HEALTH SRC STRATEGY

Toronto Metropolitan University

2025–2030

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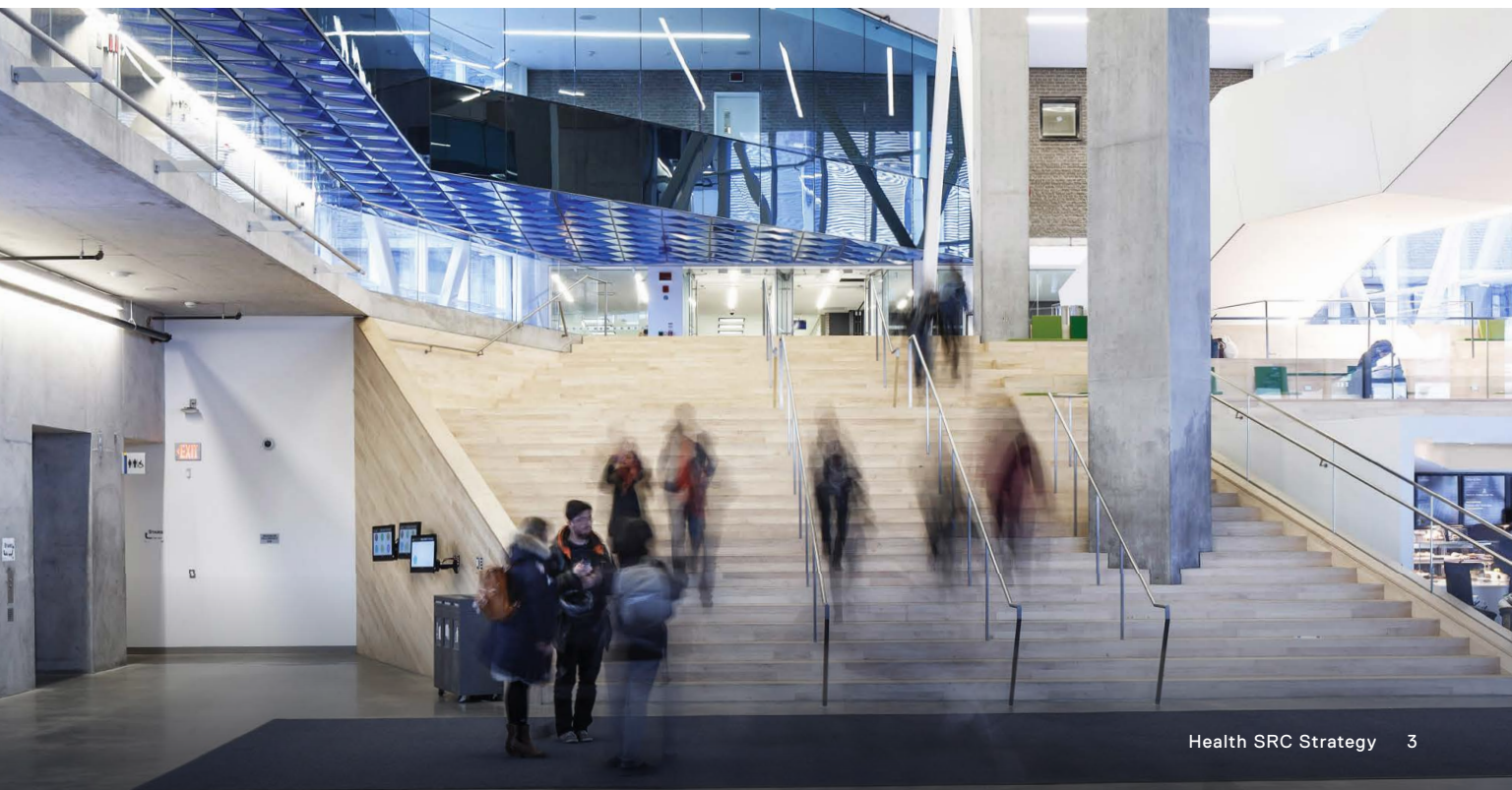
Cover image: Sheldon & Tracy Levy Student Learning Centre.

Background

One of the key drivers of Toronto Metropolitan University (TMU)'s Health Scholarly, Research and Creative (SRC) Strategy continues to be the effective integration of its diverse health research expertise to address the pressing and persistent societal needs of today and the future. During the initial Health SRC Strategy planning process, a comprehensive analysis of TMU's health and wellbeing SRC activities identified a wide range of areas of strength, including mental health and wellbeing; community health; food and nutrition; environmental health; public and occupational health; cell, molecular and microbial biology; biomaterials and biomedical devices; biomedical optics; digital systems and data; health systems and health services policy; as well as health-care models.

Five years after the initial Health SRC Strategy launched, TMU is on a trajectory of transformative change. Health SRC activity has grown to represent 40 per cent of the university's research and innovation enterprise, and in 2025, the university opened a new School of Medicine. This refresh of TMU's Health SRC Strategy reflects this growth of health SRC activity, which has led to our expanded strategic areas of health SRC while maintaining our strong institutional commitment to serving the needs of communities. The Health SRC Strategy 2025–2030 refresh also brings into focus priorities in health and wellbeing represented in the university's recently revised Strategic Research Plan (SRP) and charts a path toward strategic goals and key priorities through 2030.



Vision

TMU's Health SRC Strategy was initially developed in 2020 following an extensive consultation process with internal and external stakeholders, partners, collaborators and external health sector leaders. With the goal of developing impactful strategic research and innovation initiatives, we analyzed the university's particular strengths in health and wellbeing through bibliometric data, the historical record of external funding and direct input from the research community.

The initial Health SRC Strategy envisaged the creation of an urban health and wellbeing nexus where interdisciplinary research programs would give rise to innovations focused on community health and health equity, along with the development of policies, products and services to address high priority needs in urban centres. This vision would subsequently inform the university's proposal for the establishment of its School of Medicine, which opened its doors to the inaugural cohort of medical students in September of 2025.

The refreshed Health SRC Strategy 2025–2030 envisions a significant advancement of research and innovation activities across the university and its network with special attention to the following three interdisciplinary strategic areas of focus:

1. Aging and Health
2. Integration of Health and Technology
3. Social Determinants of Health

In each area, TMU will seek to improve the health and wellbeing outcomes of individuals and communities through novel diagnostics and treatments, new modes of health-care access and delivery, re-imagining health education, advancing health policy development, and improving health-care systems through collaborative interdisciplinary and inter-sectoral approaches.

Inspired by the SRP sub-themes and further developed through the Health SRC Strategy refresh consultation process, the following areas of expertise, excellence and aspiring growth were identified and taken into consideration when establishing our three strategic areas of focus:

- Aging and Health
- Biotechnology and Synthetic Biology
- Brain Health
- Digital Health
- Environmental Impacts on Health
- Global and Regional Health
- Health Equity and Accessibility
- Health Innovation
- Health Law
- Health Policy and Health Services
- Health Professionals of the Future
- Indigenous Health
- Medical Imaging
- Mental Health and Wellbeing
- Migration and Transnational Health
- Molecular Mechanisms for Health and Disease
- Social Determinants of Health
- One Health
- Targeted and Precision Medicine

This image: Kerr Hall Quad.

Health & Wellbeing

In line with the university's Strategic Research Plan 2025–2030 (SRP), which outlines the institution's overall research themes of focus for the next five years, the refreshed Health SRC Strategy is also anchored in inclusive, interdisciplinary and ecosystem approaches to the theme of Health and Wellbeing. Moreover, the refreshed Health SRC Strategy reflects the interconnectedness between the Health and Wellbeing theme and the other following key themes of TMU's larger SRP: Transformative Technology; Resilient, Inclusive Communities; Future of Work; Climate, Environment and Sustainability; Democracy, Justice and Governance; Arts, Culture and Creativity.

- **Transformative Technology**
- **Resilient, Inclusive Communities**
- **Future of Work**
- **Climate, Environment & Sustainability**
- **Democracy, Justice & Governance**
- **Arts, Culture & Creativity**

STRATEGIC AREAS OF FOCUS

TMU's Health SRC Strategy 2025–2030 aims to address complex and interconnected health and wellbeing challenges across biological, behavioural, clinical, environmental, policy, social and system-level dimensions. Building on intrinsically equitable and collaborative approaches, TMU aims to mobilize and scale up both foundational and applied health SRC activity for real-world impact. The following three strategic areas of focus represent established interdisciplinary SRC excellence and expertise in health at TMU as well as our aspirations for future growth.

1

Aging and Health

2

Integration of Health and Technology

3

Social Determinants of Health

This image: Daphne Cockwell Health Sciences Complex.

1

Aging and Health

TMU is actively engaging with local and global communities and health-care providers to support Canada's aging population needs through the development of novel research, innovative solutions and new models of health-care delivery, as well as training the next generation of health-care professionals.

This strategic area of focus builds on an established cluster of interdisciplinary research expertise and excellence across TMU, including but not limited to the following schools and departments: Business Management; Electrical, Computer, and Biomedical Engineering; Financial Planning; Geography and Environmental Studies; Law; Nursing; Politics and Public Administration; Psychology; and Urban and Regional Planning. The work of this cluster focuses on examining the health and wellbeing of aging individuals as well as the impact that aging has on them, their communities and society at large.

They study care delivery to seniors, long-term care, technological advancements for enabling aging in the right place, financial security of seniors, and issues relevant to the community living, urban and suburban planning, as well as legal frameworks and policy advocacy for supporting better health outcomes for seniors. In September 2024, TMU hosted a highly successful Aging Symposium, showcasing transdisciplinary expertise at TMU, with themes that included key matters related to aging and cognition, the consideration of health-care delivery to the elderly, discussion of inclusive housing and urban planning, and financial security and legal issues relevant to aging Canadians. Read the Aging Symposium story recap to learn more.

TMU is home to the **National Institute on Ageing (NIA)**, the leading health policy research institute in Canada aimed at improving health and wellbeing and financial security to drive measurable life-improving health outcomes for older adults.

TMU is also an active member of the **Canadian Frailty Network**, Canada's sole research network devoted to improving care for older Canadians living with frailty and supporting their families and caregivers.

2

Integration of Health and Technology

This area of focus is concerned with the application of technology – as exemplified by the development of various health and medical devices, diagnostics, interventions, molecular and precision medicine, and innovative health systems approaches – to transform health outcomes and health-care systems. This includes novel, leading-edge, multi-disciplinary research starting at the cellular and molecular level – with the potential to transform diagnosis, prevention, and management of disease and other health conditions – and working up to interventions as well as complex systems-level simulations and modelling.

TMU will build on its interdisciplinary research expertise as it looks to harness the transformative power of advanced technologies in health across topics that include data analytics (e.g., in epidemiology, bioinformatics, equitable AI), medical imaging and AI, health systems modelling and digital twins. Addressing the challenge of health data security management is also a related priority, which connects closely with TMU's established area of strength in cybersecurity.

Moreover, building upon TMU's strengths in technology and digital innovation as well as creative scholarship, and aligning with the goal of fostering interdisciplinary collaborations, interactive simulation and training, represent a powerful modality for advancing health-related SRC activities and education. Drawing inspiration from the principles of digital media and technologies as well as (serious) game design, which can facilitate the operationalization of complex systems, interactive platforms offer significant potential for training and upskilling students, learners and health-care professionals.

One of TMU's key institutional assets in this area is the Institute for Biomedical Engineering, Science & Technology (iBEST), a partnership between TMU and St. Michael's Hospital, which brings together leading researchers, clinicians, and industry partners to advance research and innovation in medical technology, regenerative medicine, biomaterials, biomedical devices and digital health. The development of transformative health-care solutions is enabled at iBEST through interdisciplinary approaches with the goal of improving patient health outcomes across the lifespan, shaping the future of health innovation and health care in Canada and globally.

In November of 2025, TMU also hosted an interdisciplinary Health & Technology Symposium, bringing together research and innovation experts from across the university to critically examine the interplay between health and technology and discuss the resulting impact on the lives of individuals, communities and society at large. The event included researchers, clinicians, scholars and creatives from TMU schools and departments that included Chemistry and Biology; Computer Science; Disability Studies; Electrical, Computer, and Biomedical Engineering; Geography and Environmental Studies; Law; Mechanical, Industrial, and Mechatronics Engineering; Media; Nursing; Physics; Professional Communication; Psychology; and Urban and Regional Planning.

The event covered a wide range of topics, highlighting the crucial importance of diverse perspectives in driving transformative innovation. It included discussions around technological advancements in diagnostics and innovative treatment solutions, human-centred approaches in health and health-care innovation, data mapping and analytics, and new health governance frameworks. Read the Health & Technology Symposium story recap to learn more.

Top: M.Sc. student using fluorescence microscopy to visualize a cell in the Botelho Lab.
Bottom: Synaesthetic Media Lab (Synlab).

3

Social Determinants of Health

Interdisciplinary research into the social determinants of health (SDH) is foundational to understanding health disparities within society and the reasons behind their persistence, as well as to determining the ways we can create equitable health outcomes at the population level.

SDH research at TMU includes community co-created and co-designed research initiatives, policy implementations, intersections with digital technologies and global perspectives produced by researchers from schools and departments that include Child and Youth Care, Disability Studies, Information Technology Management, Law, Midwifery, Nursing, Nutrition, Occupational and Public Health, Psychology, Sociology, and Urban and Regional Planning.

This strategic area combines population health, public health, clinical work and health systems research with an emphasis on both individual and community-centric approaches to knowledge creation and translation. In addition, inclusion of health humanities, particularly in exploring individual and community understandings of health and wellbeing and non-biomedical perspectives on health is highly relevant. Within this area, there are several intersecting priorities, including aging, Indigenous health, Black health, migrant health, and health equity and accessibility.

TMU is also reimagining health-care access and delivery models, with particular attention to the community care context. In doing so, it contributes to advancing the "quintuple aim" of health care – improved population health outcomes, improved healthcare worker experience, improved patient care and experiences, lowered healthcare costs/improved value, and advanced health equity.

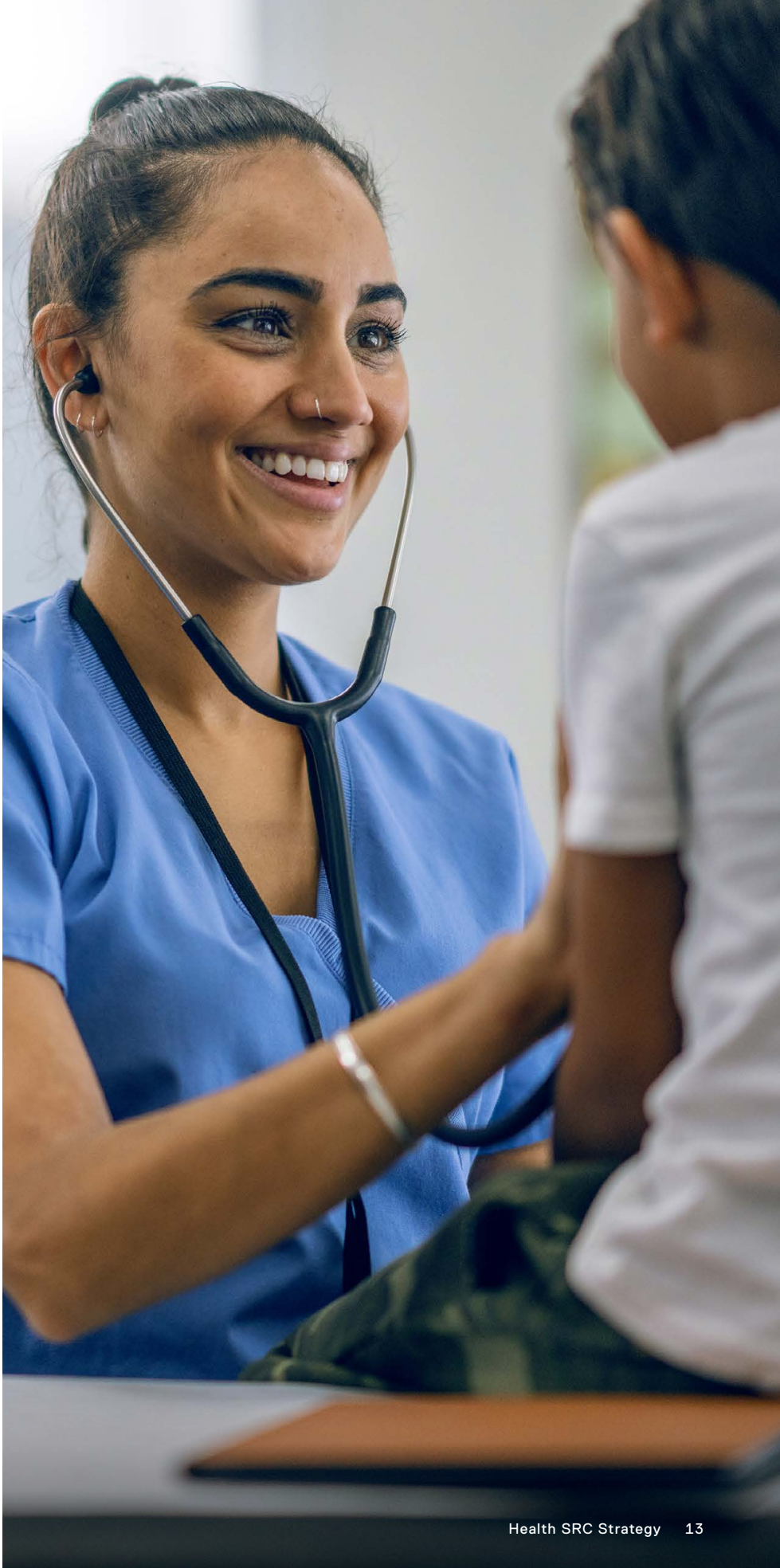
At TMU, SDH is integrated within interdisciplinary research centres, advanced large-scale research programs and policy-oriented projects that emphasize community engagement and aim to drive systemic change.

The Canada Excellence Research Chair (CERC) in Health Equity and Community Wellbeing, professor Karen Soldatic, leads a transformative research program centred on co-creating knowledge with communities to expand the ways in which health care is understood, practiced and delivered today, with an overarching goal of meaningfully improving health outcomes for all members of these communities. The CERC's research program utilizes a critical disability lens in its approach, with the dual aim of reducing health disparities within society while working to embed community knowledge in the ways that health-care institutions and systems deliver care.

The Migrant Integration in the Mid-21st Century: Bridging Divides interdisciplinary research program, funded by the Canada First Research Excellence Fund (CFREF) and led by Canada Excellence Research Chair (CERC) in Migration and Integration, professor Anna Triandafyllidou, examines the global challenges and opportunities of immigration. Bridging Divides seeks to drive excellence and leadership in the areas of citizenship and civic participation, the future of work and the future of health care.

Its work also aligns with the responsible and ethical use of advanced technologies, including artificial intelligence, which are changing the ways we interact, work and live, as well as how we provide and receive health care. TMU's School of Medicine is part of a large transformative effort in the rapidly developing city of Brampton and the Region of Peel, aimed at strategically driving health education, training, research, innovation and health-care delivery.

TMU's School of Medicine is designed to address long-standing health-care gaps in Brampton and Peel Region specifically, and in Ontario more generally, building community-specific and cross-cutting models of health care through Integrated Health Clinics (IHCs). In addition, the School of Medicine's SRC and innovation focus on the primary care needs of diverse and medically underserved populations has SDH at the core of this endeavour. By fostering a community-focused, patient-centred, data-driven and technology-enhanced medical education and training environment, TMU is leading a shift towards developing a more inclusive, responsive and sustainable health-care system in the region.



Strategic Goals

The following five strategic goals will enable TMU to expand and scale up its health research and innovation ecosystem:

1

Enhance TMU's institutional health SRC strength and excellence. To achieve this, we will attract and support world-class SRC leaders in the health and wellbeing domain through programs such as the Canada Excellence Research Chairs (CERC) and Canada Impact+ Research Chairs. This institutional focus will make TMU a beacon of excellence, further growing our national and international reputation in health and wellbeing research and innovation.

2

Enable and foster strong health research collaboration and partnerships between TMU researchers, scholars, clinicians, communities, hospitals, health-care organizations, industry, policy-makers and others within the scope of SRC activity.

3

Develop scalable health innovations through integration with transformative technology to address current and emerging health challenges in Canada and globally. This also includes supporting equitable, community-driven health research and innovation solutions, co-designed and co-created together with structurally marginalized populations and communities. Support a wide variety and modes of knowledge translation activities to ensure the most impactful uptake of health and wellbeing research results to directly benefit society.

4

Promote health equity. Engage with respect and openness to learn and support scholars and communities working to advance Indigenous health, Black health, and migrant health and wellbeing SRC initiatives. Develop respectful partnerships with Indigenous scholars and Indigenous communities to advance the integration of Indigenous health perspectives and knowledge into health-care education and practices. Conduct research together with structurally marginalized communities to advance health equity and outcomes.

5

Recruit, train and support the next generation of highly skilled health researchers, health-care providers, and leaders to address the pressing needs of society today and in the future.

Left: Coralee McLaren, Professor
'Yes We Dance' Project, Tokyo Midtown Yaesu,
Department of Robotics, Tohoku University, Japan.
Right: TMU's Urban Farm rooftop.


Toronto
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Key Priorities

The following key priorities have been identified to enable the success of the Health SRC Strategy 2025–2030 at TMU:

- Increasing the number of large-scale interdisciplinary health SRC programs across the university and its network. Securing the necessary infrastructure to support them.
- Attracting world-class health SRC leaders to the university and enabling their success.
- Establishing a designated space in Brampton for a research-driven, industry-oriented Hub, with a designated space for experimentation and prototyping, a medtech and device fabrication facility, and an accelerator.
- Supporting the development of Integrated Health Clinics (IHCs) as platforms for enabling research and innovation, as well as transdisciplinary and inter-professional training of health-care professionals and health-care delivery.
- Expanding the number of meaningful research collaboration partnerships with hospitals, health-care and community organizations, not-for-profit organizations and industry.
- Establishing productive international research partnerships with universities and industry.
- Growing the institutional reputation in health research and innovation excellence.

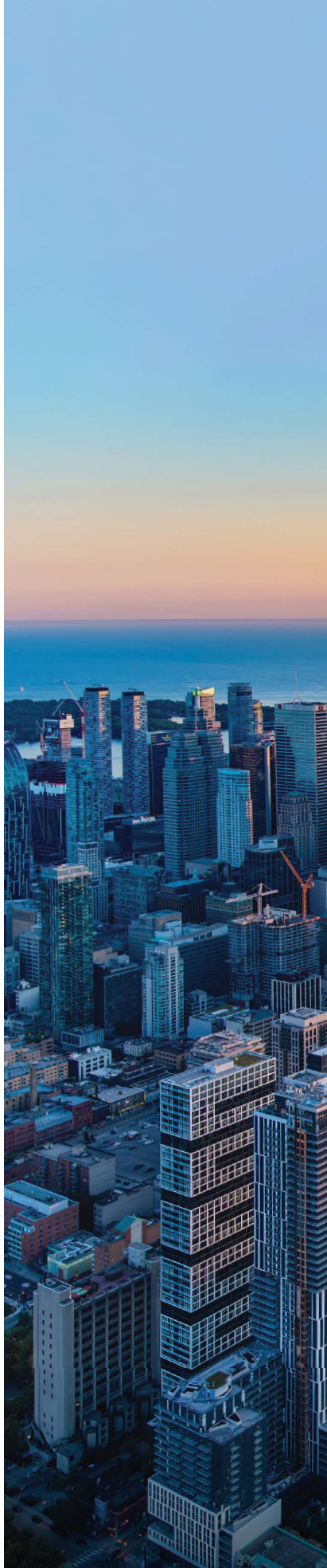
Left: TMU School of Medicine.

Success Indicators

The following qualitative and quantitative outcomes will be used to assess the success of the Health SRC Strategy for the upcoming time period:

- Securing the necessary supports for the key priorities.
- Increasing the impact of SRC and innovation activities and outcomes across the university.
- The creation of impactful research collaborations and quality partnerships with local hospitals, community organizations, not-for-profit organizations and industry.
- The number of international partnerships established to grow and support health research and innovation programs.
- Increase in the number of health research excellence awards.

We will conduct periodic reviews of the success indicators to assess progress and refine approaches.



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