Working Together Towards Common Goals: Serving Through Research

The University of Regina’s Strategic Research Plan 2010 – 2015
Executive Summary

The University of Regina has transformed from a relatively small, predominantly undergraduate teaching university in 1974 to a mid-size comprehensive institution in 2010 that actively fosters excellence in its three fundamental pillars - research, teaching, and public service. In 2009, the University developed its Strategic Plan: mâmawohkamâtowin: Our Work, Our People, Our Communities with wide-ranging goals and objectives for the next five years. The Strategic Research Plan (SRP) has been developed as a direct response to the University’s Strategic Plan and embraces its values, mission, and goals.

The development process for the Strategic Research Plan involved extensive consultations with internal and external stakeholders through interviews, town-hall meetings, personal written submissions and responses to three on-line questionnaires beginning in the spring of 2009 and concluding in the summer of 2010. The mission, values, goals and signature themes as well as recommended actions that emerged from this extensive process form the basis of this plan and thus make it a document inspired by and developed for the University of Regina community and its partners. This document sets the blueprint for our pure and applied research into the future in full alignment with the University’s Strategic Plan. It also provides the basis for specific action as each unit will determine how it will incorporate this plan into its own research activities.

The SRP presents an overview of the University’s Vision, Mission, Values, and Goals and among the Goals identifies three signature themes and accompanying sub-themes of demonstrated and sustained excellence, namely:

- **Sustainable Development**: Energy and Natural Resources; Environment
- **Human Development**: Health; Human Justice, Safety and Security; Arts, Culture & Heritage
- **Knowledge Creation & Discovery**: Information and Communication; Pure Discovery-Based Research; Community-Based Research.

Conclusion

The Strategic Research Plan was developed through extensive consultation with the University community and its stakeholders. What has emerged is a statement of our culture that reveals a deep-seated commitment to excellence in pure and applied research. It also reveals powerful coherence with mâmawohkamâtowin: Our Work, Our People, Our Communities. The culture of the University of Regina values creativity, innovation, and academic rigour. It rewards risk taking in the pursuit of excellence and offers the infrastructure to support cutting edge efforts to expand human knowledge intellectually, socially, environmentally, and physically. By all available measures, the University is currently functioning at the highest research capacity in its 100 year history. This public statement of our university culture sets the tone for the continued growth and the pursuit of excellence in research across faculties and disciplines.
The Strategic Research Plan (SRP) is intended to communicate how to build on the University’s Strategic Plan and put into action our mandate to serve our people and our community through our research. Serving the community through creative and free enquiry and the dissemination of the outcomes of our research defines the university. It is our privilege and obligation to be society’s hub for the pursuit of knowledge.

We endeavour to do this through research that is:

- **meaningful** to the individual academic, and
- **responsible** and **responsive** to the needs of society and to the demands of the academy.

**Our Vision**

The University of Regina is an institution with a century of strength in teaching and community service¹. We will build on this history and emerge as a leader among comprehensive universities, where we are internationally recognised for innovative research, the ability to integrate our findings into classroom lectures, and our commitment to disseminate this knowledge to the public.

**Our Mission**

The research mission of the University of Regina is to use the exceptional talents of research scholars - professors and students - to extend the boundaries of human knowledge and to use these discoveries to understand and resolve present and future challenges to humanity and the environment².

To do this, the University of Regina will:

- Attract, nurture, retain, and promote outstanding research scholars;
- Recruit the best and brightest graduate students and post doctoral fellows;
- Lead in undergraduate education through inspired application of research;
- Provide exceptional capacity and opportunities for individuals and teams to develop excellence in pure and applied research;
- Foster commercialisation of applied research endeavours to the benefit of Saskatchewan, Canadian, and Global citizenry;
- Demonstrate research achievements for the benefit of society through diverse academic and non-traditional means of communication.

**Our Values**

The University of Regina values:

- Innovative pure and applied research to expand human knowledge and to support social, environmental, and economic development;
- The pursuit of excellence in all forms of research based on the highest standards in the peer-review process in each discipline;

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¹ Strategic Plan Goal A1 – Promote and reward the pursuit of excellence in teaching, research, public service, and administration. Make the University widely known for excellence in all its activities.
² Strategic Plan Goal A4 – Enhance the University’s distinctive programming and research profile. Capitalize on our research successes to benefit the institution, researchers, and our students.
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- The dissemination and translation of findings not only in the traditional academic media (e.g., peer-reviewed publications) but also in non-academic outlets to expand the scope of knowledge translation;
- A rigorous environment for all forms of new and original enquiry among research scholars (faculty members and students);
- Engagement of undergraduate students in the research enterprise;
- The explicit engagement of community stakeholders in research endeavours whenever and wherever possible;
- Domestic and international collaborations to foster a global citizenry and strengthen resources in support of research;
- The transfer of its technological innovations through commercial ventures and partnerships with industry.

Our Goals
The University of Regina will achieve its research mission by identifying and attaining important and well-defined goals.

First Goal: Encourage, nurture, promote, and sustain excellence in all aspects of research.

We support and encourage our tradition and culture of pure and applied research excellence based on the principle of academic freedom. The natural outcome of such a culture is an invigorated faculty and an institution that is sought out by individuals looking for a dynamic, meaningful, and preferred workplace. As indicated in the Strategic Plan, we aspire to be among Canada’s premier comprehensive universities. Integral to this vision becoming a reality is a vibrant research culture.

Fundamental to success in the future is our ability to create an environment for all research scholars that stimulates, supports, and recognises research excellence. Such an environment attracts the best and brightest and instils a sense of meaning to the institution and the public it serves. The University will continue to develop and maintain an environment that fosters meaningful work and facilitates individuals to meet their research and scholarly goals. Furthermore, while involving graduate students and post doctoral fellows in the research enterprise is essential, the University will enhance the involvement of undergraduate students in research not only as a succession strategy to prepare the next generation of the academy, but also to enhance the quality of the undergraduate educational experience.

Strategy to meet the first goal: The University of Regina will foster this first goal by supporting emerging and experienced research scholars through the

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3 The University of Regina’s Vision statement reads as follows: The University of Regina is a welcoming, student-focused institution that combines deep-rooted values with innovative thinking, classroom theory with real-world practice, and global ideas with regional needs. We aspire to be one of Canada’s best comprehensive universities.
various programmes offered through the Office of Research Services, by encouraging collaborative research, centres & institutes, interdisciplinarity, graduate education and by continued support in seeding research activities through the Office of the Vice-President Research.

- **Collaborative Research – International and Domestic**. The University of Regina has distinguished itself as a dynamic institution that seeks out and capitalises on international, domestic, provincial, and local opportunities and partnerships. Realising that we are a mid-sized institution and geographically distant from other major centres, we have consistently taken advantage of networks and partnerships around the world to make the University of Regina an international player in research excellence in a variety of areas. While not all research endeavours are predisposed to collaboration, we remain committed to advancing team efforts and strive to enhance the research culture of the University.

Our relationships with the **Federated Colleges** - Campion, First Nations University of Canada, and Luther as well as the Institut français, and the Gabriel Dumont Institute - are important to continued success in research. Disciplinary and interdisciplinary collaborations with research scholars at the federated colleges have led to numerous Tri-council awards, publications, and a profound impact in the community. The University of Regina is committed to foster these positive and fruitful relationships.

The University of Regina has a long and proud history of international collaborations including our inaugural meetings in 1980 as the first Canadian University to establish relations in the modern era with the People’s Republic of China. Since then we have established academic and research agreements with numerous countries around the world and we continue to foster these relationships formally through institutional agreements.

- **Interdisciplinary**. The University of Regina supports the role of interdisciplinarity and disciplinary research in advancing the boundaries of human knowledge. When the complexity of the problem demands answers from varying perspectives and paradigms,

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4 Strategic Plan Goal C1 – Raise the profile and increase the presence of the University regionally, nationally, and internationally. Promote community involvement of University personnel by redoubling our efforts to showcase the pursuit of excellence in teaching, research, and administration.
Strategic Plan Goal C2 – Enhance collaboration with and among First Nations University of Canada, Campion and Luther Colleges, the Institut français, and the Gabriel Dumont Institute.
Strategic Plan Goal C3 – Foster educational, research, and human resource development partnerships with other educational entities, businesses, professions and community groups.

5 Interdisciplinarity is defined as the ability to analyze, synthesize and harmonize links between disciplines into a coordinated and coherent whole (Canadian Institutes for Health Research, 2005).
then interdisciplinarity is essential. This approach provides the opportunity for research scholars to seek to understand concepts and phenomenon from different academic worldviews. In this regard, the University of Regina supports efforts from diverse backgrounds and core disciplines to work together toward common goals and solutions.

- **Research Centres & Institutes.** The University of Regina currently supports over 30 centres, institutes, and laboratories that provide an identity and reputation to enable the leveraging of new opportunities and external funding. They are flexible and responsive to changing circumstances and opportunities. They create synergy and community engagement, as well as provide opportunities for mentoring, and the development of expertise. As the research landscape continues to evolve the need to introduce new vibrant centres and institutions will be encouraged and supported. 
http://www.uregina.ca/presoff/vpadmin/policymanual/research/14020.shtml

- **Graduate Education.** A key component in establishing a strong research culture at the University of Regina is the continued growth of and support for vibrant graduate programmes at the Master’s and Doctoral levels in each of our faculties. Graduate students bring new energy and basic inquisitiveness to the research enterprise of any faculty member. Graduate education is also critical to the undergraduate agenda by providing an obvious link between course-based scholarship and new and original research advancing the knowledge boundaries. The University of Regina, the Faculty of Graduate Studies & Research, individual faculties, and departments will continue to foster viable graduate programmes, develop new initiatives, and support individual students to reach their potential through skilled mentorship.

- **Seed Funding Opportunities.** The University currently offers a variety of initiatives to research scholars seeking start up funds for research which include:
  - Office of Research Services Cohort Program;
  - Academic Conference Host funding;
  - SSHRC General Research Grant Fund/President’s Fund;
  - Research Trust fund;
  - Start-up awards available from participating faculties with matching funds from the Office of the Vice President-Research;
  - Other awards are available through individual faculty initiatives and individuals should consult their respective Associate Deans Research for opportunities and details.
Second Goal: Foster and support signature themes of research that have demonstrated and sustained excellence.

The University of Regina distinguishes itself internationally in numerous theme areas of research. These achievements by our researchers have been recognised not only by peer-reviewed acclaim, but also by their impact on the public good. We will sustain these research signature themes in order to foster continued innovation and measurable success. The following is a brief overview of our three signature themes and eight sub-themes:

Sustainable6 Development

- Energy and Natural Resources. The University of Regina has long understood that both pure research and applied research are driving forces behind sustainable societal and economic development. There is a clear recognition that the availability of energy (including both non-renewable, e.g., oil and uranium, and renewable, e.g., geothermal and wind) geological materials (potash, gold, and diamond), water, and agricultural resources are fundamental to that growth. The University of Regina has and is making significant contributions to develop ways to lessen human impact and increase social responsibility with respect to climate, water, and land in energy production, industrial technologies, water management, and agricultural practices. We specialize in solutions focused on carbon capture and storage, risk assessment of geological storage of CO2, enhanced oil recovery and recovery of minerals from mine waste, innovative mining methods for metals, minerals, and oil shales, and energy-related policy options.

- Environment. The University of Regina is deeply committed to research that sustains and enhances the quality of the natural environment (air, water, and soil), and increases our understanding of the sources, movement, and transformations of contaminants in the environment. We are also committed to research that will lead to the reduction of the negative impact of industrialization (traffic noise, hazardous wastes, and infrastructure aging). Building on decades of environmental research at the University of Regina spanning various faculties and disciplines, research scholars have advanced the knowledge of both natural and artificial systems by addressing environmental issues such as climate change, air and water quality, biodiversity, and natural hazards. Our researchers

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6 Based on its internationally-accepted definition (World Commission on Environment and Development, 1987), sustainable development is defined as one that “meets the needs of the present without compromising the ability of future generations to meet their own needs.” The United Nations 2005 World Summit Outcome Document identified three interdependent and mutually reinforcing pillars of sustainability as economic development, social development, and environmental protection.
specialize in solutions focused on conserving renewable resources, forecasting weather and environmental change, advancing process knowledge required for management and control of pollutants in urban, agricultural, and rural settings, industrial waste management, and sustainability of urban infrastructure. Internationally, our research has provided industry and government organizations with innovative solutions to address several environmental challenges the global community is facing.

**Human Development**

- **Health.** The University of Regina’s approach to health research is a multidisciplinary one, drawing on the expertise of researchers in different faculties to study the impact of health determinants on various populations. At the same time, research continues into the preventative aspects of health care, with the study and development of policy and program interventions designed to improve health determinants and equitable access to health services. Our researchers explore many aspects of health and are conducting leading-edge studies in aging, ethics, long-term care, pain assessment and management, cancer, population and aboriginal health, rural and northern health, and studies on the overall health and wellness of our communities. In partnership with the First Nations University of Canada and the University of Saskatchewan, our research scholars are advancing aboriginal health studies of chronic diseases, nutrition and lifestyle, indigenous healing, health delivery, and environmental health.

- **Human Justice, Safety, and Security.** This province has a history of progressive justice initiatives and the University of Regina has played a part in advancing justice through the endorsement and creation of justice centres, departments, research units, and schools. The University of Regina researchers offer expertise on corporate and fiscal policy, organizational behaviour, contemporary political philosophy and political ideologies, ethics and privacy issues, immigration, human rights, and broad issues of economic, social and political development. The University of Regina partners with a number of policy-forming organizations, including governments, community-based organizations, and social movements concerned with equality and justice. In the area of legal security, we partner with the Canadian Police Research Centre and the Saskatchewan Police College building on traditional strengths in social policy innovation.

- **Arts, Culture, and Heritage.** Spanning across faculties and departments, research activities in this area involve the study of art, culture, heritage, and applied and practitioner based work. Our culture and heritage scholars
are active nationally and internationally in artistic creation, performance, and translation; they are engaged in exploring and understanding languages, historical and cultural beliefs, and they undertake related ethnographic studies. Working within specific disciplines and in collaborative and interdisciplinary contexts, scholars merge the practice and study of art and culture with the development of computer-based technology. Additionally, the presence of the First Nations University of Canada, the Gabriel Dumont Institute and the Institut français uniquely positions the University to advance cultural research with and about three of the founding peoples of Canada – First Nations, Métis and francophone – and to further define diverse artistic, literary, and cultural heritage.

**Knowledge Creation & Discovery**

- **Information and Communication.** The University of Regina is an innovator in information and media technology research. This research directly reflects our partnerships with numerous technology R&D organizations and showcases proven strengths in mathematical software and modelling, artificial intelligence, data mining and rough sets, multimedia computing, surround sound, and imaging. Focused on information technology, software engineering, computer science, physics, and interdisciplinary collaboration, the University of Regina is highly versatile, lending itself to innovative projects in a research atmosphere that is rich and varied. Medical research, cognitive science, environmental assessment, data interpretation for the energy industry, digital media, data mining, even electronic entertainment – these are just some of the streams of enquiry that rely heavily on collaboration among researchers and provide an important step in driving the creation and commercialization of new technology.

- **Pure Discovery-Based Research.** Pure research is carried out to increase our understanding of the basic principles of nature and the human world. The motivation for fundamental research arises from our deep-seated need to understand ourselves, the universe we are in and how it operates, and thus is central to the mission of a university.

Fundamental or basic research deals in ideas, principles, concepts, and theories and may or may not result in an immediate practical or commercial benefit. However, in the long term, it forms the basis for the development of new technologies and social advances with direct applications in our daily life which were not originally foreseen. For example, today's computers could not exist without pure research in mathematics and physics, for which there was no known practical application at the time. The University of Regina has established a tradition of excellence in pure research and is committed to continuing this most basic inquisitive endeavour.
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- **Community-Based Research.** Community-based research endeavours to foster research opportunities, social responsibility, and civic engagement between the university and its community. Community-based research promotes an exchange of ideas to resolve diverse challenges and social inequities that face our communities - local and global. It is a collaborative partnership between university and community research partners in which diverse methods and disciplines are employed to creatively produce and disseminate knowledge while problem solving through social action. Community-based research is dedicated to facilitating community research needs by matching questions to university-based researchers, hosting goal-setting gatherings, and advising on research opportunities and processes. It has a long and successful research history at the University of Regina demonstrating the significant impact of research on the community at large.

**Strategy to meet the second goal:** The University of Regina is committed to excellence in research across the breadth of the signature themes as well as within and between disciplines. These activities and the processes they demand are valued by the University in its commitment to the rigours of peer-review - the cornerstone standard for assessing excellence. The process can be viewed in terms of input, output, and impact.

- **Inputs: Grants & Contracts.** Funding derived from Tri-Council and other agencies (e.g., Canada Council Grants) are important indicators of research success that allow individuals to develop novel and cutting edge research, train graduate students, establish infrastructure, and achieve international excellence. Funding and recognition from other external sources (i.e., foundations, endowed chairs, research awards, and industry contracts) is also strongly encouraged and respected. The University of Regina will continue to support and build capacity among researcher scholars to achieve success in peer-reviewed research by increasing the level of external funding applications annually with special, but not exclusive, attention to Tri-council sources over the next 5 years.

- **Outputs: Peer-Review.** The University of Regina and its researchers accept that all research activities are subject to professional and public evaluation, the nature of which varies substantially among disciplines. Despite these differences, there are some common principles from which excellence in research can be evaluated. The University of Regina recognizes that:
  - Research must be discovery-based;
  - Research must offer theoretical contextualization within the relevant field or fields of scientific/literary/artistic inquiry;

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7 Tri-Council funding is also a critical variable in the provincial and federal funding formulae.
8 This list represents a synthesis of material from the criteria documents of all UofR faculties and Tri-Council criteria.
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- Research must present a well considered methodological approach;
- Research results must be open to public scrutiny;
- Research results must meet the criterion of peer review in the respective field;
- Peer review must be that of peers external to the University;
- Both quality and quantity of research output need to be considered.

To meet the requirement for adjudication and evaluation of research activities, the University of Regina will establish baseline measures of peer-reviewed research output in 2011 for each Faculty. We will establish a listing of comparable universities in collaboration with each faculty, against which we can assess our relative success. We will look to grants awarded, peer-reviewed publications and performances, thesis-based graduate student engagement, and involvement in fostering undergraduate research.

- **Impact.** Research is most valued by society when it changes the way we think, act, and feel about ourselves, others and our environment, be it at the international, national, provincial, or local level. The University acknowledges the need to communicate achievements and to demonstrate that our actions may achieve benefit to society. In doing so, the University community recognizes that some avenues of research produce immediate and tangible benefits to society, whereas other kinds of research will demonstrate influence over years to decades (e.g., creative writing, visual arts, and performance as well as basic/pure/theoretical science & math). As a result, the University will capitalise on its immediately important findings and communicate them to the government and society at large, while demonstrating and promoting our maturing achievements through conventional and novel communications strategies.

**Third Goal: Provide the needed space, infrastructure, and administration to support excellence in research.**

While initiative, creativity, and curiosity of researchers are the essential catalysts for the University's success, there must be a matching commitment from the University to facilitate these efforts. Faculty can expect support from academic and administrative units through the provision of infrastructure in the form of research space and administration.

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9 This may, or may not be, based on peer-reviewed journal publications.

10 Strategic Plan Goal B4 – Increase our administrative efficiency and enhance productivity.
**Strategy to meet the third goal:** The University of Regina recognises that superior infrastructure, including space and administrative support, are critical to fostering excellence in research.

- **Space.** The University's growth in its research was enabled by significant growth in space constructed and allocated to faculties. In the past decade, the University has more than doubled its physical capacity, with notable research-related construction including a $60 million Research and Innovation Centre providing faculty and students with state-of-the-art teaching and research facilities; and a $32 million Centre for Kinesiology, Health and Sport that is home to a health clinic and a variety of research facilities.

- **Administrative Support.** All units within the University's structure, including administrative and academic units, provide administrative support both directly and indirectly to researchers. Both forms of support are crucial to the mission of the University in all areas - not just research.

Despite this unprecedented growth as the University expanded its research emphasis, there continues to be a tremendous demand for research space. In addition to the planning, design and construction of new facilities, Facilities Management, in partnership with faculties, departments and the Office of Research Services, continuously strives to improve the utilization efficiency of existing space to create opportunities for new research initiatives. Strategies include sharing of resources and equipment, consolidation of inefficient storage, and conversion of underutilized space.

For existing, newly constructed and renovated space provided to match research needs, Academic and Administrative Units collaborate with researchers to:

- Create a safe work environment, through environmental design and the development of safe work practices and procedures;
- Create a work environment that is productive and comfortable;
- Provide and pro-actively maintain building space including heating, security, cooling, ventilation and electrical systems that protect the integrity of research activities;
- Minimize the overall environmental impacts of construction and operations;
- Create a flexible and functional environment that maximizes the benefit and sustainability of research facilities.

The Office of Research Services (ORS) is dedicated to providing essential support services to researchers to enable them to achieve their individual goals of excellence in research. Specifically, ORS will:
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- Locate and assist in obtaining funds from diverse sources including (but not limited to) the Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council of Canada (NSERC), the Social Sciences and Humanities Research Council of Canada (SSHRC), Canada Foundation for Innovation (CFI), Provincial agencies, and industry partners, associations, foundations, and trusts;
- Provide first class service to administer grants and contracts;
- Insure compliance with regulatory bodies, Canadian and international law, and ethical research standards;
- Provide workshops, mentorship and internal review programs, grant proof-reading, grant writing, and assistance with grant budget preparations;
- Assist in reviewing, negotiating, and developing research agreements, such as non-disclosure or confidentiality agreements, Memoranda of Understanding, and research contracts; and
- Advise and inform faculty concerning policies on intellectual property, overhead costs, publication rights, liability, etc.

Fourth Goal: Demonstrate the relevance of pure and applied research to the community. The University holds a unique and privileged role in society as the centre for the pursuit of knowledge. With this role comes the expectation that we will serve the public through research and that these pursuits will:
- Continue to foster the principle of academic freedom regarding research endeavours;
- Enhance the commitment to conduct applied research with and for the community;
- Translate knowledge to the public and actively demonstrate the impact the University of Regina has on the community through enhanced communication.

Maintaining and enhancing the support of the public can only occur if it is aware of our research and the extent to which this free enquiry allows them to better understand the world’s physical, social, and philosophical complexities.

Strategy to meet the fourth goal: The University of Regina will develop a comprehensive and inclusive strategy that will communicate campus-wide research initiatives. This strategy will involve the identification and promotion of the success stories of our scholars to the local, national, and international

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11 Strategic Plan Goal C1 – Raise the profile and increase the presence of the University regionally, nationally, and internationally. Promote community involvement of University personnel by redoubling our efforts to showcase the pursuit of excellence in teaching, research, and administration.
communities which we serve through a variety of media (http://www.uregina.ca/news/commun/).

We will continue to explore industry partnerships and endeavour to maximise commercial capacity through the University-Industry Liaison Office (UILO) (http://www.uregina.ca/uilo/). The UILO is an initiative of the City of Regina and the University of Regina to promote research collaborations and partnering opportunities involving intellectual property and to build focused working relationships between the University and the business communities in our region, our country and internationally. Universities share their expertise with private and public organizations to enhance the development of the communities that generously support the primary missions of teaching and research.

**Conclusion**

The Strategic Research Plan was developed through extensive consultation with the University community and its stakeholders. What has emerged is a statement of our culture that reveals a deep-seated commitment to excellence in pure and applied research. It also reveals powerful coherence with mâmawokamâtowin: *Our Work, Our People, Our Communities*. The culture of the University of Regina values creativity, innovation, and academic rigour. It rewards risk taking in the pursuit of excellence and offers the infrastructure to support cutting edge efforts to expand human knowledge intellectually, socially, environmentally, and physically. By all available measures, the University is currently functioning at the highest research capacity in its 100 year history. This public statement of our university culture sets the tone for the continued growth and the pursuit of excellence in research across faculties and disciplines.