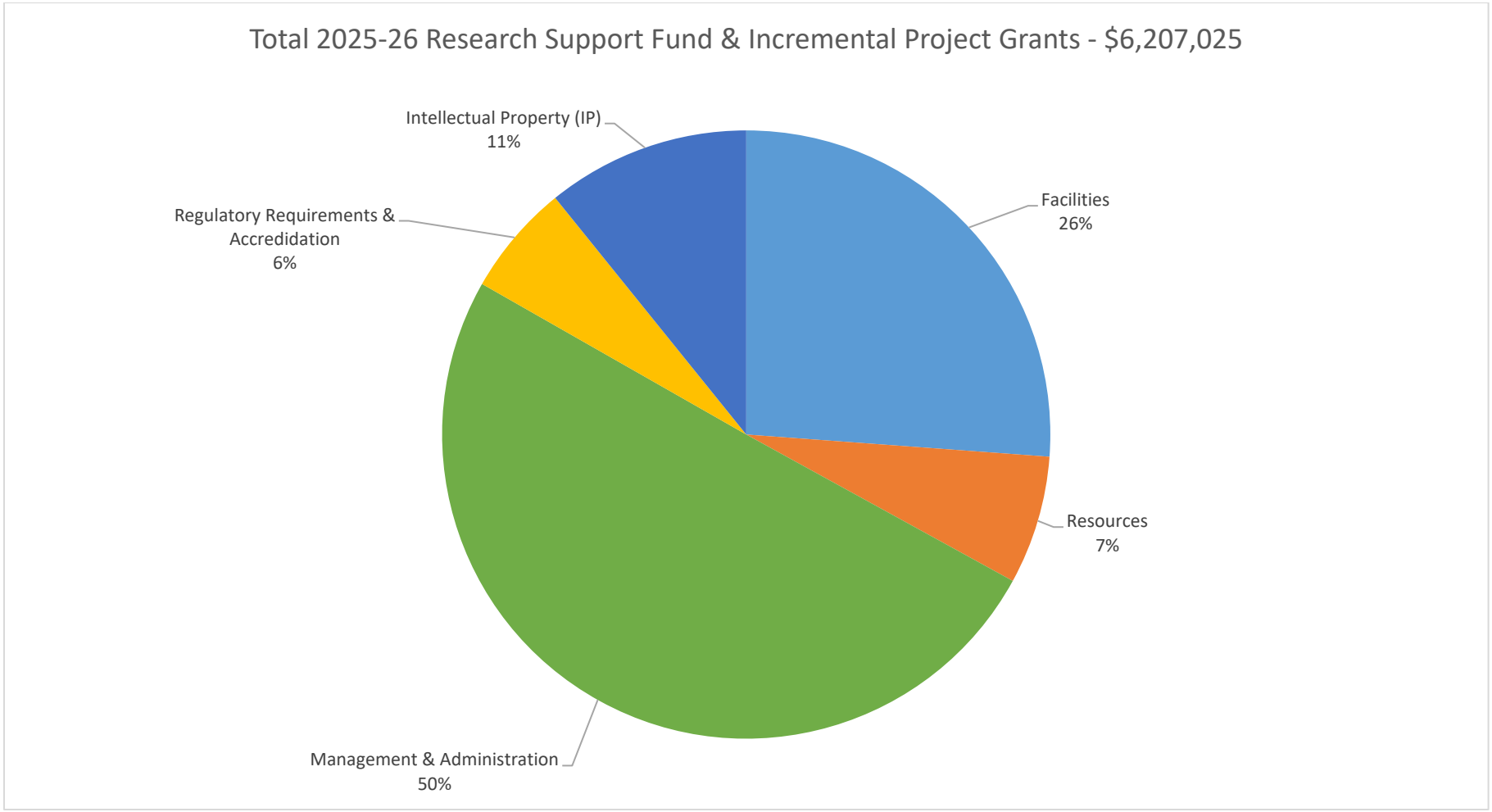
Toronto Metropolitan University

2025-26 Research Support Fund – Performance Objectives, Indicators and Reported Outcome

The Research Support Fund program has been a key component of the rapid growth of Toronto Metropolitan University's scholarly, research and creative (SRC) enterprise. With the RSF program, Toronto Metropolitan University (TMU) is able to enhance existing areas of SRC strength and expertise, and create new SRC opportunities with high impact in emerging areas, and to leverage collaborative research partnerships to broaden and deepen our SRC efforts and enhance our profile.



Eligible expenditure category	Institutional performance objective	Indicator	Output	Outcome reported at year end
Research Facilities	Provide research and innovation infrastructure support to increase scholarly, research and creative (SRC) quality, participation, and funding Coordinate and integrate activities of OSSU Research Centres	Renovation of research and innovation premises Maintain suitable office space to execute OSSU activities	Square footage of research and innovation space renovated Coordinating Centre space	278 square metre Suitable office space for up to four Coordinating Centre staff has been secured at MaRS to coordinate OSSU activities
Research Resources	Provision of subscription library resources in support of research	Access and use verified via proxy data	Total access and uses of online library resources	Cambridge: 9,072 Science Direct: 425,647
Management and Administration	Provide pre- and post-award support services to faculty members to enhance SRC excellence and impact of SRC activities OSSU – Maintain adequate staffing levels to execute organizational coordination and integration activities	Research administration services provided by the Offices of the Vice-President, Research and Innovation and Vice-President, Finance and Administration Employ a coordinator to support attainment of organizational goals and objectives	Number of research grant/contract applications Number of new research cost centres Achieve organizational goals and objectives	819 research grant/contract applications submitted 351 new research cost centres created Institutional performance objective achieved: Coordinating Centre coordination and communication activities successfully advance mission mandates
Regulatory Requirements and Accreditation	Provide the ethics protocol review and approval services to faculty members and graduate students to enhance SRC excellence and impact of SRC activities	Reviews and approvals of ethics protocol applications	Number of ethics protocols reviewed	2061 ethics protocols reviewed
Intellectual Property	Provide support to faculty member with respect to intellectual property activities to enhance impact of SRC activities	Number of invention disclosures filed	Number of invention disclosures filed	35 invention disclosures filed

Investment Story 1

The RSF supported the construction of the Smart Campus Integration and Testing Hub (SCITHub). The SCITHub is a world-leading facility that will advance Smart and Sustainable building research. Supported by an IT backbone and innovative Intelligent Structural Panel structure, all systems - heating & cooling, ventilation, lighting, building envelope, security, IT, and communications - are connected, making it the world's first 100% digitally integrated building.

SCITHub consists of three key areas: an Operations, Visualization, and Data Centre (OVDC), the Affordable Living Integrated Residential Testbed (ALIRT), and the Smart Building Analytics Living Lab (SBALL). The OVDC contains an Amazon Outpost to consolidate all data and stream it to a dedicated Canadian secure cloud environment and contains a visualization suite providing access to all SCITHub systems and equipment. Next, ALIRT is a mockup of a single family residential unit, equipped with 5G-enabled technologies and two parallel zero-carbon HVAC systems, supporting Smart Home technology development, testing & validation, and optimization. Finally, SBALL contains four independently-controllable test cells, each connected to the three zero-carbon HVAC systems (air-source VRV, water-source VRV, and water-source heat pumps) to permit side-by-side controls optimization testing. An open-office area with a PoE testbed completes SBALL. The building has renewable energy testing capacity, with a solar-ready roof, low-voltage microgrid, and ground-source heat pump to eliminate the need for fossil fuels.

This facility will support four lines of investigation for researchers:

1. Integrated Smart City and Smart Campus Management
2. Smart and Ongoing Commissioning and Optimized Asset Performance
3. Advanced Building Energy Simulation Approaches
4. Human-Building Interaction and Improved Occupant Experience

The SCITHub emerged from an ongoing pan-Canadian collaboration established at TMU in 2016 to improve the performance of building portfolios in operation through the study of University building campuses. Faculty at eight participating universities have ongoing research projects to use existing buildings (both on- and off-campus) to support Smart Building and related research—and have agreed to share their collected data and resultant applications with one another. As the world’s first 100% digitally-enabled building, all building systems and services can be co-optimized and accessed remotely by these researchers and future lab users through a robust and secure common data environment, supporting researchers at TMU and across Canada to build the best buildings for people and the planet.

Investment Story 2

Dr. Jenn McArthur is a Professor in Architectural Science and the Associate Chair for Project Management in the Built Environment, and the Director of the SCITHub, a living laboratory for digital twins, smart building analytics, and low-carbon operations. Her research integrates Cognitive (AI-integrated) Digital Twins, Smart & Ongoing Commissioning, real estate management /IEQ perspectives, and AI-enabled performance monitoring to improve the energy, carbon, and operational outcomes of complex buildings. Through partnerships with municipalities, utilities, and infrastructure owners, this work has translated real-time building data into decision-grade intelligence that supports operational energy savings, electrification, and net-zero retrofit strategies at portfolio and city scales. Professor Jennifer McArthur is a prominent building scientist, mechanical engineer, and consultant in Canada. She actively collaborates with government, enterprises, start-ups, academics, and students to develop new solutions and policies that result in future-friendly buildings.