# **Research Junction Program Update 2025**

#### **ISSUE**

This report provides an update on the City of Saskatoon/University of Saskatchewan Research Junction program.

### **BACKGROUND**

In 2019, the City of Saskatoon (City) signed a Memorandum of Understanding with the University of Saskatchewan (USask). One of the main articles in this agreement is a commitment to actively engage in research projects of mutual benefit in an effort to encourage innovation and collaboration between the two organizations. A Research Connections working group made up of members of the City Administration and Department of Research Acceleration and Strategic Initiatives at USask has been actively advancing and sustaining these efforts since 2019.

At its November 8, 2023, meeting, the Governance and Priorities Committee received an information report entitled "COS USask Research Junction Update," which provided an update on the program.

### **CURRENT STATUS**

The Research Connections working group has continued its efforts in developing, sustaining, and improving opportunities for collaboration through data sharing, partnership development, and support for research opportunities.

The annual Research Junction development grant competition continues to serve as one of a few cornerstone programs for establishing productive collaborations between the City and USask. The grant competition encourages both City Administration staff and USask academics to submit research project ideas to be considered for the \$100,000 in available funding each year (\$50,000 each from USask and the City). Each application must both align with the strategic goals of the City and fulfill an academic accomplishment for USask.

The Research Junction program has provided 22 development grants since its inception, with 16 completed to date and, at time of report writing, 4 more anticipated to be complete by the end of Q2 2025.

The 2024 competition awarded two development grants totalling \$58,000 for the following projects:

- Optimizing the Reliability of the City of Saskatoon's Water Supply Network. Leads: Hamed Samarghandi and Amanda Munshaw; and
- Data Review and Program Evaluation of the Saskatoon Fire Department's Inadequate Housing Initiative. Leads: Mansfield Mela and Yvonne Raymer.

The working group hosted a City/USask workshop on October 30, 2024, to re-invigorate research connections between the two organizations. The event included several presentations, guest speakers, and thematic group discussions with 109 attendees. Outcomes of the event included a list of research projects inspired by City Administration that was shared with university researchers and administrators, and greater awareness of the Research Junction program.

Subsequent to the October workshop, participants were invited to establish partnerships to apply for a seed grant to build research and partnership capacity, with the goal of applying for additional funding. Six \$5,000 seed grants were awarded for the following projects, which create useful incubator opportunities to apply for additional outside research funding [e.g. Natural Sciences and Engineering Research Council (NSERC), Mitacs]:

- Digital Equity Literature Review. Leads: Dawn Wallin, Austin Stewart;
- Digital Transformation Solutions Toward Inclusive AI: Equity and Ethics in Saskatoon's Service Delivery. Leads: Joelena Leader, Yasmine Wafa;
- Improving the Safety and Environmental Sustainability of "Forever Chemicals" in the Saskatoon Fire Department. Leads: Lee Wilson, Rob Hogan;
- Measuring and Modeling Saskatoon's Transit and Housing Capacity: Bus Rapid Transit and the Housing Accelerator Fund. Leads: Scott Bell, Tyson McShane;
- Slow the Spread: Dutch Elm Disease Literature Review. Leads: Sean Prager, Jeff Boone; and
- Determining Research Priorities for Firefighter Health in the Saskatoon Fire Department. Leads: Tracey Carr, Rob Hogan.

The 2025 development grant competition launched earlier this year with an application deadline of May 16. At time of report writing, adjudication of the applications had not yet occurred. For more information visit the Research Junction website.

## **DISCUSSION/ANALYSIS**

## Leveraging External Funding

As research partnerships between various City and USask departments develop and grow, the Research Connections working group also works to support these partnerships in pursuing externally funded research grants. The following projects have attracted external funding to support comprehensive research efforts:

- USask and the City were awarded \$480,000 from NSERC for the Innovating Design and Decision-Making for Sediment Management in Stormwater Retention Ponds: Enhancing Pond Performance While Minimizing Lifecycle Costs project. Leads: Kerry Mazurek and Mitch McMann; and
- USask and the City, along with partners from SaskPower, SaskEnergy, Enbridge Inc., and the Government of Saskatchewan, were awarded \$300,000 from NSERC for the Research and Application of Air-Source Heat Pumps to Improve Implementation in Cold Climates project. Leads: Carey Simonson and Jeanna South (along with additional partners).

## Research Stories and Impact

The <u>Research Junction website</u> includes several articles regarding the impact of the research projects undertaken to date. The following are some highlights from recent projects:

 An Economic Analysis of Housing Sustainability Policies for Under-Represented and Vulnerable Populations in Saskatoon project. Leads: Nazmi Sari and Melissa McHale:

This project aims to learn more about any gaps in services provided and the bylaws enacted by the City in order to create more preventative systems to fight housing insecurity and homelessness in the future.

"If we deem a house to be uninhabitable, as a last resort, we'll issue a notice of closure on a house. We've had to do that where there's people, family, pets living in the houses. With this research project, we thought it would be beneficial ... looking into why was this house closed in the first place? Often when we're stepping in and closing a house, the problem didn't appear overnight."

A number of well-intended policies in municipalities inadvertently have unintended and undesired consequences. In addition to addressing frontline policies, this research will also examine economic policies – or lack thereof – around housing supports.

"Just identifying some of those gaps or maybe how people fall through the cracks, anything that we could do or recommendations we could make to other agencies to prevent this problem before it gets there."

2. Optimizing the Reliability of the City's Water Supply Network project. Leads Hamed Samarghandi and Amanda Munshaw:

This project involves analysis of the City's primary water main network to identify supply chain risks and decide on a strategy for purchasing and warehousing critical replacement stock. The intent is to apply the results of the research immediately and to purchase and warehouse recommended parts, reducing risk to the City and the citizens that rely on the water distribution network.

"Going from reactive to proactive, that's the main reason for the project. Also, the type of research we're doing might end up saving the City money. Proactive ordering and storage in the warehouse might in fact save the city money due to the inflation effect. We will consider this matter in our models."

"The recent large-scale water main break in Calgary has raised public awareness of the risk large municipalities face with respect to water services. Increasing supply chain pressures, such as product availability and long lead times, can cause delays in repairing large diameter water mains. This project aims to help the City of Saskatoon develop a risk-informed strategy for critical large

diameter parts, thereby increasing the availability of Saskatoon's water distribution system."

3. Public Support and Communication Strategy for Municipal Property Tax Policy Reform: Evidence from a Survey Experiment project. Leads: Yang Yang and Mike Jordan:

This project delves into potential property tax reforms and how to communicate them to the public.

"This research is really going to give us some insight into what may be possible going forward, and what may not be possible in terms of what the (public) tolerance and barriers are around using different revenue instruments."

Since the City receives nearly half of its operating revenue from property taxes, it's important for residents to understand them as fully as possible. As the services that municipalities support and supply change over time — with added pressures, including addressing climate change, keeping up with inflation, and funding essential services in a continually expanding city — municipalities must adjust their revenue strategies to meet these new demands.

"We think tax policy reforms are necessary to ensure that municipalities can meet all these new demands and challenges. We're hoping to use this project to provide a timely assessment of the public acceptance and support for proposed property tax policy changes."

"We're hoping to inform the development of targeted and effective communication strategies that could resonate better with residents about what our rationales are, and what could be missed opportunities, without reforming property tax policy."

An article regarding a previous Research Junction project from 2020-21 involving the same collaborators entitled <u>Competing for Business: Non-Residential</u>

<u>Property Tax Policies in Saskatoon</u> was recently published in the Canadian Journal of Public Administration.

## FINANCIAL IMPLICATIONS

Since 2019, the City and USask have provided matching annual funding of \$50,000 each towards the Research Junction development grant competition. The City's contribution to date has utilized annual allocations out of the Reserve for Capital Expenditure (RCE). USask has recently confirmed that they would continue to support the program with their annual contribution over the long term should the City establish an ongoing operational budget to continue its support of the program.

# OTHER IMPLICATIONS

There are no communications, Triple Bottom Line, policy, privacy, or CPTED implications or considerations emerging from this report. These will be considered in future reports as required.

#### **NEXT STEPS**

The Administration will be putting forward a budget option for City Council's consideration to instate long-term funding of the Research Junction program through the 2026-2027 Multi-Year Business Plan and Budget.

Subject to approval of funding, the 2026 Research Junction development grant competition will be launched in early 2026 with an application deadline in late spring. In addition, the Research Connections working group will continue to support research collaborations in pursuing external competitive funding opportunities including opportunities for Mitacs, NSERC, and the Social Sciences and Humanities Research Council (SSHRC) Partnership Grant funding. The working group will also continue to develop stories of completed research collaborations to share with the public.

Report Approval

Written by: Dan Willems, Director of Technical Services

Reviewed by: Angela Gardiner, General Manager, Utilities and Environment

Approved by: Jeff Jorgenson, City Manager

Admin Report - Research Junction Program Update 2025.docx