

Transformational Research for Societal Resilience:

The 2020 – 2025 U of R Research Action Plan



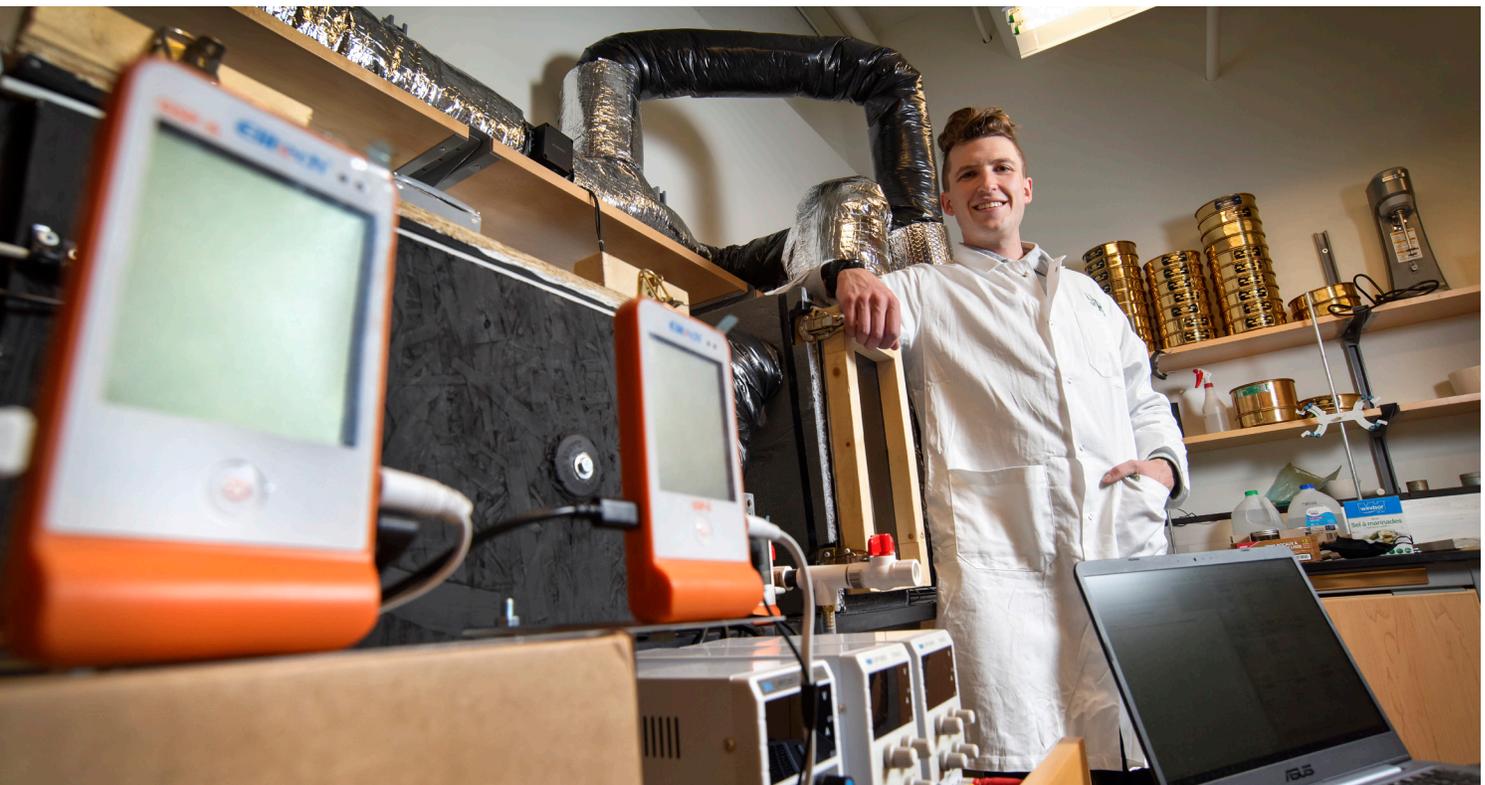
<https://www.uregina.ca/ur-research/>



University
of Regina

Table of Contents

Section 1: Preamble	1
Section 2: Five Strategic Research Actions	3
I: Grow the research enterprise at the University through new funding and support of the University’s research centres	5
II: Promote the U of R signature research strengths in Climate and the Environment, Digital Futures, Living Heritage, and Health and Wellness; and aligned research centres.....	6
III: Establish a robust innovation and entrepreneurship framework to position the U of R as the leading innovative and entrepreneurial postsecondary institution in Saskatchewan and the Prairies	9
IV: Expand the graduate studies enterprise as graduate students and postdocs will be vital to the intensification of research activity, innovation and entrepreneurship at the U of R	10
V: Build a partnership network with Indigenous communities, industry, government, and non-profit stakeholders.....	11
Section 3: Metrics and Benchmarks	12



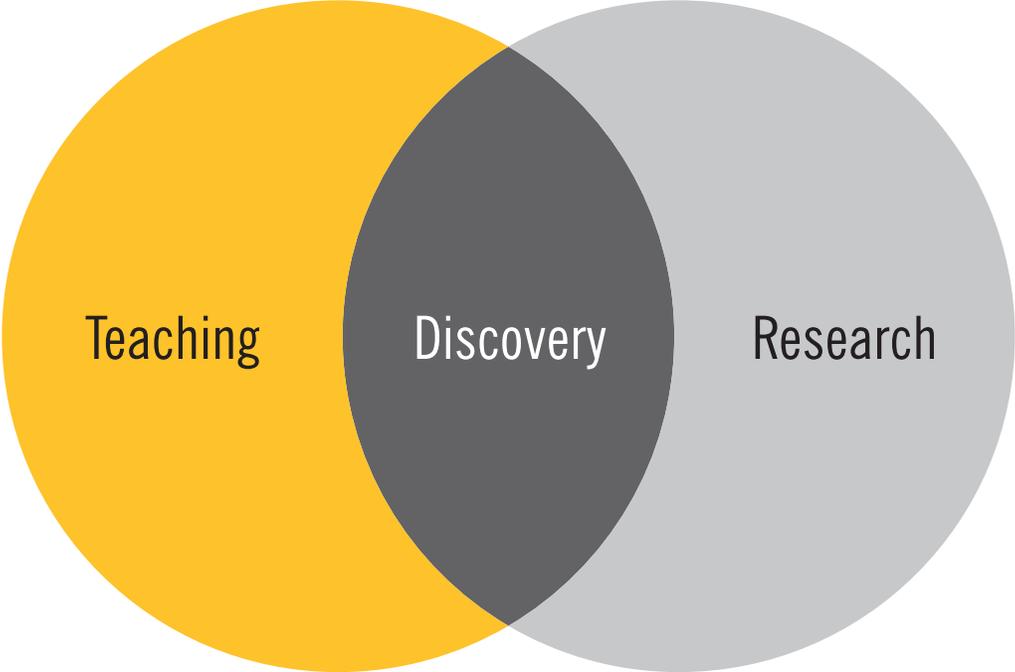
Preamble



The University of Regina’s Strategic Plan (“All Our Relations,” 2020-2025) underscores the “strong sense of mutuality and interdependence” underpinning the future of our institution within which the current research strategy plays a fundamental role. The research enterprise is deeply rooted in a culture of discovery that propels the University’s strategic vision/direction as the innovative and entrepreneurial core of Saskatchewan and the Prairies.

The research enterprise strongly supports research intensity through enhanced services and collaborative programs, as well as active engagement with faculty members, postdoctoral researchers, graduate, and undergraduate students. Enhanced efforts to widely disseminate and expand access to the U of R research expertise, furthermore, remain essential to bolstering relationships with Indigenous communities, industry, government, and non-profit stakeholders.

Research intensification and culture of innovation strongly position the University for an increasingly visible and influential role in the region’s economic and social development. These twin goals mesh with the economic and social development of the region and the Province’s Growth Plan as the University’s research and knowledge transfer supports industry, local businesses, government, and non-government sectors.



The U of R’s commitment to decolonization, Indigeneity, and climate action, in line with the inclusive and socially responsible vision of “All Our Relations,” informs our culture of discovery and innovation and the entire strategic research vision. With our research and discovery continuing to attract talented researchers and students, a strong culture of equity, diversity and inclusion helps the University retain high-quality personnel and optimize the conditions for their success.

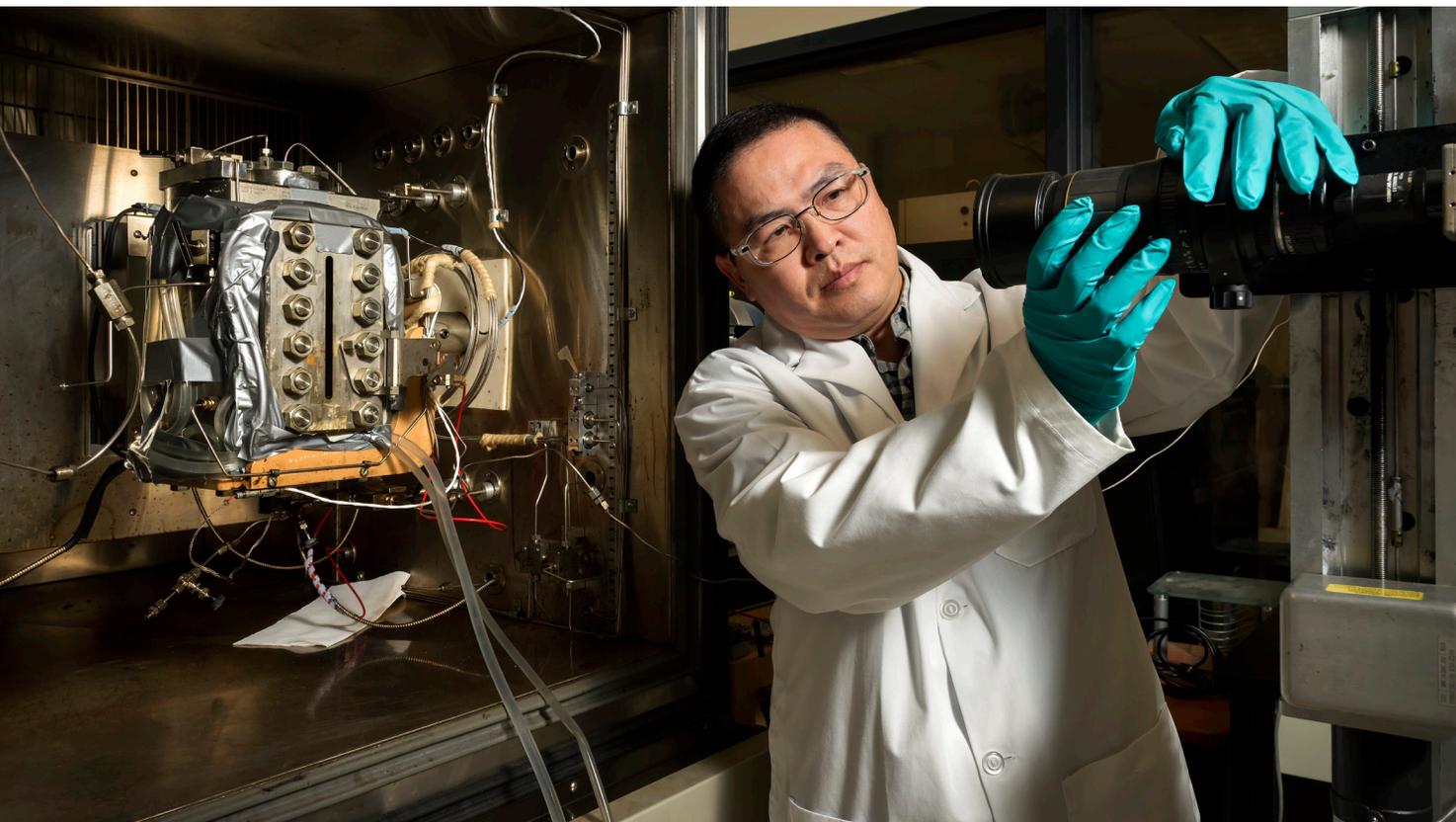
Five Strategic Research Actions



In 2020-2021, as part of the implementation of the next phase of the University's Strategic Plan, the Vice-President Research (VPR) conducted a major assessment of the University's research strengths that consisted of consultations with faculty members and researchers, government, industry and community partners. Additionally, a review of our research units, research funding, and other supports took place. The analysis of our research strengths and potential areas of growth has led the VPR to identify the following five major strategic actions for the next five years that will support **transformational research with high impact**:

- I: Grow the research enterprise at the University through new funding and support of the University's research centres;
- II: Promote the U of R signature research strengths in Climate and the Environment, Digital Futures, Living Heritage, and Health and Wellness and the aligned research centres;
- III: Establish a robust innovation and entrepreneurship framework to position the U of R as the leading innovative and entrepreneurial postsecondary institution in Saskatchewan and the Prairies;
- IV: Expand the graduate studies enterprise as graduate students and postdocs will be vital to the intensification of research activity, innovation and entrepreneurship at the U of R; and
- V: Build a partnership network with Indigenous communities, industry, government, and non-profit stakeholders.

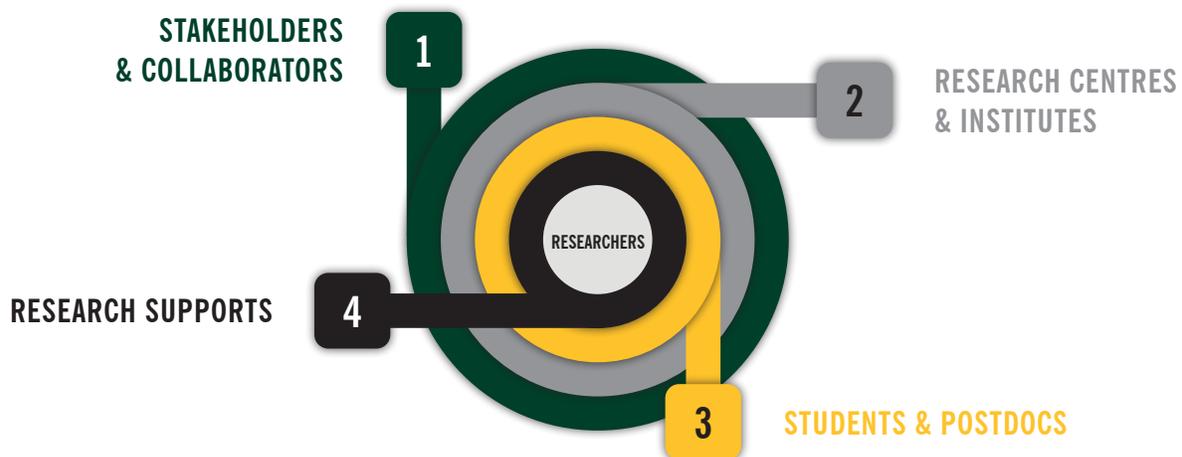
The Vice President-Research Office plays a prominent role in advocating for decolonization at the University as the institution seeks to live up to our commitments to Indigenous and BIPOC researchers and students through funding supports and mentorship programs. The Vice President-Research team pledges to ensure that equity, diversity and inclusion principles are prioritized and enacted throughout the implementation of the research strategy and within each of the above research actions.



I. Grow the research enterprise at the University through new funding and support of the University's research centres

The research enterprise is integral to the identity of the University and to our mission of serving and promoting excellence and prosperity in the City of Regina, the Province of Saskatchewan, Canada, and the world. Researchers constitute the lifeblood of the research enterprise and work closely with students and postdoctoral scholars who are the engines of research. The VPR Office supports development and delivery of programs that promote research and discovery efforts and partners with stakeholders and collaborators to ensure research impact is realized by our researchers.

The VPR Office oversees and supports the development of research infrastructure at the University which includes building resilient/robust technical and financial foundations for sustainable research institutes, centres, and labs. Our research institutes and centres, including both institutional and Faculty-based, are key conduits to sustained and impactful government, industry and community partnerships. Together, the U of R research institutes, centres and Canada Research Chairs constitute a readily available network central to the implementation of the above strategic priorities.



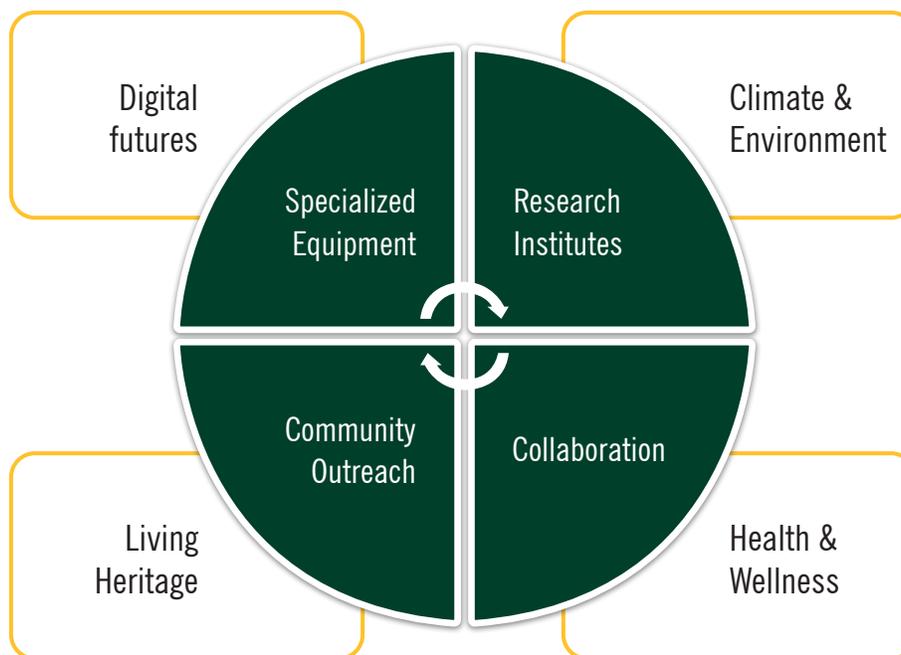
Key actions:

To better support the research enterprise, the VPR will:

- Encourage, support, and promote student, faculty, and staff research and scholarship at home and abroad. This will include engaging our early career researchers in our University research centres and institutes and focusing resource support to centres and institutes;
- Develop and validate incentive programs to expand Tri-Council Agency research funding across all Faculties;
- Strengthen Indigenous research by working closely with the Associate Vice-President Indigenous Engagement and building new supports for Indigenous researchers; and
- Invest in technology that allows for active participation in research with an awareness of environmental impact.

II. Promote the U of R signature research strengths in Climate and the Environment, Digital Futures, Living Heritage, and Health and Wellness.

Through consultation and review of research impacts and activities, the Vice-President Research has identified Four Signature Research Areas, to position the University's research enterprise around cutting-edge clusters:



Formalizing our signature areas of research will address the specific objectives of the institutional Strategic Plan to: broaden partnerships; provide a foci for Institutional Identity, and produce social impact. Research clusters streamline institutional resources to better support research and creative work, as well as enhance technologies for research

1. Climate and the Environment

Many members of the University of Regina's research community work on the most serious threats to environments in semi-arid regions in Saskatchewan and elsewhere. The U of R has maintained a long commitment to researching and mitigating societal impacts to climate and the environment. This is clearly evident in the number of research centres that are aligned to this signature area and work together to address grand challenges via multi-disciplinary approaches; including: the Clean Energy Technologies Research Institute, Institute for Energy, Environment and Sustainable Communities, Institute for Environmental Change and Society, Prairie Adaptation Research Collaborative, and the Centre for the Study of Science and Innovation Policy. Their research provides information to decision-makers on how to alleviate negative

impacts on climate, land-use and pollution on hydrology, degradation of water quality and food-web integrity. We develop adaptive management strategies and policies for the impacts of anticipated climate change, population growth and increased development of natural resources.

Researchers in this signature area evaluate the impacts of natural and anthropogenic effects on grassland, forest and aquatic habitats, develop environmental low carbon technologies to mitigate carbon dioxide emissions associated with climate change, and study other aspects of clean energy such as smart grids, intelligent transportation systems, and lean and agile manufacturing.

Key actions:

To support the Climate and the Environment signature area, the VPR will:

- Work with researchers and Research Centre Directors to develop a leadership presence dedicated to sustainability and societal resilience
- Deploy research administration resources to help researchers develop strategic initiatives that protect source water quality and reduce degradation of water resources
- Transform the University of Regina into a Living Lab where models for energy transitions are developed

2. Living Heritage

Living Heritage, as defined by UNESCO, is also referred to as intangible culture. Research in this area examines the practices, production/reproduction, expression, spaces, and knowledges that protect the diversity of human creativity and humanity's collective heritage. Every day, University of Regina researchers focus their efforts on understanding and preserving the dynamic and evolving elements of cultural heritage – oral histories, food heritage (traditional, sustainable cuisine), music, dance, ceremony, the natural world, and aesthetic and spiritual beliefs. Through this work, researchers across our campus create partnerships and produce scholarship that positively impacts our communities and our world.

Researchers in this signature area are highly engaged in the diverse and creative works that support Living Heritage scholarship, and are examining a range of diverse activities that center on it. Through our commitment to creating a culture of Living Heritage on our campus, we envision the University of Regina as a living lab of intangible culture – a space to ask questions, to research, and to experiment – a place where we embrace existing and emerging opportunities within the realm of Living Heritage research. The UofR's Humanities Research Institute plays a vital role in actioning our Living Heritage signature area.

Key actions:

To support the Living Heritage signature area, the VPR will:

- Support research and cultural production at the University to play a critical role in policy development within the cultural sector;
- Expand the University's relationships with community groups and government to increase knowledge translation and dissemination; and
- Build a transnational research and training network that encourages the integration of diverse cultural heritage expressions into sustainable development policies in SouthSouthNorth.

3. Digital Futures

The growth and continuous expansion of the data culture provides constant opportunities for our researchers to innovate, partner, develop and produce across fields such as commerce, science, education, healthcare, public administration, the arts and culture industries.

Digital Future researchers are leading the way through innovation and creativity in computing and digital media. They are performing research in data mining, wise computing, visualization, data security, and policy design, creation and analysis of emerging technologies, as well as within the digital humanities. They are emphasizing effective, efficient and sensitive decision-making by working with new information accumulated from diverse sources in scaled quantities of heterogeneous, electronic data.

Key actions:

To support the Digital Futures research signature area, the VPR will:

- Research and validate approaches to develop digital hubs that drive local/regional social and economic development;
- Facilitate the integration of technologies and efficient evaluation of big data to enhance economic and social resilience within our communities; and
- Work with Faculties to support the development of highly qualified personnel (HQP), increased graduate student co-op placements, and recruitment of top data scientists.

4. Health and Wellness

The University of Regina has an exceptional research reputation and international recognition in mental health and wellness. This is particularly evident by the strengths in our institutional research centres including: Centre on Aging and Health, Child Trauma Research Centre, and Canadian Institute for Public Safety Research and Treatment, and Saskatchewan Population Health and Evaluation Research Unit. Emerging areas of research within the Health and Wellness signature area include: neuroscience, therapeutic recreation and nutrition and training.

Pain, anxiety, depression, and stress can be understood as being part of a self-perpetuating cycle. Understanding, evaluating, managing and mitigating this cycle is the focus of this signature area. Researchers are tackling complex and costly human problems related to anxiety, stress and pain, their clinical evaluation, manifestation, causal factors and their management, with the goal of improving functional ability and quality of life for millions of people. The Health and Wellness signature area also builds on the University's strategic commitment to mental health literacy and research, strengthening connections with communities; providing positive social, environmental, economic, and health impacts through our reciprocal relationships with our communities. Our research in mental health leads to discoveries that have measurable impacts on our communities.

Key actions:

To support the Health and Wellness research signature area, the VPR will:

- Prioritize research activities at existing health-related research centres;
- Strengthen positive and reciprocal connections with communities and other University partners; and
- Work with Research Centre Directors to position the U of R as the leading centre of excellence in Mental Health and Wellness research.

III. Establish a robust innovation and entrepreneurship framework to position the U of R as the leading innovative and entrepreneurial postsecondary institution in Saskatchewan and the Prairies.

The VPR will work with the U of R research community to accelerate research and the translation of research innovations into reality. To spark and intensify entrepreneurial activities at the University will require a concerted effort with many partners. The VPR will establish an innovation and entrepreneurship framework through strategic planning, new policy development, financial and organizational infrastructure, and marketing and branding.

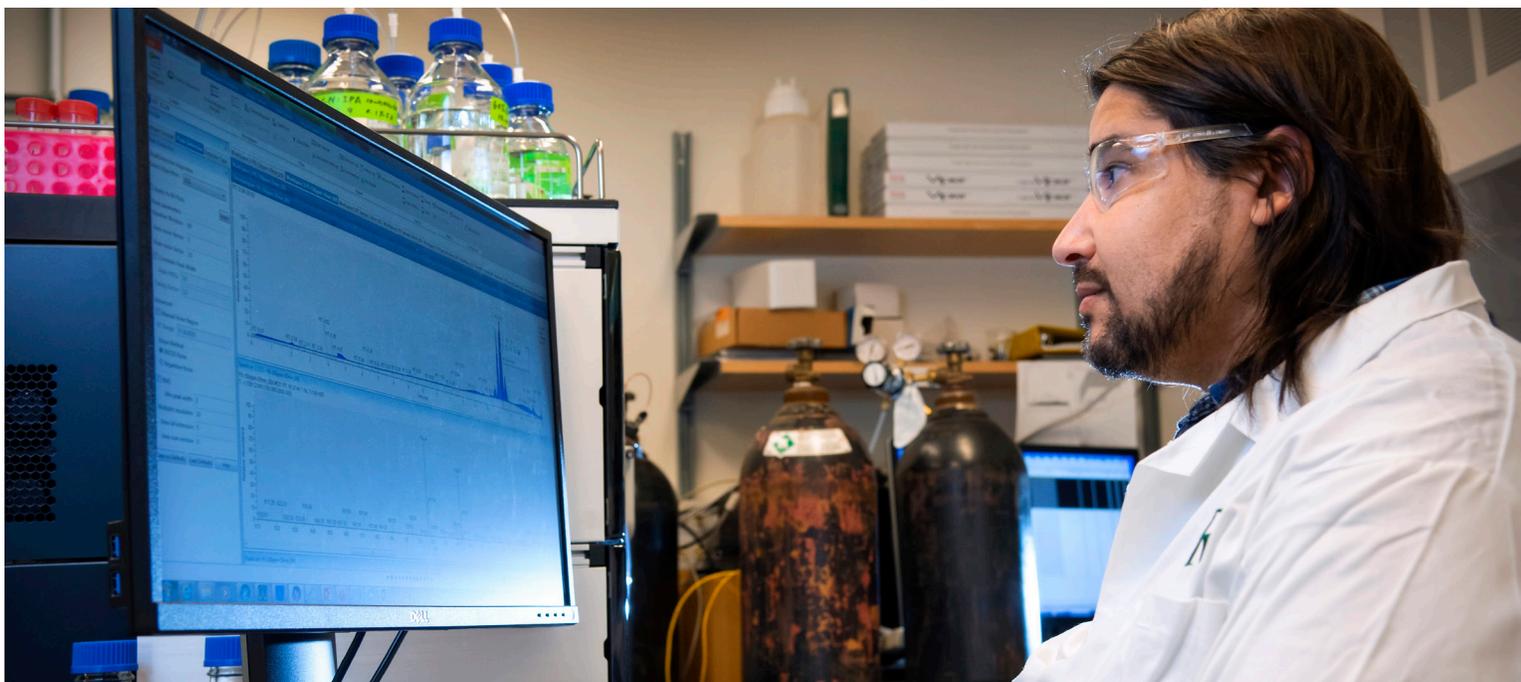
The new entrepreneurship framework will integrate research and innovation across the University and incentivize the pursuit of entrepreneurial and commercialization activities around four loosely interconnected major hubs [incubators]:

- Ag-Tech Hub
- Social/Community Innovation Hub
- Digital Technologies Hub
- Canadian Energy Transition Hub

Key actions:

To support a robust innovation and entrepreneurship framework, the VPR will:

- Promote a sustainable entrepreneurship culture, training and social R&D;
- Enable commercialization of research to serve industry and community needs; and
- Support the establishment of interconnected major (digital) innovation hubs for regional development.



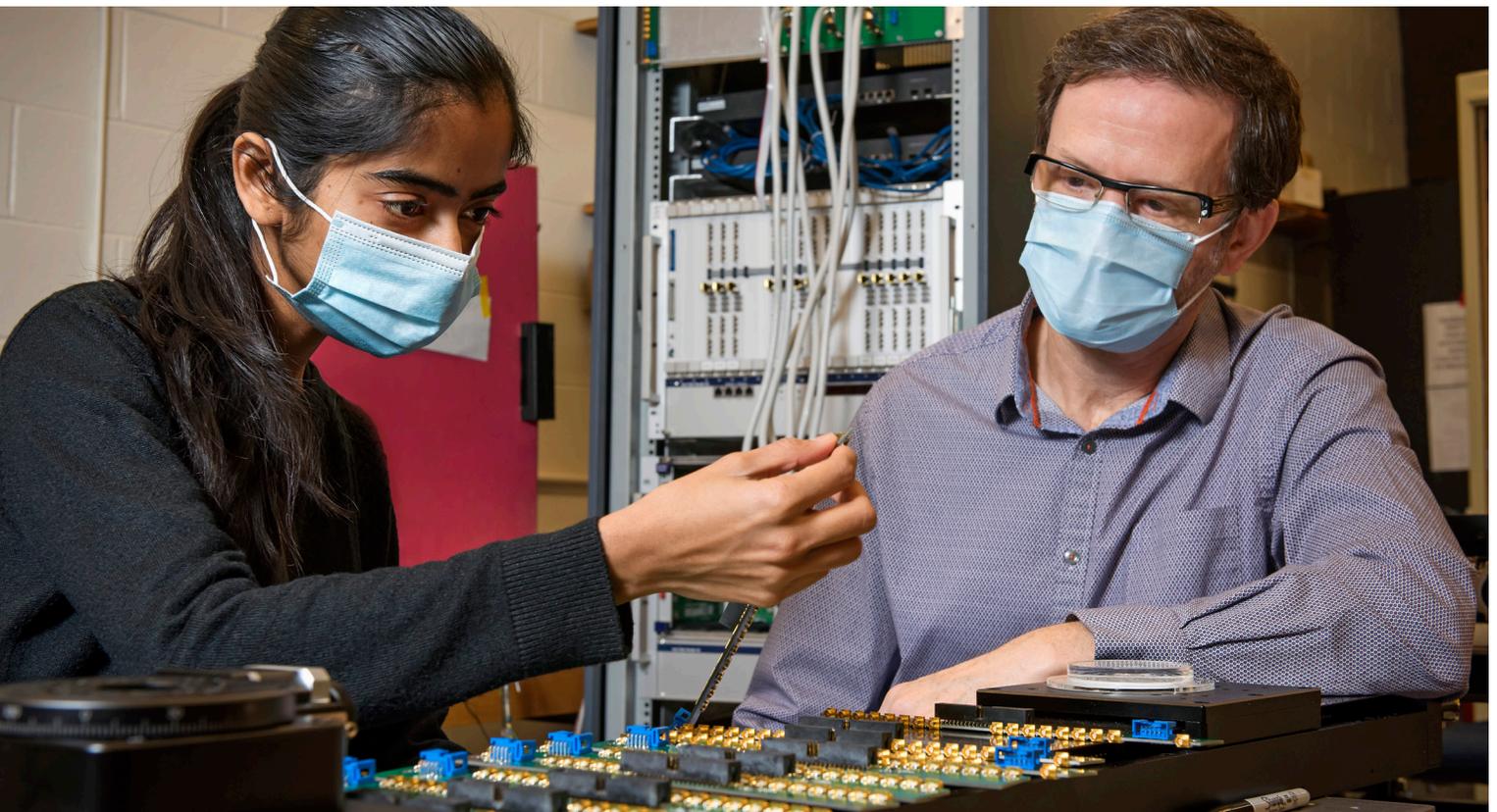
IV. Expand the graduate studies enterprise as graduate students and postdocs will be vital to the intensification of research activity, innovation and entrepreneurship at the U of R

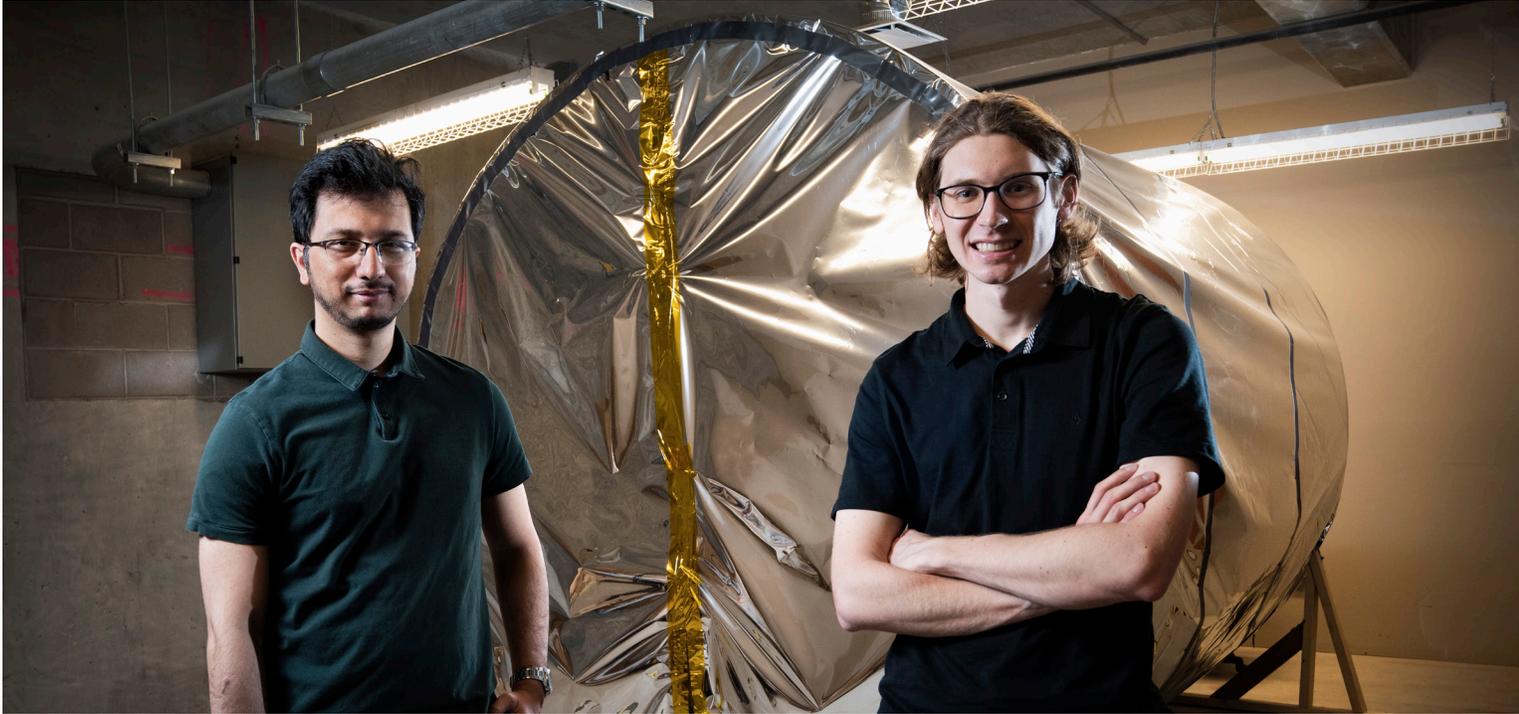
The Faculty of Graduate Studies and Research (FGSR) engages with various stakeholders as it aims to lead in graduate education through: innovative programming, Indigenization and decolonization of graduate studies, and strengthening connections with our communities and the environment. We commit to creating the conditions to support graduate students and postdoctoral fellows to push the boundaries of knowledge and discovery and improve student career-readiness.

Key actions:

To support the enhancement and quality of graduate student training the VPR will:

- Unleash creativity and discovery through expansion of new graduate and interdisciplinary programs;
- Improve recruitment, support and training of highly qualified, talented doctoral students and postdoctoral scholars from across Saskatchewan, Canada and around the world;
- Enrich graduate student experience through inclusive and robust graduate professional development and entrepreneurship programming;
- Advance collaboration and partnerships with local organizations and international institutions; and
- Enhance impactful communication through social media and alumni networks.





V. Build a partnership network with Indigenous communities, industry, government, and non-profit stakeholders

U of R researchers collaborate locally, provincially, nationally, and internationally across all of our stakeholder groups. We strive to strengthen alliances with Indigenous communities, and expand our collaborations with not-for-profit, government, non-governmental and industry organizations. The University is committed to forging reciprocal relationships that generate interest in and increase the societal relevance of our research efforts.

Key actions:

To expand the U of R partnership network, the VPR will:

- Build alliances with Indigenous communities that facilitate accountable research and support Indigenous researchers;
- Develop new partnerships that produce positive social impact through new relationships and joint initiatives with community partners;
- Broaden partnerships that enhance institutional identity and reputation; and
- Encourage, support and promote internationalization through close research collaboration.

Our success will be evident by a clear and consistent presence of the above signature research areas within the University's internal and external communications, as well as in the substantial proportion of research funding that can be ascribed to each signature area.

Metrics and Benchmarks



The following research-related measures from the University of Regina Performance Management Framework will be used to monitor progress on the Action Plan.

Strategic Theme	Performance Measure
Discovery	# of student registrations in experiential learning
Environment and Climate Action	# of living labs on- and off-campus focused on decarbonization % increase in researchers affiliated with research centres focused on environment and climate action
Impact & Identity	Research Impact: Field Weighted Citation Impact (FWCI)
Impact & Identity	Research Impact: # of media engagements with UR research and creative contribution
Impact & Identity	Growth in Research Revenue

Additional Measures

Action Plan Pillar	Performance Measures
I. Strengthen the research enterprise at the U of R through new funding and research centre supports	Annual Researcher Satisfaction Survey ¹
II. Promote the U of R signature research strengths in Climate and the Environment, Digital Futures, Living Heritage, and Mental Health and Wellbeing.	SciVal Metrics (FWCI, # of publications, # of citations)
III. Establish a robust Innovation and entrepreneurship framework to position the U of R as the leading entrepreneurial and innovative postsecondary institution in Saskatchewan and the Prairies.	Completed implementation of the Innovation Eco-system and Entrepreneurship Strategy
IV. Expand the graduate studies enterprise as graduate students and postdocs will increasingly continue to be vital to the intensification of research activity, innovation and entrepreneurship at the University of Regina	Increase graduate student enrollment to 15% of the student population
V. Build a network of partnerships and alliances with industry, government, and non-profit stakeholders	Annual Partnership Scan ²

¹Annual researcher satisfaction survey to be administered by FGSR targeted to faculty, student and staff researchers.

²Annual scan to obtain an inventory of partnerships and collaborations across sectors (industry, government, and non-profit) and geographies (Saskatchewan, Canada, international).

