a rapidly evolving urban environment.





Master of Urban and Regional Planning Click to Watch

SDG 15: Life on Land 73

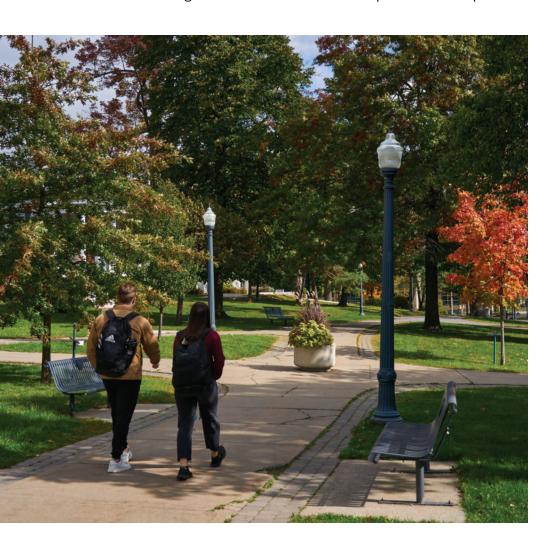
Administration and operations

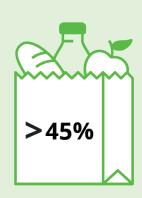
Protecting birds on campus

When a Queen's student presented research on bird collisions on campus, the Office of Sustainability installed **collision reduction film** on campus windows. Combining research with sustainability, the installation has brought people from across the university together to protect the local environment.

Sustainable use of campus land

Development is a major threat to wildlife habitats. Our <u>Campus</u> <u>Master Plan</u> calls for the conservation, restoration, and sustainable use of terrestrial ecosystems associated with the university and identifies stringent conditions for new developments on campus.





Queen's loves local food! Between May 2022 and April 2023, 45% of our food served on campus came from suppliers within a 500 km radius.

SDG 15: Life on Land 74

Our goals in action

SDG 16: Peace, Justice and Strong Institutions

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels



Research and innovation

Contributing to global peace

Queen's researcher John McGarry was awarded the 2022 Pearson Peace Medal in recognition of his outstanding contributions to peace and prosperity around the world. One of the world's foremost experts in conflict resolution, Dr. McGarry was appointed the United Nations' first Senior Advisor on Power-Sharing and is an ongoing member of the United Nations' Mediation Roster, with his foundational works on Northern Ireland being influential in its 1998 Good Friday Peace Agreement.

Research expertise

The <u>Institute of Intergovernmental Relations</u> is Canada's premier university-based centre for research on federalism and intergovernmental relations, both in Canada and in countries around the world.

Research that shapes public policy

The John Deutsch Institute for the Study of Economic Policy in the Department of Economics informs policymaking in Canada and abroad by focusing on policy-relevant research in economics and related fields.

Teaching and student life

Educating current and future leaders

Queen's **Graduate Diploma in Immigration and Citizenship Law** is Canada's only English-language pathway to becoming a licensed immigration consultant. The program will train the next generation



of immigration consultants in the full range of competencies, from immigration and citizenship law to best practices for career success.

The online Certificate in Organized Crime Prevention Foundations at Queen's provides vital knowledge and skills to identify, analyze, and mitigate criminal activity. The program is designed to provide a foundational knowledge of organized crime prevention for law enforcement and government agents, and people interested in having a better understanding of the impact of organized crime on their everyday lives.



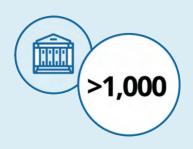
Queen's Master of Public Administration (MPA) Program Click to Watch





The Alma Mater Society of Queen's University (AMS) is Canada's oldest undergraduate student government and one of our university's key distinguishing factors. The AMS is responsible for many of the services and opportunities available on campus and represents the needs of the students to university administration.

Queen's Model Parliament (QMP) is the oldest and largest model parliament in Canada. A student-led event that attracts upwards of 100 Queen's students from across all faculties, QMP is held in Canada's House of Commons where students experience the legislative process by forming political parties, running for government, drafting bills, and debating these bills on the floor.



More than 1,000 alumni from the Professional Master of Public Administration (PMPA) have gone on to senior roles at all levels of government.



Community impact

Forging a partnership

Queen's University is located on traditional Anishinaabe and Haudenosaunee Territory, in the heart of Kingston, Ontario. The university's impact in the local community and beyond is felt across a range of dimensions: economically, socially, and culturally. This impact happens when Queen's works intentionally with community partners to advance wellbeing, bring innovations to market, and build a stronger community. The **Economic and Community Impact Study of Queen's University** prepared by Deloitte reports on our impact on the region's economy, as well as the many tangible impacts to the quality of life in the community that cannot be expressed in strictly economic terms.



Queen's Legal Aid provides a wide range of free legal services, including attending courts and tribunals, to low-income residents of Kingston, Napanee, and surrounding areas, and to Queen's University students. From Criminal Court to Small Claims Court, and from hearings before the Social Benefits Tribunal, the Human Rights Tribunal of Ontario, and the Landlord and Tenant Board, Queen's Legal Aid is able to provide excellent representation to eligible clients.

Global reach

Supporting those affected by war, conflict, and political instability

The <u>Principal's Global Scholars and Fellows Program</u> offers support through sanctuary and assistance for students, postdoctoral fellows, and faculty members forcibly displaced by conflict, political instability, violence, and persecution.

Queen's is a member of <u>Scholars at Risk</u> (SAR), an international network of institutions and individuals working to protect scholars facing threats to their lives, liberty, and wellbeing. Our SAR Committee oversees the implementation of SAR activities with the purpose of ensuring consistency, transparency, and quality of its activities while fostering an environment of global cosmopolitanism, and global citizenship at Queen's that protects and encourages academic freedom. Initiatives include hosting an <u>Artist Protection</u> <u>Fund Fellow</u> at Queen's with support of the Artist Protection Fund and a generous donation from alumni.



Partnering for a Prosperous Economy Click to Watch

Administration and operations

University governance measures

The Queen's **Board of Trustees** is the university's highest governing body and is responsible for the overall operations of the university. It includes elected representation from undergraduate and graduate students, faculty, and staff.

Diversity at the university's highest levels

The Board of Trustees' <u>Diversity</u>, <u>Equity</u>, <u>Inclusion</u>, <u>and Indigenization Action Plan</u> instructs the Board to consider diversity and inclusion in its own composition and that of its working groups. It also requires the consideration of diversity in all its mandates and policies.

Commitment to free speech

Queen's <u>Free Expression Policy</u> protects free speech on campus. It includes the right of any person, group, or community to communicate opinions and ideas without interference, censorship, or sanction, including the right to engage in peaceful protest about the content of the free expression of others.





Learning for Impact
Click to Watch

Our goals in action

SDG 17: Partnerships for the Goals

Strengthen the means of implementation and revitalize the global partnership for sustainable development



Research and innovation

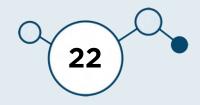
International scope

Queen's is home to <u>internationally recognized researchers</u> exploring a range of environmental topics including climate change, renewable energy, and water. Our <u>research centres and institutes</u> work collaboratively with each other and with international organizations to develop best practice around contributing to the United Nations' Sustainable Development Goals.



Queen's Art of Research Submission: *Exploring Worlds at Home* by James Xie, BASc Student (Engineering Chemistry), Mars Desert Research Station, Utah

Sustainable Development Goals by the numbers:

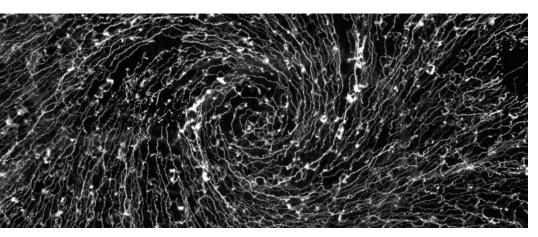


Queen's has 22 institutional and faculty-based research centres pursuing research that addresses grand challenges and societal issues of national and international scope.

Capturing the Art of Research

From under the stars to the top of the world, the annual <u>Art of</u>

Research photo contest takes us behind the scenes of the everyday research experience at Queen's. The five categories inspired by the UN SDGs shine a spotlight on the intrinsic connection between research and social impact and our institutional mission guided by the Queen's Strategy.



Queen's Art of Research Submission: *Corneal Fingerprint* by Cassandra Brand, MSc Student (Translational Medicine), Queen's University

Teaching and student life

Socially responsive scholarship

In 2023, the School of Graduate Studies and Postdoctoral Affairs launched the Queen's <u>Public Scholars Program</u> to support graduate students whose research directly impacts local, national, and global communities. The program empowers community-centred efforts that work toward a more equitable and sustainable future through practical research dissemination, interdisciplinary and intersectoral thinking, and skills development within the next generation of scholars and leaders.

Educating responsible leaders of tomorrow

The world needs leaders who are passionate about making a change and are ready to tackle challenging issues. The Smith School of Business <u>Certificate in Social Impact</u> integrates social impact approaches into core business strategies and business models to inform the next generation of change leaders. Students have the opportunity to engage with industry leaders who are advancing social impact and grow their network through events offered through the <u>Centre for Social Impact</u>.

Community impact

Enhancing impact

In 2023, the Office of the Principal and Vice-Chancellor appointed Queen's researchers <u>Wendy Craig</u> and <u>Heather Aldersey</u> as Special Advisor to the Principal on Community Engagement and Special Advisor to the Principal on United Nations' Sustainable Development Goals, respectively. These appointments will help advance the Queen's Strategy with a focus on mobilizing our community to address real-world challenges, achieve shared goals, and enhance student learning and impact.

A musical message of support

In 2022, more than 100 Kingston professional musicians and youth ensembles, including DAN School of Music faculty, performed a concert at Queen's <u>Isabel Bader Centre for the Performing Arts</u> to support the Ukraine Humanitarian Appeal Fund. Proceeds from the event were donated to raise funds for humanitarian aid for those affected by the war in Ukraine.



Global reach

A new vision

Queen's Global Engagement Strategic Plan launched in 2023 presents six interrelated objectives for advancing the university's ability to have global impact. In keeping with the centrality of connectedness, the first objective focuses on mutually beneficial partnerships with external stakeholders, which forms the basis of our values-driven approach to global engagement. Together the objectives aim to build capacity and empower the Queen's community to embed global engagement across all aspects of university life.

Supporting society

Principal Patrick Deane is the President of the Magna Charta Observatory Governing Council, the oversight body that protects and promotes the Magna Charta Universitatum (MCU). Close to 1,000 universities around the world have signed the MCU, which celebrates the deepest values of university traditions such as academic freedom, autonomy, integration of teaching and research, and social responsibility that unites them through these common bonds. At their most recent anniversary conference presided over by Principal Deane, more than 170 higher education leaders from 45 countries assembled to discuss how universities can support society during challenging times and advance the UN SDGs.

"[The SDGs] provide a shared language which helps universities in diverse geographical, political, and socio-economic locations understand and build upon the commonality of their work in both teaching and research."

Patrick Deane

Principal and Vice-Chancellor



Partnering for a better world

In 2022, Queen's hosted leaders of the Matariki Network of Universities (MNU) to discuss research collaborations, educational and professional development, and the network's priorities for the next five years. Founded in 2010, the MNU is a global group of leading universities, including Queen's, recognized as leading, research-intensive institutions providing high-quality student experience and focused on international impact.

Administration and operations

A commitment to de-carbonize

In 2023, we published the inaugural Responsible Investing Annual Report as part of our commitment to de-carbonize the university's investments through a holistic, collaborative, and comprehensive strategy across our entire \$1.9 billion investment portfolio, with an approach that also remains consistent with our fiduciary responsibility. Between December 2021 and December 2022, we posted a 5% decrease in the carbon footprint of our Pooled Endowment Fund, resulting in a carbon footprint that is 12% lower than the carbon emissions of the global benchmark index.

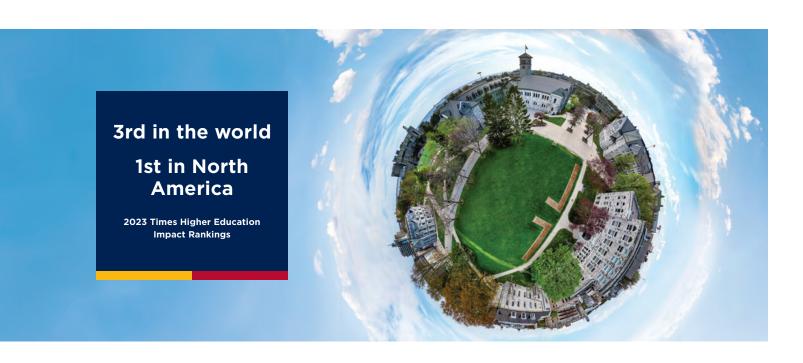
Advancing our contributions to the SDGs

We are extremely proud of the Queen's community for our continued ranking among the global top 10 in the Times Higher Education (THE) Impact Rankings. Queen's is the only Canadian university to achieve three top-10 placements since the rankings began in 2019, earning third place worldwide and first place in North America in 2023. However, we are not content to rest on our laurels. We are committed to continuing to advance our work around each of the SDGs, to promote meaningful education on these goals across the university, as well as in our city and beyond our borders. This report complements over 15 annual reports produced by various units and departments across the university that provide evidence of our contributions to sustainability and social impact through efforts in research, teaching, and outreach.



Our progress

The Times Higher Education Impact Rankings are the only global performance tables that assess a university's societal impact towards the United Nations' SDGs. In June 2023, THE revealed that Queen's had placed third in the world and first in North America in the 2023 Impact Rankings. Learn more about the rankings and Queen's performance by visiting queensu.ca/social-impact





Illustrating Queen's social impact

THE Impact Rankings submission measure Queen's overall contribution to global sustainability.



What are the United Nations' SDGs?

Universities draw upon global framework to boost social impact of learning, research, and outreach.



<u>Transforming</u> the global academy

Principal Patrick Deane on how the SDGs are helping break down silos, provoke dialogue, and unite us all in a common global purpose.

Our future

Our promise

We're committed to advancing outreach, research, teaching, and stewardship activities that align with the United Nations' Sustainable Development Goals and tackle some of the world's most urgent challenges – from climate change to hunger and poverty.

To track our continued progress, we'll continue to participate in the annual Times Higher Education Impact Rankings, a global ranking that captures the role of universities in delivering on social impact and sustainability.

We encourage you to visit and explore some of the resources showcasing Queen's actions and initiatives advancing these global goals:

Queen's actions and initiatives

Queen's Gazette

<u>News and updates</u> on our latest initiatives advancing sustainability and social impact.

Sustainable Queen's

<u>Sustainable Queen's</u> is a dynamic community, bringing together campus and Kingston partners pursuing climate action and sustainability efforts in all their forms.

17 Rooms at Queen's

The <u>17 Rooms</u> event at Queen's is a fast-paced, brainstorming approach to generating awareness of and action on the United Nations' Sustainable Development Goals.

Sustainability Framework

<u>Queen's Housing and Ancillary Service</u> is committed to helping protect our community and environment.

