



**FOR INFORMATION**

**PUBLIC**

**OPEN SESSION**

**TO:** Planning and Budget Committee

**SPONSOR:** Leah Cowen, Vice-President, Research and Innovation, and Strategic Initiatives

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**CONTACT INFO:**

**DATE:** February 16, 2024 for February 26, 2024

**AGENDA ITEM:** 5

**ITEM IDENTIFICATION:**

Institutional Strategic Research Plan 2024-2029

**JURISDICTIONAL INFORMATION:**

The Institutional Strategic Research Plan is considered by the Planning and Budget Committee and the Academic Board for information and feedback. (Academic Board Terms of Reference, Section 5.1. and Planning and Budget Committee Terms of Reference, Section 4.1).

**GOVERNANCE PATH:**

1. **Planning and Budget Committee [For Information] (February 26, 2024)**
2. Academic Board [For Information] (March 7, 2024)

**PREVIOUS ACTION TAKEN:**

The current *Institutional Strategic Research Plan 2018-2023* was presented for information to Academic Board on January 10, 2018.

**HIGHLIGHTS:**

U of T's Institutional Strategic Research Plan (ISRP) is the key document that expresses our core commitments to research excellence, providing direction for supporting scholarship by identifying strategic opportunities and enabling actions. It builds upon our previous successful plans and draws upon the plans of our academic divisions and affiliated hospitals including U of T's ISRP is informed by the institutional priorities articulated in plans such as [U of T's Towards 2030 plan](#) and the [Three Priorities](#). The ISRP is a requirement of the Canada Research Chairs (CRC) program and a non-adjudicated component of several other federal funding programs.

The Strategic Planning Process engaged the U of T community and partner hospitals in a rigorous consultation process between May and June 2023. The Division of the Vice-President, Research & Innovation led 32 consultation sessions with key leadership tables from across the university and the affiliated hospitals, deployed three online surveys, and communicated our process widely, ensuring we received feedback from a broad range of perspectives.

Prior to this presentation, the ISRP was presented and discussed at a meeting of the Tri-Campus Vice-Presidents (TVP) on December 20, 2023, and the Research Advisory Board (RAB) on December 11, 2023. Based on feedback, we further refined and clarified the strategic plan.

The resulting ISRP identifies seven global grand challenges, 5 core research & innovation values, 5 strategic objectives with accompanying actions and 5 research themes. Our aim is to enable U of T to continue its excellence in research and innovation by doing the following:

1. lead nationally and globally in research and innovation.
2. Provide institutional supports to empower scholars to do their best research.
3. Enable, train and support the next generation of researchers and innovators.
4. Promote all stages of research from idea to discovery, translation and impact.
5. Cultivate an environment to leverage opportunities and foster collaboration and partnerships.

In the next five years, we will continue to build on our legacy of discoveries that improve lives, have global impact and advance the world's collective knowledge by leveraging our globally recognized strengths in research and innovation. Our bold strategic plan will help guide the facilitation of research and innovation and opportunities for partnerships and collaborations.

## **FINANCIAL IMPLICATIONS:**

N/A

## **RECOMMENDATION:**

This item is *for information* only.

## **DOCUMENTATION PROVIDED:**

*Institutional Strategic Research Plan 2024-2029; Presentation Slide Deck*

# From discovery to impact

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University of Toronto's  
Institutional Strategic  
Research Plan

2024–2029

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“Few universities in the world can rival U of T’s internationally recognized strengths in research, innovation and inclusive excellence.”

**Professor Leah E. Cowen**  
Vice-President,  
Research and Innovation,  
and Strategic Initiatives

## Expanding the boundaries of knowledge

**For nearly two centuries**, U of T faculty, students, postdoctoral fellows, staff and librarians have been expanding the boundaries of knowledge, providing answers to some of the world's most important questions and advancing civil society in all its facets. We revolutionized the world's understanding of mass media and literary criticism. We uncovered cyber-espionage networks, unearthed ancient civilizations and helped preserve ancient and modern languages. We reimagined artificial intelligence, paving the way for new frontiers in science, technology, the arts and medicine and, together with hospital partners, we brought the Nobel Prize-winning discovery of insulin to the world, helped conquer polio and smallpox, revolutionized transplant surgery, led the way in stem cell therapies, and today, we stand at the forefront of public health policy and human-centred responses to technology.

The extraordinary breadth and depth of academic excellence across our three campuses and partner hospitals is reflected in the local, national and global impact of our researchers and their collaborations and partnerships worldwide. Through the ingenuity of the entire U of T community, we are proud to be Canada's top university and ranked one of the leading public universities globally.

University of Toronto's Institutional Strategic Research Plan 2024–2029 will guide our efforts to solve global challenges and build partnerships with our community.



# A commitment to fundamental and applied research and innovation

**U of T is committed to supporting** curiosity-driven research. Finding new approaches to solving problems is not possible without strong foundations in fundamental, investigator-led research. Society entrusts universities to undertake research that generates and preserves such knowledge as it is the foundation for understanding our world.

As a globally recognized research-intensive institution, U of T is committed to fostering community, industry and global research partnerships that are integral to innovation and help expand the scope and impact of our research enterprise.

To maximize the impact of our researchers' knowledge and discoveries, we support the convergence of disciplinary excellence, the securing of intellectual property and the disseminating of research findings—through teaching and publishing—to ensure that our discoveries reach those who need it most. Given that many research problems are complex and require the expertise of various disciplines, we will continue to support opportunities for multidisciplinary and interdisciplinary engagement and research.



## U of T's Institutional Strategic Research Plan 2024–2029

**U of T's Institutional Strategic Research Plan (ISRP)** is the primary document that expresses our core commitments to research excellence, providing direction for supporting scholarship by identifying strategic opportunities and enabling actions. It builds upon our previous successful plans and draws upon the plans of our academic divisions and affiliated hospitals. It provides a flexible framework that outlines our strategic vision, while also summarizing our research into broad thematic areas.<sup>1</sup> The ISRP is a requirement of the Canada Research Chairs (CRC) program and a non-adjudicated component of several other federal funding programs.

**The Strategic Planning Process** engaged the U of T community and partner hospitals in a rigorous consultation process between May and June 2023 to solicit input on the development of the plan. The Division of the Vice-President, Research & Innovation led 32 consultation sessions with key leadership tables from across the university and partner hospitals, deployed three online surveys, and communicated our process widely, ensuring we received feedback from diverse perspectives.

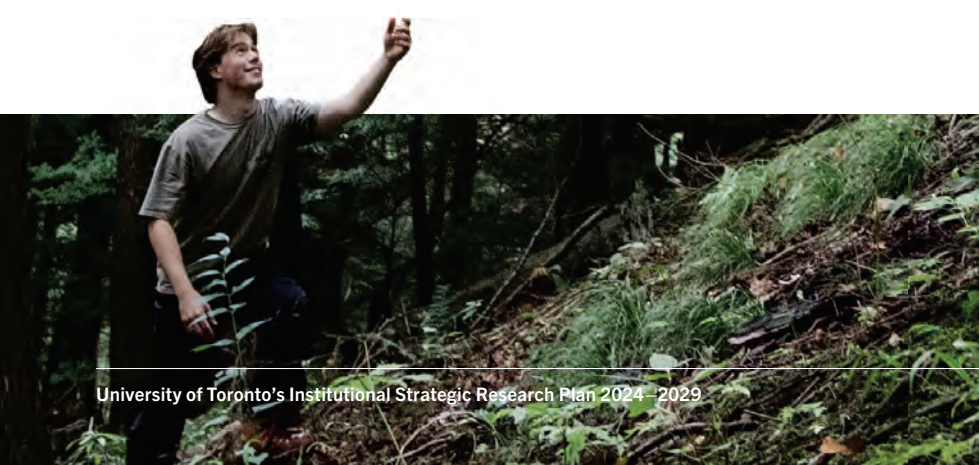
<sup>1</sup> U of T's ISRP is informed by the institutional priorities articulated in U of T's [Towards 2030 plan](#), the [Three Priorities](#), the [2022–2027 International Strategic Plan](#), our [Commercialization Framework](#), [Global Access Principles](#) and the [Administrative Response to the Report of the President's Advisory Committee on Divestment from Fossil Fuels](#). Moreover, this strategic plan supports the Calls to Actions in the [Answering the Call: Wecheehetowin](#).



# Solving global grand challenges

**U of T and partner hospitals** bring together top minds from across many disciplines to discover and implement solutions to the world's most pressing challenges. Our outstanding researchers are committed to understanding today's world—and look ahead to what is possible for the future. **Some of the challenges we will tackle over the next five years include:**

- 1.** Creating technology and sustainability solutions to address critical environmental concerns due to climate change
- 2.** Preparing for the next pandemic by harnessing our strengths across multiple fields of research
- 3.** Strengthening civil society and democracy by creating spaces for respectful discourse, crafting solutions to disinformation and geopolitical challenges and advocating for equity and social justice
- 4.** Developing leading-edge artificial intelligence technologies with the corresponding ethical and legal structures to protect the best interests of humanity
- 5.** Promoting the humanities and their essential function of imparting human values, languages and histories to future generations
- 6.** Pursuing medical innovations to address the needs of an aging population and improve health and well-being
- 7.** Leading in regenerative medicine that can design therapeutics with greater precision for individual needs



# Core research and innovation values

## The university's core research and innovation values

hold broad consensus and will underpin our institutional research and innovation strategy for the next five years. These values were developed in consultation with the wider U of T community in alignment with the [Statement of Institutional Purpose](#) ratified by the University of Toronto's Governing Council.

1.

Pursuing research and innovation that solve global grand challenges

2.

Advancing equity, diversity and inclusion

3.

Promoting an environment that centres inclusive excellence and integrity

4.

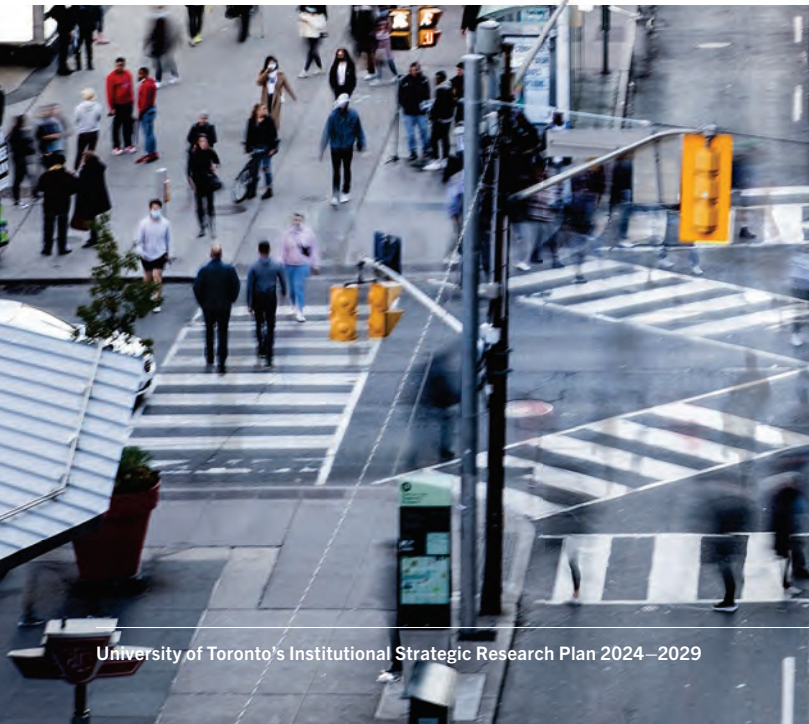
Enabling the pursuit of new fields of research and groundbreaking innovations

5.

Building collaborations and partnerships with communities, organizations, industry and other universities

6.

Working towards reconciliation with First Nations, Métis and Inuit peoples and communities



# Strategic objectives

**Our strategic objectives** will inform and propel U of T's research and innovation and performance measures over the next five years. They will help us continue to be one of the world's top research-intensive universities and to address global challenges. These objectives complement those of the academic divisions as they continue to develop their own plans, goals, actions and performance measures.

- 1.** Lead nationally and globally in research and innovation
- 2.** Provide institutional supports to empower scholars to do their best research
- 3.** Enable, train and support the next generation of researchers and innovators
- 4.** Promote all stages of research from idea to discovery, translation and impact
- 5.** Cultivate an environment to leverage opportunities and foster collaboration and partnerships



# 1. Lead nationally and globally in research and innovation

Inclusive excellence and leadership in research and innovation allow us to have the broadest and deepest impact in scholarship and on society. We will continue to lead in research funding, global rankings and international recognition of our academic excellence, and through our successes in innovation and entrepreneurship.

## We will:

Continue to be ranked the #1 university in Canada

Lead nationally in the share of research funding from tri-agency programs, and in the number of Canada Research Chairs and other funding programs

Continue to be a global hub for innovation and entrepreneurship

Lead Canadian and international institutions in prestigious awards and honours

Advocate, shape and respond to new government research initiatives and priorities

Engage as a global leader dedicated to tackling the world's grand challenges and positively impacting the international community

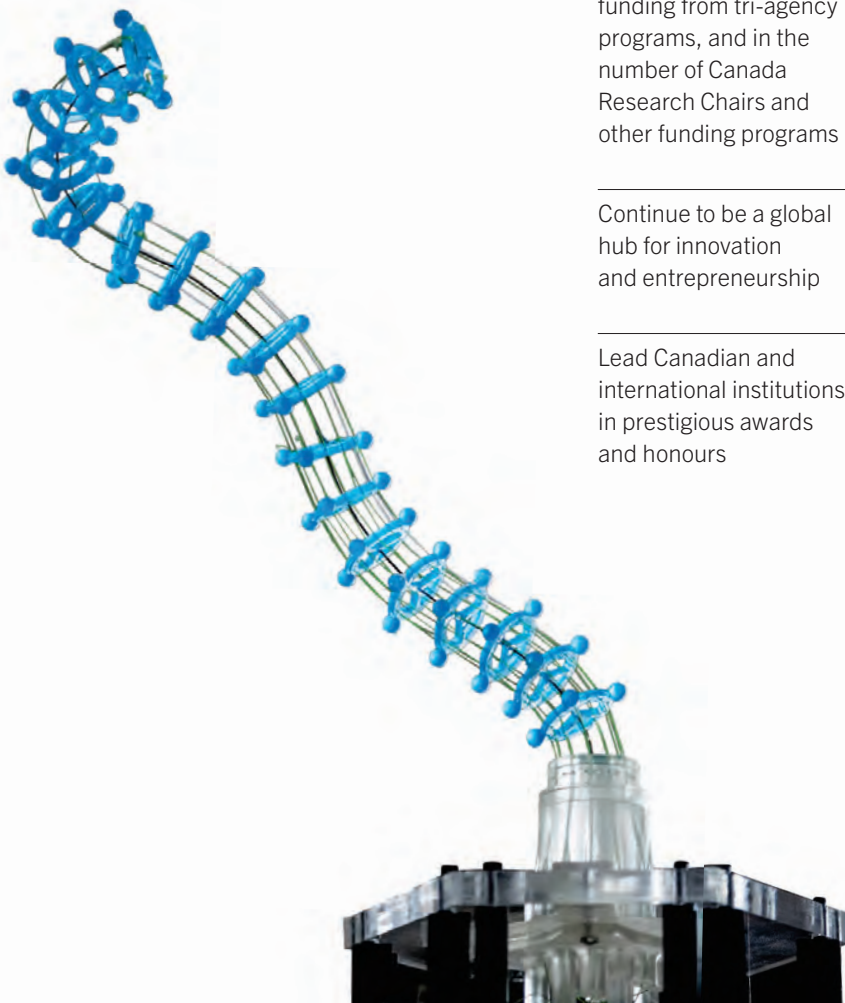
Lead initiatives that incorporate equity, diversity and inclusion, and centre reconciliation with First Nations, Métis and Inuit peoples and communities

Help researchers to secure their intellectual property, streamline licensing and help with startup creation and business development to turn U of T innovations into products, services, companies and jobs

Lead nationally on supports for securing and safeguarding research and innovation

Set evidence-informed research goals and targets that enable thriving research communities across our three campuses

Foster collaborative research across global teams and facilitate multidisciplinary collaboration at U of T and partner hospitals



## 2. Provide institutional supports to empower scholars to do their best research

We will provide all members of our scholarly community with the necessary supports they need to be successful and competitive. We will create and refine tools, policies, best practices and procedures that advance research and innovation, ensuring the highest standards of ethics, integrity and accountability.

### We will:

Modernize and scale critical institutional research and innovation administrative services and systems

Develop tools and support systems that address the needs of academic divisions and meet performance-based metrics

Maintain research infrastructure and space, including core facilities

Educate U of T community members on the standards of research ethics, safety and integrity

Ensure the professional development of our faculty and staff in research and innovation

Implement and sustain training programs, systems and resources that foster equity, diversity and inclusion and support First Nations, Métis and Inuit reconciliation in research and innovation



### 3. Enable, train and support the next generation of researchers and innovators

Our research and teaching missions are inextricably linked. Research-informed teaching innovations, standards and practices enhance the entire educational mission and position the university as the top destination for future students, post-doctoral fellows, researchers and innovators. Our innovation and entrepreneurship community provides mentorship, expertise, space and networks for all stages of the innovation journey for students and faculty. These programs not only strengthen existing areas of excellence and develop new ones, but they also increase synergies between teaching and research.

#### We will:

Support trainee research opportunities and their engagement in innovation and entrepreneurship activities

Increase participation and success rates of underrepresented groups in internal and external research funding, research awards and honours, and entrepreneurship programs

Support opportunities for trainees to obtain curricular and co-curricular research and innovation experiences

Advocate for the necessary supports from government for the next generation of researchers and innovators



## 4. Promote all stages of research, from idea to discovery, translation and impact

As a public steward of knowledge, U of T recognizes its obligation to ensure that our scholarship engages the broader community and is widely disseminated. We will continue to promote all stages of research through services and resources dedicated to assisting relationship building, the translation of research into impact and recognizing the achievements of researchers.

### We will:

Promote the impact of U of T research and innovation activities to local and global audiences

Manage the development of highly competitive national and international research awards and honours

Support opportunities for students to participate in a wide variety of entrepreneurial events and activities enabled through research partnerships that span the globe

Encourage opportunities for public engagement with researchers and trainees

Provide stories of impact by U of T researchers and innovators to top global media outlets

Develop effective communication tool kits to enable researchers to share the impact of their scholarship

Advocate for increased government support for research and researchers at all stages of their careers





## 5. Cultivate an environment to leverage opportunities and foster collaboration and partnerships

Collaborations and partnerships with communities, governments, NGOs, industry and within the university itself allow us to leverage complementary research strengths, which produce unique capabilities that foster learning, promote critical inquiry and accelerate discovery. The university plays an important role in addressing local and global challenges by engaging with communities as partners and by advancing solutions that are sustainable, equitable and serve the needs of those communities.

### We will:

Diversify and expand partnerships into new regions, including the Global South

Collaborate with key funding partners to support the design and implementation of research programs

Partner with First Nations, Métis and Inuit peoples and communities in respectful, reciprocal and meaningful ways that reinforce our commitment to reconciliation

Continue to facilitate collaborations with partner hospitals

Support multidisciplinary collaborations and partnerships between U of T researchers through Institutional Strategic Initiatives and other tri-campus collaborative endeavours

Centre local and international government, organization and industry partnerships

Facilitate community-engaged research partnerships

Increase industry-supported research and opportunities for students, trainees and researchers



# Research themes



**U of T's thematic research areas** engage the community and our partners as they work to solve fundamental questions and find solutions to some of the most pressing challenges that face humanity.

The themes embody the strengths of the university that result from our joint teaching and research missions: our ability to apply new knowledge to advance education and practice, and our commitment to mobilize our extensive and diverse intellectual resources to support student success as we educate the next generation of creative, engaged and empathetic citizens for the benefit of society. Researchers can draw from these themes to demonstrate to funders how their research aligns with the university's strategic research plan.

- 1.** Expanding our fundamental knowledge of living organisms and the universe
- 2.** Exploring cultures and communication
- 3.** Advancing health and well-being
- 4.** Innovating technology
- 5.** Developing community, policy, pedagogies and governance



# 1. Expanding our fundamental knowledge of living organisms and the universe

Identifying new approaches to solving problems is only possible with strong foundational research. Our progress as humans has been driven by valuing knowledge for its own sake. The pursuit of fundamental disciplinary and interdisciplinary knowledge serves as a foundation for U of T's research strategy.

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## Examples of research areas include:

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The biology and evolution of humans and other organisms

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The nature of socio-economic, racial and gender inequalities

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The nature of the cosmos and planet Earth

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The molecules and mechanisms of life

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Fundamental mathematics and physics

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The dynamics of natural and human-made changes in the environment

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Education and research on the biological, cognitive, social and environmental factors that determine how we learn, grow and adapt



## 2. Exploring cultures and communication

In the face of great social, cultural and technological change, the continued importance of language, literature, culture, art, music and philosophy is the focus of many U of T scholars. Our researchers engage with the cultural, historical, philosophical, linguistic, literary, and artistic dimensions of human experience and are helping us understand the diversity and complexity of our world.

### Examples of research areas include:

Historical research through a wide variety of archeological, textual, archival and anthropological methods

Past, current and new communication of identities

Digital tools and the creative convergence of art, science, technology, business, education and communication

New and existing modes of narration and meaning-making, along with their social, political, epistemological, technological and ethical implications

The role, validity and transmission of values

Questions of fairness, suffering, human dignity, law, equity, inclusiveness, accessibility and social justice

The origins of language, art, science, civilization and cultural dimensions of human nature

Understanding and combatting systemic racism

Research-informed pedagogical approaches that are socially and culturally appropriate for diverse learners



### 3. Advancing health and well-being

U of T scholars are working to develop solutions to new and increasingly complex health problems that challenge population health, health systems and health equity. They are studying the biological, social, cultural and environmental determinants of health and how they can help us devise better ways of preventing and treating disease and health-related harms. They are also collaborating to advance high-quality care and to translate knowledge that will have a positive impact on our collective health and well-being.

#### Examples of research areas include:

Personalized and regenerative therapies

Emerging and infectious disease preparedness

Addressing the needs of an aging population

Molecular medicine and the biology of disease

The development or identification of solutions to mental health needs

New technologies to enable users and improve quality of life, including the rehabilitation sciences

Educational and employment barriers to full inclusion in society and well-being

Questions of public health and health systems, health equity and accessibility, quality, sustainability and the efficiency of health services

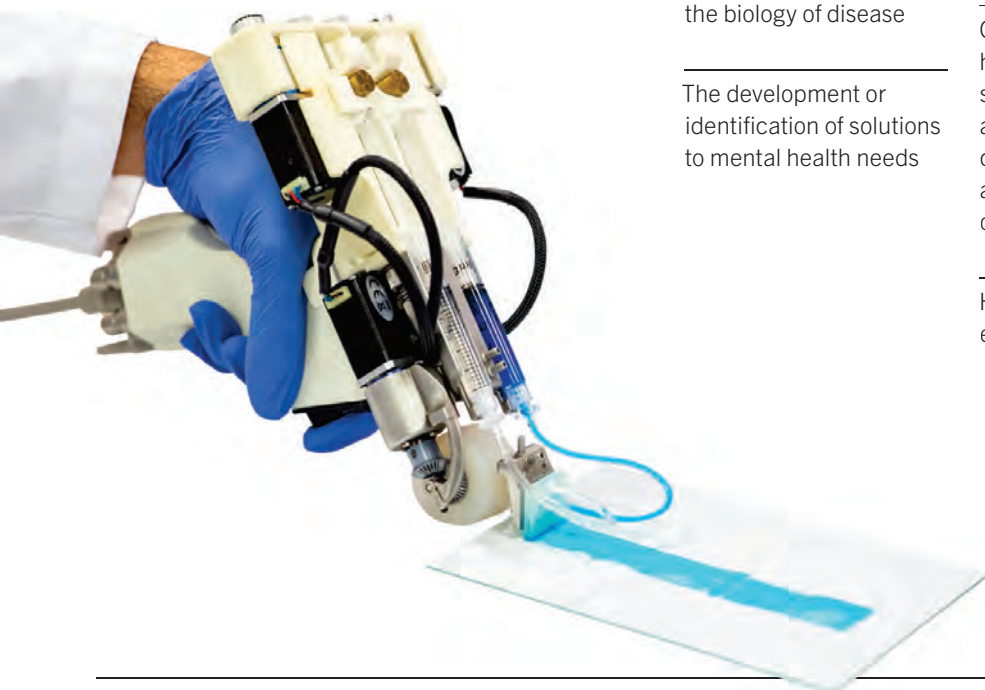
Health methodology evaluation

Methods for connecting public health and Indigenous traditional knowledges to health practitioners

Removing barriers for people with disabilities and managing chronic, long-term conditions

The well-being, mental health and health equity of Black and racialized, First Nations, Métis and Inuit, 2SLGBTQ+ communities and other marginalized populations

Patient consent and their participation as partners in research



# 4. Innovating technology

New tools, models, data systems, processes and novel and advanced materials are among the many ways U of T researchers are harnessing our creativity to develop new and innovative technologies that benefit humanity.

## Examples of research areas include:

Data, analytics and advanced computation

Technology to enable liveable and sustainable cities

Robotics, artificial intelligence, autonomous technologies and advanced manufacturing, employment, work and education

Innovation and modelling for climate change, natural resource management and sustainability

Digital tools and research security

Collection of long-term, longitudinal data that are curated and in the public domain

Ethical and legal frameworks to guide the development, utility and regulation of innovative technology

Methodology and protocols for conducting data-driven research to enhance rigour, reproducibility and reliability

Novel materials and manufacturing processes for extraordinary properties



## 5. Developing community, policy, pedagogies and governance

Our researchers are studying the factors that influence quality of life in communities, as well as developing partnerships and ethically engaging in First Nations, Métis and Inuit-related research to learn from and with community members. Our researchers are also exploring how to strengthen democratic and civil institutions by making governance more inclusive, participatory, respectful of diversity, and responsive to issues of autonomy, equity and social justice.

### Examples of research areas include:

Evidence-informed policy that furthers human rights and diversity

Policies and regulations to govern the development of artificial intelligence tools

Legal dimensions of technology such as Internet privacy law

Processes and outcomes for community-research partnerships

Migration, internationalization, multiculturalism and identity

Best practices for the design, construction, commissioning and maintenance of municipal infrastructure

Innovation and translation of school system pedagogies and methodologies

Local and global community engagement to develop healthy, vibrant and diverse neighbourhoods

Ethical research with marginalized groups and populations

Sustainable societies and ecosystems, global governance and environmental policy and law

Governance and development planning that affect global health and address climate change





## Looking ahead

In the next five years, we will continue to build on our legacy of discovery that improves lives, demonstrates global impact and advances the world's collective knowledge by leveraging our globally recognized strengths in research and innovation. Our bold strategic plan will help guide the facilitation of research and innovation, and provide opportunities for partnerships and collaborations.

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TORONTO

# From discovery to impact

University of Toronto's  
Institutional Strategic Research Plan  
2024–2029

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Presented by:

**Leah Cowen**

Vice-President, Research and  
Innovation, and Strategic Initiatives



## U of T's institutional strategic research plan 2024–2029

**U of T's Institutional Strategic Research Plan (ISRP)** is the primary document that expresses our core commitments to research excellence, providing direction for supporting scholarship by identifying strategic opportunities and enabling actions.

# Solving global grand challenges

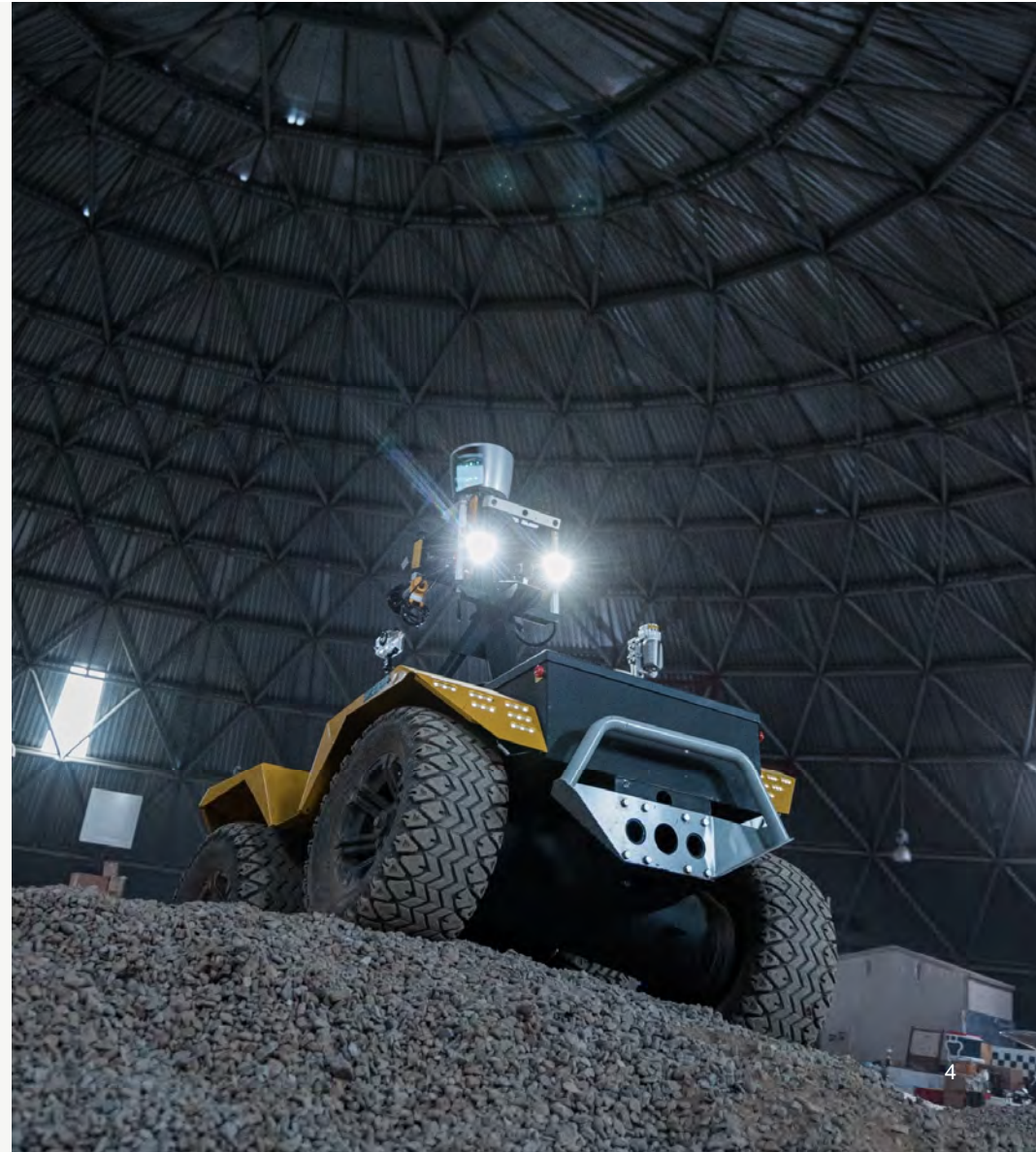
**Some of the challenges we will tackle over the next five years include:**

1. Creating technology and sustainability solutions to address critical environmental concerns due to climate change
2. Preparing for the next pandemic by harnessing our strengths across multiple fields of research
3. Strengthening civil society and democracy by creating spaces for respectful discourse, crafting solutions to disinformation and geopolitical challenges and advocating for equity and social justice



# Solving global grand challenges

4. Developing leading-edge artificial intelligence technologies with the corresponding ethical and legal structures to protect the best interests of humanity
5. Promoting the humanities and their essential function of imparting human values, languages and histories to future generations
6. Pursuing medical innovations to address the needs of an aging population and improve health and well-being
7. Leading in regenerative medicine that can design therapeutics with greater precision for individual needs





## Core research and innovation values

**The core research and innovation values underpin our institutional research and innovation strategy for the next five years.**

1. Pursuing research and innovation that solve global grand challenges
2. Advancing equity, diversity and inclusion
3. Promoting an environment that centres inclusive excellence and integrity
4. Enabling the pursuit of new fields of research and groundbreaking innovations
5. Building collaborations and partnerships with communities, organizations, industry and other universities
6. Working towards reconciliation with First Nations, Métis and Inuit peoples or communities



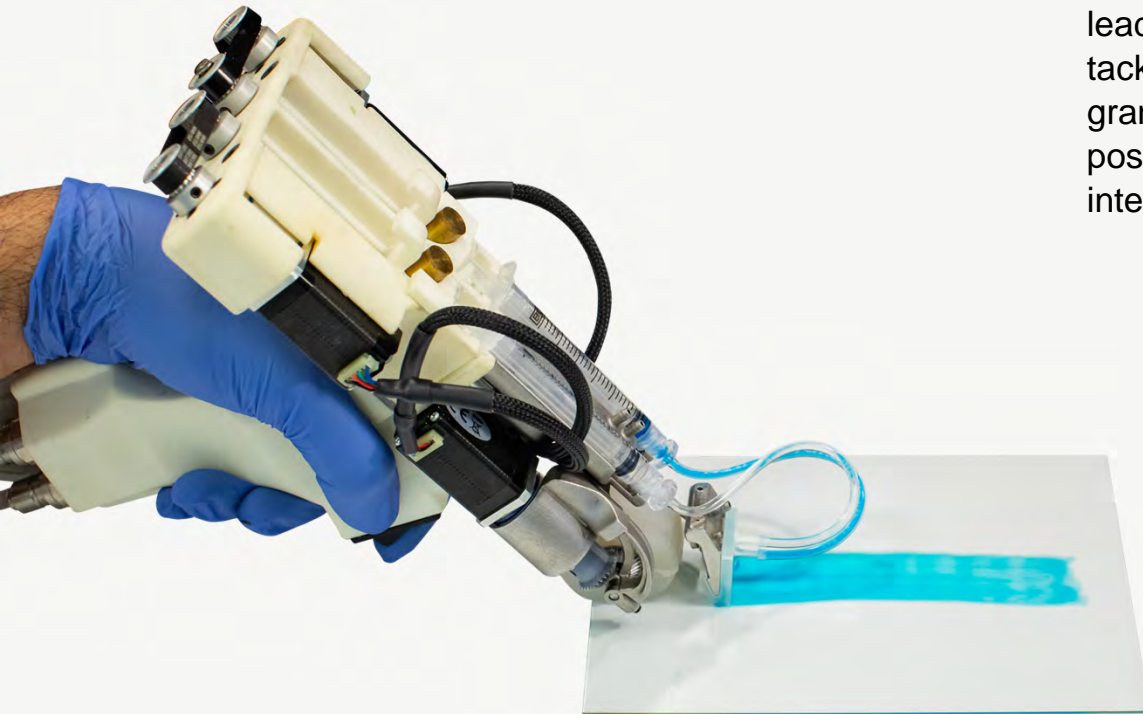
# Strategic objectives

**Our strategic objectives will inform and propel U of T's research and innovation and performance measures over the next five years.**

1. Lead nationally and globally in research and innovation
2. Provide institutional supports to empower scholars to do their best research
3. Enable, train and support the next generation of researchers and innovators
4. Promote all stages of research from idea to discovery, translation and impact
5. Cultivate an environment to leverage opportunities and foster collaboration and partnerships



# 1. Lead nationally and globally in research and innovation



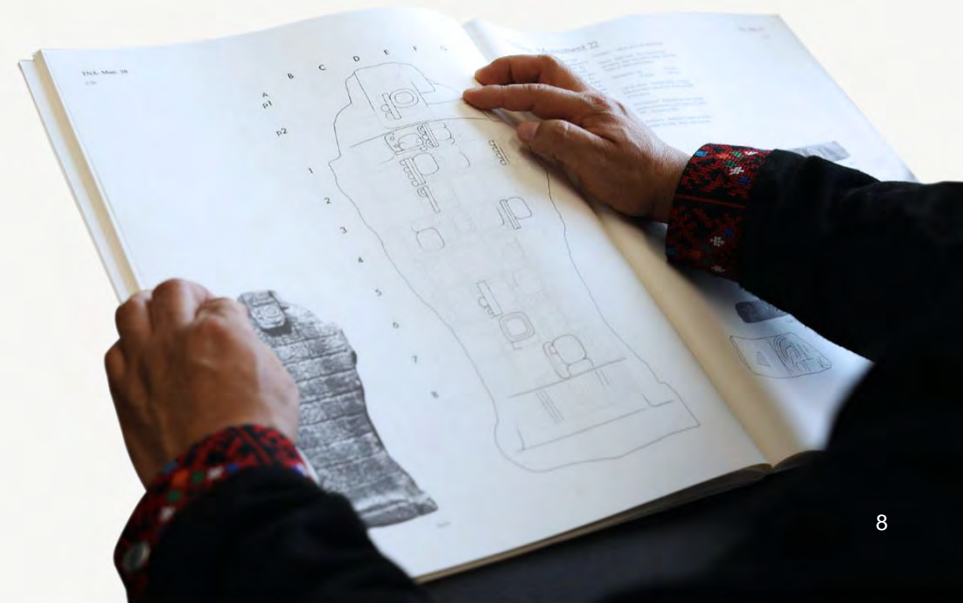
## We will:

- Advocate, shape and respond to new government research initiatives and priorities
- Engage as a global leader dedicated to tackling the world's grand challenges and positively impacting the international community
- Lead initiatives that incorporate equity, diversity and inclusion, and centre reconciliation with First Nations, Métis and Inuit peoples or communities into our research and innovation ecosystem
- Foster collaborative research across global teams and facilitate multidisciplinary collaboration at U of T and partner hospitals

## 2. Provide institutional supports to empower scholars to do their best research

### We will:

- Modernize and scale critical institutional research and innovation administrative services and systems
- Maintain research infrastructure and space, including core facilities
- Educate U of T community members on the standards of research ethics, safety and integrity
- Ensure the professional development of our faculty and staff in research and innovation



### 3. Enable, train and support the next generation of researchers and innovators

#### We will:

- Support trainee research opportunities and their engagement in innovation and entrepreneurship activities
- Increase participation and success rates of underrepresented groups in internal and external research funding, research awards and honours and entrepreneurship programs
- Advocate for the necessary supports from government for the next generation of researchers and innovators



## 4. Promote all stages of research, from idea to discovery, translation and impact

### We will:

- Promote the impact of U of T research and innovation activities to local and global audiences
- Support opportunities for students to participate in a wide variety of entrepreneurial events and activities enabled through research partnerships that span the globe
- Provide stories of impact by U of T researchers and innovators to top global media outlets
- Advocate for increased government support for research and researchers at all stages of their careers



## 5. Cultivate an environment to leverage opportunities and foster collaboration and partnerships



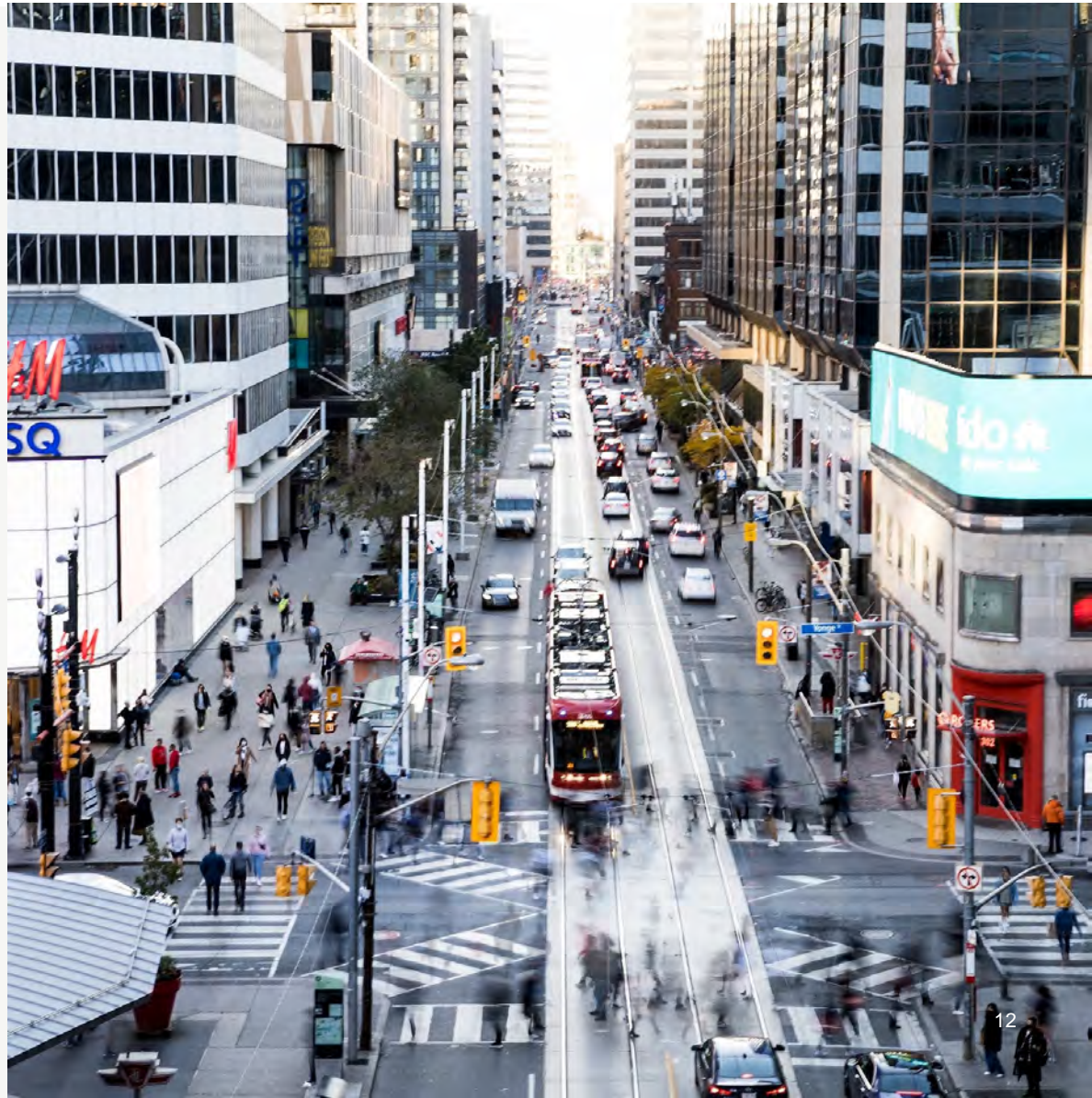
### We will:

- Diversify and expand partnerships into new regions, including the Global South
- Support multidisciplinary collaborations and partnerships between U of T researchers through Institutional Strategic Initiatives (ISIs) and other tri-campus collaborative initiatives
- Facilitate community-engaged research partnerships
- Increase industry-supported research and opportunities for students, trainees and researchers

# Research themes

**The research themes embody the strengths of the university.**

1. Expanding our fundamental knowledge of living organisms and the universe
2. Exploring cultures and communication
3. Advancing health and well-being
4. Innovating technology
5. Developing community, policy, pedagogies and governance





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Few universities in the world can rival U of T's internationally recognized strengths in research, innovation and inclusive excellence.

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