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The following Motions and Documents were considered by the General Faculties Council at its Monday, September 18, 2023 meeting:

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Agenda Title: **New Members of GFC**

CARRIED MOTION:

TO RECEIVE:

The following statutory academic staff members who have been elected by their Faculty, to serve on GFC for a term of office beginning immediately and ending June 30, 2026:

- Esther Kim Rehabilitation Medicine
- Adetola Adesida Medicine and Dentistry
- Duncan Elliott Engineering
- Lindsey Westover Engineering
- Kenneth Gariepy Education
- Jodi Harding-Kuringer Education

The following ex-officio members to serve on GFC for a term extending for the duration of the appointment:

- Declan Ali Dean, Faculty of Science
- Tracy Raivio Vice-Provost and Dean, Faculty of Graduate Studies and Research
- Doug Gleddie Acting Dean, Faculty of Education
- Denise LaFitte Acting Vice-Provost and Chief Librarian
- Chris Andersen Dean, Faculty of Native Studies

The following ex-officio members to serve on GFC for a term beginning July 1, 2023 and ending June 30, 2024:

- Tom Stelfox Dean's delegate, Faculty of Medicine and Dentistry

CARRIED MOTION:

TO APPOINT:

The following cross-appointed members to serve on GFC for a three-year term concurrent with their appointment to the Board of Governors:

- Dilini Vethanayagam GFC Nominee to the Board
- Stephanie Dickie NASA Representative

The following appointed ex officio members to serve on GFC for a term extending for the duration of their appointment:

- Brenda Hemmelgarn Vice-Provost and College Dean, Health Sciences
- Marvin Washington Vice-Provost and College Dean, Social Sciences and Humanities
- Ravina Sanghera Vice-Provost and Dean of Students

The following graduate student representatives to serve on GFC for terms commencing immediately and ending April 30, 2024:

- Zak Kaal Agricultural, Life & Environmental Sciences
- Shubham Goswami Mechanical Engineering

The following post-doctoral fellow representative to serve on GFC for a term commencing immediately and ending January 31, 2024:

- Olena Mykhailenko School of Business

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The following Libraries representative to serve on GFC for a term commencing immediately and ending June 30, 2026:

Tim Klassen Libraries and Museums

FINAL Item 4

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Agenda Title: **Strategic Plan for Research and Innovation (SPRI)**

CARRIED MOTION:

THAT General Faculties Council approve "Forward with Purpose: A Strategic Plan for Research and Innovation".

FINAL Item 5

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New Members of GFC

**MOTION I: TO RECEIVE:**

The following statutory academic staff members who have been elected by their Faculty, to serve on GFC for a term of office beginning immediately and ending June 30, 2026:

Esther Kim	Rehabilitation Medicine
Adetola Adesida	Medicine and Dentistry
Duncan Elliott	Engineering
Lindsey Westover	Engineering
Kenneth Gariepy	Education
Jodi Harding-Kuringer	Education

The following ex-officio members to serve on GFC for a term extending for the duration of the appointment:

Declan Ali	Dean, Faculty of Science
Tracy Raivio	Vice-Provost and Dean, Faculty of Graduate Studies and Research
Doug Gleddie	Acting Dean, Faculty of Education
Denise LaFitte	Acting Vice-Provost and Chief Librarian
Chris Andersen	Dean, Faculty of Native Studies

The following ex-officio members to serve on GFC for a term beginning July 1, 2023 and ending June 30, 2024:

Tom Stelfox	Dean’s delegate, Faculty of Medicine and Dentistry
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**MOTION II: TO APPOINT:**

The following cross-appointed members to serve on GFC for a three-year term concurrent with their appointment to the Board of Governors:

Dilini Vethanayagam	GFC Nominee to the Board
Stephanie Dickie	NASA Representative

The following appointed ex officio members to serve on GFC for a term extending for the duration of their appointment:

Brenda Hemmelgarn	Vice-Provost and College Dean, Health Sciences
Marvin Washington	Vice-Provost and College Dean, Social Sciences and Humanities



Ravina Sanghera

Vice-Provost and Dean of  
Students

The following graduate student representatives to serve on GFC for terms commencing immediately and ending April 30, 2024:

Zak Kaal

Agricultural, Life & Environmental Sciences

Shubham Goswami

Mechanical Engineering

The following post-doctoral fellow representative to serve on GFC for a term commencing immediately and ending January 31, 2024:

Olena Mykhailenko

School of Business

The following Libraries representative to serve on GFC for a term commencing immediately and ending June 30, 2026:

Tim Klassen

Libraries and Museums

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**FINAL ITEM NO. 5****Decision X Discussion Information**

**ITEM OBJECTIVE:** This item is before the General Faculties Council (GFC) for a final discussion on “Forward with Purpose: A Strategic Plan for Research and Innovation” to the General Faculties Council for approval.

<b>DATE</b>	18 September 2023
<b>TO</b>	General Faculties Council
<b>RESPONSIBLE PORTFOLIO</b>	Vice-President (Research and Innovation)

**MOTION:**

That General Faculties Council approve “Forward with Purpose: A Strategic Plan for Research and Innovation”.

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**EXECUTIVE SUMMARY:**Background

The development of an institutional strategic plan for research and innovation has been completed. Its working title has been Strategic Plan for Research and Innovation (SPRI), and its final title is “Forward with Purpose: A Strategic Plan for Research and Innovation”. Over the same period of time, colleagues in the President’s Office and the Provost and Vice-President (Academic)’s Office led the consultations that informed the University Strategic Plan (USP), and the two initiatives kept in close touch with each other as they evolved.

A Working Group focused on the research and innovation plan was convened in July 2021 by Vice-President (Research and Innovation) Aminah Robinson Fayek, comprised of two individuals from each of the three Colleges, representatives from the President’s Office and External Relations, and all the Associate Vice-Presidents in the VPRI portfolio. The Working Group met regularly and produced an initial draft document for discussion by the group. The VPRI Office reviewed and addressed the feedback received from a small number of focus groups in late 2022 who commented on the initial draft Strategic Plan for Research and Innovation. The Working Group then prepared a revised draft of the plan based on this preliminary feedback, which underwent widespread consultation in April and May 2023.

Analysis / Discussion

While the Vice-President (Research and Innovation) portfolio has developed strategic plans in the past for its internal use, no comprehensive institutional strategic plan for research and innovation has been produced at the U of A. Guided by the University’s [Equity, Diversity and Inclusion](#) Strategic Plan and the Indigenous Strategic Plan [Braiding Past, Present and Future](#), as well as the development of the University Strategic Plan, there was an excellent opportunity to highlight the central importance of research and innovation in the University’s mission and mandate through the creation of a strategic plan for these areas.

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**GOVERNANCE OUTLINE**

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**ITEM NO. 5**

The plan identifies research and innovation priorities for the University and highlights its proposed strategic vision and goals to:

- Focus on people and build talent;
- Support researchers with tools and infrastructure;
- Strengthen our research and innovation culture and broaden our impact; and
- Enhance our reputation as a global research and innovation leader.

These goals and priorities were identified and developed through consultation with the University community and refined by the multi-disciplinary Working Group. The plan recognizes the need to focus on targeted areas of research and innovation that will highlight existing strengths and expand capacity over the next five years, help implement the *One University* vision and enable support of the growth of the people and the diverse communities with whom the University engages.

The draft institutional Strategic Plan for Research and Innovation was posted on the VPRI website and it underwent consultation during April and May 2023, with 18 sessions being held that were hosted by the Office of the Vice-President (Research and Innovation) with the assistance of professional facilitators. As part of the consultation process, two meetings with external groups were held – one with Federal and Municipal government representatives, and the other with Industry and Community Partners and Supporters, including Alumni and Senate members. A total of 269 participants engaged in the formal consultation meetings; others provided input through informal meetings, and comments were also received via an online form. APC discussed the draft Strategic Plan for Research and Innovation at its meeting on 17 May. The collective frank and valuable feedback on the draft plan that emerged from these productive conversations and submissions was synthesized in the final version of the plan. Its accompanying document, [What We Heard](#), summarizes the feedback received in the various consultation sessions and how such feedback was incorporated in the final plan.

During the development of the research and innovation plan, the VPRI Office worked closely with colleagues leading the development of the University Strategic Plan (USP), and “Forward with Purpose: A Strategic Plan for Research and Innovation” will support the main objectives of the USP related to research and innovation.

#### Next Steps

Once “Forward with Purpose: A Strategic Plan for Research and Innovation” has been finalised its implementation will be guided by a comprehensive plan being developed in conjunction with the VPRI Senior Communications Partner. As it is an institutional plan, the VPRI Office will be working closely with the Colleges and Faculties to ensure alignment of planning for research and innovation in all areas of the University. Working collectively, the University community will harness its resources to achieve the goals and objectives outlined in “Forward with Purpose: A Strategic Plan for Research and Innovation”, thereby supporting the overall institutional vision outlined in the University Strategic Plan.

**Supporting Materials:**

1. [Forward with Purpose: A Strategic Plan for Research and Innovation](#)
2. [What We Heard](#)

**SCHEDULE A:****Engagement and Routing**

Consultation and Stakeholder Participation / Approval Route (parties who have seen the proposal and in what capacity) <[Governance Resources Section Student Participation Protocol](#)>

**Those who are actively participating:**

- Members of the University of Alberta community
- GFC Academic Planning Committee
- General Faculties Council
- Government Partners
- External Industry and Community Groups

**Those who were invited to participate in consultation:**

- University Research and Innovation Advisory Committee (URIAC, formerly URPC)
- Campus Saint-Jean
- Augustana Faculty
- Faculty of Native Studies
- Undergraduate and Graduate Students
- Postdoctoral Fellows
- College of Natural and Applied Sciences
- College of Social Sciences and Humanities
- College of Health Sciences
- Deans, Vice Provosts and Associate Vice-Presidents
- Indigenous Scholars
- U of A Centres and Institutes Directors
- Academic Planning Committee
- General Faculties Council
- Board Learning, Research and Student Experience Committee
- Board of Governors
- Government Partners
- External Industry and Community Partners

**Those who have been informed:**

- The Quad article on 8 April 2023 invited everyone in the University community to offer input into the consultation process through both in person and online means.

Prepared by Katharine Moore, Office of the Vice-President (Research and Innovation),  
[katharine.moore@ualberta.ca](mailto:katharine.moore@ualberta.ca)

**Leading with Purpose.**



**UNIVERSITY  
OF ALBERTA**

**Forward with Purpose:  
A Strategic Plan for Research and  
Innovation**

**2023-2028**



The University of Alberta respectfully acknowledges that we are located on Treaty 6 territory, a traditional gathering place for diverse Indigenous peoples including the Cree, Blackfoot, Métis, Nakota Sioux, Iroquois, Dene, Ojibway/Saulteaux/Anishinaabe, Inuit and many others whose histories, languages and cultures continue to influence our vibrant community.

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The University of Alberta also acknowledges our enduring roots in the City of Edmonton, traditionally known as amiskwaciywâskahikan, which means Beaver Hills House in Cree. We view our location as an integral aspect of our identity, intertwined with our history, present engagements and future aspirations. Embracing our relationship with this vibrant community, the university strives to work together for the enhancement and betterment of the Edmonton region and beyond.

# A Message from the Vice President of Research and Innovation

I am extremely pleased to present the University of Alberta's *Strategic Plan for Research and Innovation (SPRI)* – a five-year roadmap toward a future in which our University's leadership and contributions have an even greater impact on the world.

This institutional *SPRI* is the first of its kind at the University of Alberta and reflects the future of our research and innovation enterprise, presenting a bold new step in defining areas for maximum impact to address the grand challenges of our time. It sets out strategies for creating a renewed focus on knowledge mobilization and translation, innovation, commercialization, and for increased mobilization of creative and artistic work.

In an increasingly competitive landscape, this plan establishes clear directions for transforming key strengths into sustainable funding opportunities led by University of Alberta researchers. The *SPRI* will advance our public, private and community partnerships, empowering us all to move forward together. By focusing on tackling grand challenges through our areas of global excellence—broad, long-term and deep institutional strengths—and areas of leadership primed for further growth, we are fostering a research and innovation ecosystem that supports our researchers and positions the University of Alberta as a top global research institution.

At the same time, the *SPRI* demonstrates a deep commitment to fundamental, curiosity-driven research. Our institution has significant and extensive research capacity to bring to bear on grand challenges that are vital to the well-being of our societies, economy and environment. Addressing these challenges locally, provincially, nationally and globally requires strong multidisciplinary and intersectoral connections among academia, industry, the public sector and community members. The *SPRI* is intended for the diverse internal and external communities that make up our research and innovation ecosystem, groups to whom we offer our commitment to being a partner of choice.

The development of *the SPRI* has been a collective effort of co-creation. We consulted with our expert teams of researchers, innovators, staff and students as well as government, industry and community members, taking into account their strategic priorities. The *SPRI* serves as a testament to the collective effort and collaborative dialogue that underpins the University of Alberta's commitment to research and innovation.

I would like to express my great appreciation to my colleagues on the *Strategic Plan for Research and Innovation* Working Group. Their commitment of time, wisdom and vision over the past two years has been inspiring. I also extend my sincere gratitude to the members of the University community and to our external partners who provided their

insights and candid feedback, all of which resulted in the creation of our first pan-institutional research and innovation strategic plan.

The Office of the Vice President (Research and Innovation) advances the University's large and complex research and innovation enterprise through support, outreach, advocacy and community engagement. The *SPRI* charts a pathway for the next five years across University endeavours. This Plan aligns with other institutional strategic plans, including *Shape: A Strategic Plan of Impact*, [\*Braiding Past, Present and Future\*](#), and our [\*Strategic Plan for Equity, Diversity and Inclusion\*](#). The *SPRI* is a living document, providing our community with the freedom and flexibility necessary to pursue their specific research aspirations in the context of the University's strategic vision. Going forward, we will support our colleges, faculties, centres and institutes in the development of their own strategic plans, building on the vision of the University of Tomorrow and our One University approach.

This *SPRI* is important now. The world continues to recover and learn from the COVID-19 pandemic while facing enduring global inequities and environmental crises. Meanwhile, challenges remain for researchers, administrators, students and staff in meeting these issues. These challenges create opportunities to ask new and significant questions—and to change our ways of thinking. The goals, objectives and actions outlined in the *SPRI* will help us empower our researchers and innovators with the tools they need to address grand challenges for maximum impact. Our indicators, which enable us to measure our success over the next five years, are both aspirational and achievable.

There is no denying the magnitude of work ahead, nor the variety of perspectives on how to achieve our goals. Our *SPRI*—both ambitious and focused—challenges us to recognize our strength and potential as an institution and the capacity of our people. It encourages us to ask what we can do at the University of Alberta that cannot be done elsewhere and how we can best serve our communities and partners. Prioritizing and investing in people is the driving force behind this Plan—because our true strength is people: our researchers, administrators, students, staff and partners.

We are here to work with all of you to make what you see on these pages a reality. Our door is open. Our eyes are on the future. We are ready to move Forward with Purpose.

- Aminah Robinson Fayek  
*Vice President (Research and Innovation)*

*Strategic Plan for Research and Innovation Working Group*

- Aminah Robinson Fayek, Vice-President (Research and Innovation) – Chair
- André McDonald, Associate Vice-President (Strategic Research Initiatives and Performance), Office of the Vice-President (Research and Innovation)
- Jason Acker, Associate Vice-President (Research Integrity Support), Office of the Vice-President (Research and Innovation)
- Laura Beard, Former Associate Vice-President (Research Development and Services), Office of the Vice-President (Research and Innovation)
- David Bressler, Associate Dean (Research), College of Natural and Applied Sciences
- Marie Carriere, Former Associate Dean (Research), Faculty of Arts
- Kerry Courneya, Professor, Faculty of Kinesiology, Sport, and Recreation
- Walter Dixon, Special Advisor to the Vice-President (Research and Innovation), Office of the Vice-President (Research and Innovation)
- Florence Glanfield, Vice-Provost (Indigenous Programming & Research)
- Joanna Harrington, Associate Dean (Research), College of Social Sciences and Humanities
- Deborah James, Former Associate Vice-President (Innovation & Commercialization), Office of the Vice-President (Research and Innovation)
- Michael Lounsbury, Professor, Alberta School of Business
- Elan MacDonald, Vice-President (External Relations)
- Matt McCreary, Former Senior Communications & Marketing Partner, Offices of the Provost and VP (Academic) and Vice-President (Research and Innovation)
- Katharine Moore, Chief of Staff, Office of the Vice-President (Research and Innovation)
- Sandra Rein, Associate Dean (Research), Augustana Campus
- Lawrence Richer, Associate Dean (Research), College of Health Sciences and Vice Dean (Clinical Research), Faculty of Medicine & Dentistry
- Carrie Smith, Vice-Provost (Equity, Diversity and Inclusion)
- Kelly Spencer, Associate Vice-President (Development and Alumni Relations), External Relations
- Catherine Swindlehurst, Former Chief Strategy Officer, Office of the President
- Ying Tsui, Professor, Faculty of Engineering

## **Building on a Legacy of Transformational Impact**

Research, innovation and creative activities are a cornerstone of the University of Alberta's mission and identity. The dedicated researchers, scholars and innovators at our institution consistently produce and transfer knowledge that has enhanced our society, the economy and the environment.

Through the work of these individuals, teams and partners, the University of Alberta drives positive change in the face of grand societal challenges: environment and climate change, affordable and clean energy, pandemic preparedness, ethical use of digital technologies and artificial intelligence, decolonization and reduced social inequities.

### **Our Research and Innovation Ambition**

The University of Alberta strives to be a leader in knowledge generation and translation, inspiring solutions to grand challenges of local, provincial, national and global importance through creativity, research, innovation and higher education.

Our university is the site of the first successful open-heart surgery, home to Canada's first organ transplant research group, and was the first to develop ways to separate oil from sand. Our creative climate and commitment to using research outcomes to address challenges have made our university a hub for discourse on Indigeneity, climate action and high-impact research for social betterment.

The University of Alberta has always been a research leader in solving global challenges, and we will continue to strive for impact at the local, regional, national and global levels. The plan therefore identifies areas of focus where we have global excellence and where we are primed for growth in the context of addressing grand challenges for maximum impact.

To build upon our leadership in our areas of strength and in emerging directions, we must be forward-looking, deliberate and focused in how we plan, organize and support our research and innovation climate. The *Strategic Plan for Research and Innovation* is our blueprint for research with a purpose.

Guided by the direction set through *Shape: A Strategic Plan of Impact*, the *Strategic Plan for Research and Innovation* outlines how we will leverage our existing strengths and assets – and identifies clear choices to reinforce our ecosystem – to capitalize on major opportunities and ensure our talented researchers are empowered with the right tools, processes and culture to achieve and thrive.

This *Strategic Plan for Research and Innovation* has been led by the Office of the Vice-President (Research and Innovation) which supports researchers at all stages and facilitates external engagement and advocacy with government and partners in industry and local, national, and global communities. Our goal is to support diverse researchers, scholars and innovators across the full research continuum, from curiosity-driven scholarship to research in applied areas. Additionally, we recognize the importance of multidisciplinary large-scale and cross-sectoral initiatives for addressing and developing solutions to grand challenges.

## **Forward with Purpose: Connections to *Shape*, the University Strategic Plan**

In *Shape*, the University of Alberta's 10-year plan of impact, the institution outlines the following seven research and innovation goals for transformational impact. These goals inform the *Strategic Plan for Research and Innovation* and will shape research at the University of Alberta for the next 10 years.

1. Increased number of large-scale, multidisciplinary research initiatives that stimulate community-engaged research and impact.
2. Development of innovations that tangibly address major social, economic and environmental challenges facing Alberta, Canada and the world.
3. More robust and comprehensive research capacity through the durable embedding of Indigenous community engagement and Indigenous ways of knowing into research practices.
4. Spinoff and other commercialization activities that bring new products and services to the world.
5. Increased representation and research success among researchers from historically underrepresented and equity-denied groups.
6. Markedly higher research, innovation and creative collaboration across disciplines, through realized potential of the college structure.
7. Improvement in the quality of life for millions of people in communities across Alberta, Canada and the world.

## **Taking Stock of Our Opportunities**

### **What Makes Us Unique?**

As the northernmost U15 university, we are a Prairie land-based research-intensive university with strong connections to Canada's North.

Our relationships with Indigenous, rural, Francophone, local and national communities, industry and the land have cultivated innovative solutions to grand societal challenges.

Built through collaboration and consultation, the *Strategic Plan for Research and Innovation* envisions the future of research and innovation at the University of Alberta while remaining sensitive to our current research ecosystem.

In assessing our position, some key strengths and observations emerge.

The University of Alberta is a dynamic environment for generating new ideas and fostering innovation for significant societal impacts. We have a rich diversity of people, creating opportunities for fruitful multidisciplinary and intersectoral exchanges and collaborations. Through co-learning and co-creation, our researchers, partners and communities come together to develop novel and innovative perspectives, approaches and methodologies. In particular, we have:

- **Deep relations with a rich tradition and connections to land.** With campuses in both Edmonton and Camrose, and as the geographically northernmost U15 institution, our university offers a unique perspective in connection with a complex, biodiverse land and interconnected peoples. Our location enables us to learn from the rich traditions of First Nations, Métis, Inuit and all First Peoples of this place now called Canada, and to integrate those traditions into how we conceive, design and conduct research, recognizing the importance of genuine community engagement and participation at all stages of the process.

#### **Internationalization at the Heart of Research and Innovation**

The University of Alberta has more than 700 agreements with governments, universities and other organizations in over 80 countries.

- **Steadfast commitment to equity, diversity, inclusion and decolonization.** Our university demonstrates strength in research that addresses systemic inequities and injustices for equity-denied groups through numerous researchers who bring a diversity of perspectives and knowledge. We are willing to have courageous conversations in support of our national commitments to reconciliation, the Scarborough Charter and the Dimensions Charter. Our university commits to



centering the principles of equity, diversity, inclusion and decolonization to embrace diverse ways of knowing, learning and doing.

- **Significant local, regional, national and international connections.** Over many decades, our university has expanded touchpoints with post-secondary institutions, research institutes, industry and social innovation groups in our local communities and across the globe. We have a worldwide network of alumni, and each year, we attract thousands more research students and trainees to the University of Alberta.
- Demonstrated **uniqueness and strength in key areas.** Our university boasts national and global leadership and emerging strengths in several research areas – such as conventional oil and gas technologies, the transition to net-zero energy solutions, the health and well-being of women and children, Indigenous research, artificial intelligence, sustainable agriculture, virology and disease prevention, and transformative approaches to advancing social betterment.

#### **Our Research and Innovation Strengths**

The University of Alberta is known for energy innovations, discoveries in artificial intelligence, life-saving vaccines and cell-based therapies, community-engaged Indigenous pedagogical research, agricultural breakthroughs and research addressing intersectional inequities and decolonization.

- **Balanced breadth and depth:** We have a diverse and multidisciplinary research ecosystem and recognize the sensitive interplay between supporting the extensive range of our research strengths and maintaining focused excellence. Our vision is to foster a research ecosystem that empowers all our researchers and enables us to excel in areas of maximum impact.
- **New structures foster greater collaboration.** The new college structure at our university offers great potential for identifying, nurturing and seizing opportunities

for enhanced multidisciplinary collaboration – across traditional knowledge and disciplinary boundaries – and for exploring innovative methodologies. The work of the Centres of Expertise in the Vice-President (Research and Innovation) portfolio is key in these efforts, through its provision of planning, pre-award, post-award, technology transfer and general research-related support services.

## **Mobilizing for Maximum Impact**

### **Maximizing Impact through the Sustainable Development Goals**

The University of Alberta is maximizing impact on the world around us through excellence in working towards the United Nations' Sustainable Development Goals (SDG). We are ranked 1st in Canada for the SDGs of Affordable and Clean Energy and Industry, Innovation and Infrastructure. For our work to end hunger and achieve food security, we are ranked 2nd in the world for the Zero Hunger goal.

The *Strategic Plan for Research and Innovation* brings greater focus and alignment to our research, innovation and creative activities. It is intended to outline the strategic vision for research and innovation at the University of Alberta over the next five years, with the goal of working together with the university community, government and industry and external partners to maximize our impact on the world around us.

We define impact broadly and inclusively to recognize the validity of different dimensions and interpretations of impact across disciplines, research programs and all related scholarly activities. These include short- and long-term economic, environmental and social impacts and engagements.

We maximize our impact through deliberate investments and efforts – across all disciplines and domains – to enhance key drivers of an exceptional research and innovation ecosystem.

The result will be a prevailing climate of support for researchers and research: one that fosters multidisciplinary engagement; provides safety in the pursuit of various lines of inquiry; integrates principles of equity, diversity, inclusion, decolonization and reconciliation; and centres collaboration in the generation and mobilization of knowledge.

Our vision includes a strong focus on social impact and advocates for greater representation of the social sciences, humanities and performing and fine arts, and harnesses these to address the grand challenges of our time.

Over time, the University of Alberta will solidify its international reputation of leading with purpose to address the major questions and challenges in our global environment.

## **Guiding Principles**

The University of Alberta's guiding principles underpin everything we do, including the work laid out in this *Strategic Plan for Research and Innovation*.

- The University of Alberta is committed to **academic freedom**, where individual researchers determine their own research area, focus and pursuits, which in turn are supported at the faculty, college and institutional level.
- **Research and creative activity** are the core focus and foundation of our university. They are the drivers of new knowledge and understanding that fuel applications, innovation, knowledge mobilization, technology transfer and broad societal impacts.
- Our research excellence is underpinned by the principle of **equity** and the practices of **inclusion** and **decolonization**. By remaining accountable to these principles and practices, we strive to build a culture where **diversity** flourishes and where we work in partnership to dismantle systemic barriers with ethical integrity and social responsibility.

- We support **Indigenous-led initiatives, knowledges, communities and research engagement**, and take steps to deliver on the Truth and Reconciliation Commission of Canada's Calls to Action, particularly, though not exclusively, in relation to Education for Reconciliation. We adhere to the guiding values and principles outlined in [\*Braiding Past, Present and Future: University of Alberta Indigenous Strategic Plan\*](#). We are committed to the inclusion of Indigenous knowledges, voices and critiques, as well as physical and intellectual spaces that facilitate a plurality of Indigenous knowledges and practices.
- We are committed to **safe and responsible research, creative work, knowledge mobilization, social and technological innovation, and commercialization** activities, regardless of disciplines and our partners' geographic locations.
- We value **sustainability** and recognize the importance of data accessibility, reusability and sovereignty as well as the prudent stewardship of resources and infrastructure.
- We foster **collaboration**, within and beyond the university and across traditional boundaries. We are committed to working with government, industry and communities to co-create and co-define research areas to meet our aspirational goals as an institution.

# Strategic Research and Innovation Goals

The *Strategic Plan for Research and Innovation* identifies four goals, each underpinned by tangible objectives, actions and indicators. Together, they articulate how we will further focus, align and enhance our research and innovation ecosystem to maximize our university's impact on the world.

## Goals of the *Strategic Plan for Research and Innovation*

1. Focus on people and nurturing talented researchers.
2. Support researchers with tools and infrastructure.
3. Strengthen our research culture and broaden our impacts.
4. Enhance the University of Alberta's global research and innovation leadership.

### 1. Focus on People and Nurturing Talented Researchers

The pursuit of high-calibre research depends on our university welcoming, including and retaining high-calibre faculty members, undergraduate and graduate students, research associates, postdoctoral researchers, other research trainees and research support staff. Moreover, by integrating research into our teaching and training, we will also develop the leaders and innovators of tomorrow. Together, we will cultivate a research and innovation ecosystem that is more equitable and better positioned to explore issues from a broad range of lenses.

#### **Objective 1.1**

Support, retain and attract exceptional researchers to build on the research strengths of the university and contribute to a research ecosystem that leads with purpose.

Actions:

1. Strategically orient the Canada Research Chair (CRC), Canada Excellence Research Chair (CERC) and other chair programs to retain and attract world-class emerging and established researchers in targeted areas of strength.
2. Encourage and enhance the inclusion of undergraduate and graduate students, postdoctoral researchers and other trainees into the research ecosystem and learning environments and within local, national and international communities to develop exceptional researchers of tomorrow.
3. Promote the research strengths of the institution to targeted external researcher demographic groups, including equity-denied groups, to attract early career researchers.
4. Encourage, create and sustain clusters of researchers in high-impact, funded research initiatives through collaboration among colleges, faculties and centres and institutes.

### **Objective 1.2**

Enhance our research ecosystem to support researchers from equity-denied groups including women, visible minorities, researchers from Indigenous, Black, 2SLGBTQ+, francophone and diasporic communities, and persons with disabilities or who identify as disabled.

#### **Actions:**

1. Expand collaboration among the Office of the Vice-President (Research and Innovation), the Office of the Provost and Vice-President (Academic), colleges and faculties to enhance funding opportunities for trainees and early-career researchers from equity-denied groups to increase researcher and faculty diversity.

2. Create new, and engage existing, programs to expand research and training opportunities and communities for equity-denied groups.
3. Create strategic workshops and training resources for targeted groups of researchers, including those from equity-denied groups and early-career researchers, to develop and strengthen research leadership and project management skills.
4. Through collaborations among the faculties, colleges and centres and institutes, increase the number of university researchers from equity-denied groups who lead or co-lead large-scale, collaborative, funded, interdisciplinary research initiatives.
5. Align strategic allocations of Canada Research Chair, Canada Excellence Research Chair and other chair and research professorship positions to increase the number of recipient researchers from equity-denied groups.

### **Objective 1.3**

Engage and support diverse researchers and research teams from broad research areas and demographic groups to apply for internal and external research awards and expand their national and international research profiles.

#### **Actions**

1. Strategically design internal research award processes and policies, incorporating, where applicable, Indigenous worldviews and furthering the principles of equity, diversity and inclusion (EDI).
2. Recognize, support and celebrate research that is community-engaged, community-led, intersectional, francophone and partnered with Indigenous communities.
3. Establish targeted internal awards to recognize and celebrate Indigenous scholars, scholars from equity-denied groups, research scholarship in the areas

of Indigenous-engaged research and research that addresses and/or achieves greater levels of EDI.

4. Strengthen capacity related to national and international research awards, ensuring that engagement and nomination processes are attentive to principles of Indigenous-led and Indigenous-engaged research and EDI.

### **Objective 1.4**

Establish an integrated network of research support for Indigenous initiatives and equity, diversity and inclusion (EDI) in research and creative activities and in multidisciplinary research initiatives.

#### **Actions:**

1. Create an EDI research centre of expertise in the Office of the Vice-President (Research and Innovation).
2. Create an Indigenous research and innovation centre of expertise in the Office of the Vice-President (Research and Innovation).
3. In collaboration with the Offices of the Vice-Provost (Indigenous Programming & Research) and the Vice-Provost (Equity, Diversity and Inclusion), develop and provide training and web-based tools on Indigenous initiatives and EDI to researchers as an integral element of research grant and ethics applications, including multidisciplinary research initiatives.
4. Formally engage researchers in integrating Indigenous-engaged scholarship, research and relationships in relevant research grant and award applications.



**Key Indicators:**

1. Increase the Canada Research Chair allocations to the institution by 15% by 2028.
2. Increase per capita funding held by researchers from equity-denied groups by 25% by 2028.
3. Increase external funding that targets the recruitment of research trainees and faculty from equity-denied groups by 30% by 2028.
4. Increase the number of university researchers from equity-denied groups who lead or co-lead large-scale, collaborative, funded research initiatives by 25% by 2028.
5. Increase the application rate for external awards by 30% by 2028.
6. Increase the number of successful national and international research awards by 25% by 2028.
7. Increase Indigenous-led grant applications by 10% by 2028.

**2. Support Researchers with Tools and Infrastructure**

To sustain creativity and fuel learning, knowledge creation and innovation, talented researchers require high-calibre research supports, tools and spaces, including technicians and research support staff. Our university will continue to provide a suite of research support services that effectively meet the day-to-day and strategic needs of researchers and innovators. We will also strategically build on our robust research infrastructure to ensure researchers across all disciplines and faculties benefit from high-quality spaces and tools, including creative and artistic workspaces, data systems, lab equipment, computing power and other necessary technological infrastructure.

**Objective 2.1**

Develop streamlined and coordinated institutional processes for integrating and supporting the operation and expansion of shared institutional infrastructure for research and creative activities.

**Actions:**

1. Expand and diversify funding to support infrastructure expansion and renewal, moving to establishing institutional core and shared research and creative activity infrastructure.
2. Develop institutionally harmonized operation of stand-alone infrastructure, research platforms and core facilities—such as the small-animal services facilities and shared computational facilities—for research and innovation across the multiple campuses of the institution.
3. Implement effective models for financial sustainability and regulatory processes for animal welfare, research ethics and clinical trials to ensure proper operations and compliance.
4. Review and audit infrastructure and equipment access and use through an EDI lens.
5. Support researchers in grant development with funding for activities such as management of proposal development processes, grant writing and editing.

**Objective 2.2**

Strengthen guidelines and develop knowledge bases for research-related administrative, financial and infrastructure operations and protocols, as well as occupational health and safety compliance activities.

**Actions:**

1. Develop communication and training assets for researchers and trainees at all stages, focusing, especially on early-career researchers.
2. Improve, coordinate and expand institutional researcher onboarding and support processes for administrative, operational, facilities, safety and financial matters.
3. Develop a searchable database with research proposal development resources, grant examples and templates for researchers, trainees and innovators.

### **Objective 2.3**

Develop and expand robust and secure safeguarding of research systems, including data storage, data exchange and data management systems.

#### Actions:

1. Strategically streamline and implement institutional processes and systems for safeguarding research, technology transfer protocols, intellectual property protections, and research data management processes.
2. Strategically support the development of research data management grounded in principles of findability, accessibility, interoperability and reusability (FAIR) and First Nation principles of Ownership, Control, Access and Possession (OCAP).
3. Develop resources and processes for evaluating the risks and mitigating any impacts of unauthorized disclosure of research information and data.

### **Objective 2.4**

Enhance development and expand access to high-performance computing and research information management system infrastructure locally, regionally and nationally.

**Actions:**

1. Align existing and emerging research areas for maximum impact with access to high-performance computing resources.
2. Lead development of information technology and library support platforms for research information management.
3. Leverage existing national research data repository platforms to expand access and sharing of research data.

**Key Indicators**

1. In order to expand core facilities and infrastructure, increase annual sponsored research revenue for infrastructure from the Canada Foundation for Innovation by 50% and from other sources by 50% by 2028.
2. Identify and implement core support platforms for high-performance computing by 2025.
3. Building on the Institutional Research Data Management Plan, increase institutional capacity to support data-intensive research activities across the university by 2026.
4. Increase open access, open data publications and works by 50% by 2028.

**3. Strengthen Our Research Culture and Broaden Our Impacts**

Fueled by our high-calibre people and enhanced tools and infrastructure, we will continue to cultivate a research and innovation culture across the university that embraces a multitude of ways of thinking, knowing, doing and relating. We will also work to showcase and celebrate the impacts of our research, innovations, discoveries,

creative and artistic activities, community engagements, partnerships and relationships – and the people behind them. These impacts will expand academic thought, influence research paradigms and contribute to better practices, public policies and enhanced public life.

### **Objective 3.1**

Build a centralized research-driven and innovation ecosystem that brings together scholarly networks, multidisciplinary research work, entrepreneurial endeavours, creative works, knowledge mobilization and community-led research activities from across the university.

#### **Actions:**

1. Publicize and promote research outcomes and successes both internally and externally to enhance our innovation ecosystem.
2. Formulate and support institutionally-led formal training programs and activities for researchers and community partners in innovation and entrepreneurial initiatives, knowledge mobilization and community-engaged research activities.
3. Coordinate and strategically communicate the institution's innovation supports and services through centralized communication tools.
4. Engage and connect diverse funding sources to support innovation including social innovation, commercialization, mentorship, upskilling, experiential learning and training through interdisciplinary entrepreneurial and socially innovative research.
5. Develop innovation, commercialization and social impact annual reports to share with internal and external partners.
6. Create an online searchable database platform of all knowledge mobilization, commercialization and social innovation initiatives across the university.

7. Designate Research Impact Canada champions to support the social and cultural impact of research output.
8. Develop an intellectual property approach that better supports early-stage ventures and entrepreneurs and highlights ways to ensure that non-patentable inventions are adopted by local, national and international communities.

### **Objective 3.2**

Establish an institutional Innovation Fund to provide risk capital to support high-growth innovation, knowledge creation and entrepreneurial initiatives developed and led by institutional researchers.

#### **Actions:**

1. Strategically invest risk capital from the Innovation Fund in business startups by leveraging innovation, knowledge creation, artistic and entrepreneurial activities developed by researchers.
2. Create pathways for the development and support of proposals to the Innovation Fund, and establish an independent investment committee to manage the fund.
3. Use the Innovation Fund to support the mobilization of research, innovation and creative and artistic activities and initiatives for commercialization or community implementation programs.
4. Use the Innovation Fund to develop companies for scale and reinvest financial gains in the institution, highlight best practices and contribute to further research and innovation.

### **Objective 3.3**

Translate and mobilize knowledge, innovation, entrepreneurial research, research creation and creative works to enable, foster and support the formation of public, private and community partnerships.

#### Actions:

1. Build and support partnerships with municipal, provincial and national governments, Indigenous nations, not-for-profit organizations and the private sector to collaboratively develop and implement innovative, creative, artistic, entrepreneurial and commercial solutions to shared challenges.
2. Where appropriate, translate research and creative works outcomes into policy or regulatory frameworks to address government and societal priorities.
3. Integrate institutional commercialization assets into a cohesive network that will be a major player in the external innovation ecosystem of Alberta and Canada.
4. Refine and streamline all intellectual property and commercialization policies to stimulate and support institutional entrepreneurship activities.
5. Showcase our artwork, creative performances and collections locally, provincially, nationally and globally.
6. Develop relationships and collaborate with Indigenous, northern and equity-denied communities and civil society organizations to define and stimulate community-driven and community-led research and implementation programs.
7. Leverage the strength of centres and institutes to stimulate, nurture and enhance industry partnerships and community-led and engaged research.
8. Conduct ongoing environmental scans of municipal, provincial and national priorities and strategies to align strategic and emerging research directions.

### **Objective 3.4**

Recognize, celebrate, reward and communicate all forms of innovation, entrepreneurship and creative and artistic work and their impacts.

#### **Actions:**

1. Create events to celebrate innovation awards and showcase researchers.
2. Draw from existing initiatives, hubs and teams to create forums for researchers and university innovators to share innovation narratives.
3. Incentivize innovation, entrepreneurship, commercialization and creative activities through a framework of financial support and a reward system.
4. Develop release opportunities for researchers and innovators to facilitate and reward entrepreneurship, social innovation and commercialization activities.

#### **Key Indicators:**

1. Increase spinoffs, startups, licences and non-patentable inventions being adopted by external partners and communities by 35% by 2028.
2. Launch the Innovation Fund to directly invest in startups from early-stage concepts (pre-seed) to the first stage of company creation by 2024 and grow the Innovation Fund to \$50 million by 2028.
3. Increase sponsored research revenue from programs that support experiential learning and skills training through research by 50% by 2028.
4. By 2028, support at least two Indigenous-led initiatives that define and stimulate public, private and community-engaged research and impact.
5. Increase success rates by 15% for research in social innovation, entrepreneurial initiatives, research creation, fine arts and community-led initiatives by 2028.



## 4. Enhance the University of Alberta's Global Research and Innovation Leadership

Claiming our place among the world's top research universities will require us to be clear about and broadly showcase our areas of global excellence and growth in order to address grand challenges. We will do so by deliberately building high-priority, collaborative opportunities across our university in ways that actively leverage sole-investigator-driven research activities and encourage the formation of multidisciplinary, diverse research teams. As a leading research-intensive institution, we will continue to support fundamental research, foster emerging researchers to become experts in their fields and support established scholars to drive targeted research and innovation to generate international recognition with local and national impact. We will also strategically enhance our external engagement with funders, potential research and innovation partners and community groups, and strengthen our involvement in international research networks.

### **Objective 4.1**

Broaden, deepen and sustain existing areas of global excellence and growth for addressing grand challenges, while building areas of emerging strength.

#### Actions:

1. Prioritize multi-partner, multi-institutional and international collaborative research and funding initiatives that target areas of global excellence and growth to address grand challenges.
2. Align research chairs and allocations for infrastructure funding with areas of research strength, innovation and creative activity, while honouring our commitments to EDI and Indigeneity.
3. Leverage the colleges to conceptualize and lead large-scale, collaborative, multidisciplinary research initiatives.

4. Build high-priority collaborative opportunities across the academy, including sole-investigator-driven research activities, formation of multidisciplinary and diverse research teams, training and translation of skills to address major shared challenges with the public and private sectors and civil society.
5. Leverage the strength of centres and institutes across the university to create and nurture multidisciplinary research hubs or networks in areas of global excellence and growth in addressing grand challenges for maximum impact.
6. Leverage the strength of centres and institutes across the university to respond to targeted multidisciplinary research and training challenges, priorities and funding calls.
7. Strategically mobilize university resources to increase and leverage research funding from diverse government, industry, not-for-profit and community sources.

#### **Objective 4.2**

Strategically align areas of global excellence and growth for addressing grand challenges as well as emerging areas of strength with evolving institutional, government, community and societal priorities.

#### **Actions:**

1. Establish an institutional Strategic Research Initiatives Fund to support and leverage areas to address grand challenges for maximum impact, innovation and creative activity, and increase sponsored research funding.
2. Create strategic advisory groups of institutional, local, regional, national and international experts for each area of global excellence and growth to address grand challenges for maximum impact to provide current knowledge, critical thinking and analysis on research directions and priorities.

### **Objective 4.3**

Strengthen our participation in key municipal, provincial, national and international research networks.

#### **Actions:**

1. Secure membership and committee participation in recognized networks that align with institutional areas of global excellence and growth as well as emerging areas of research excellence.
2. Collaborate with all levels of government on mutual priorities and leverage funding support to build municipal, provincial, national and international partnerships.
3. Integrate international institutional partners in large-scale multidisciplinary research initiatives and funding opportunities.
4. Sustain participation in key international research networks to develop meaningful, mutually beneficial and sustainable research partnerships.
5. Engage in advocacy and outreach to build awareness of research, innovation and creative work, in collaboration with industry and community partners.

### **Objective 4.4**

Build or expand relationships with researchers from emerging market economies in the Global South through international research collaborations.

#### **Actions:**

1. Build bilateral relationships with institutions across the globe with a focus on countries in the Global South to enhance our global citizenship and strengthen our research through a diversity of perspectives.
2. Mobilize research activities and outcomes informed and led by researchers from countries in the Global South and emerging market economies to work in

partnership for mutual and reciprocal societal, cultural, economic and environmental benefits.

### **Objective 4.5**

Broaden the reputation of the University of Alberta locally, provincially, nationally and internationally through targeted communications and promotional activities.

#### **Actions:**

1. Targeting local communities, provincial, national and international markets, celebrate and highlight institutional strengths and accomplishments in key research areas through digital marketing and promotional assets.
2. Create a research impact framework that aligns with the San Francisco Declaration on Research Assessment (DORA) to measure and communicate the impacts of research, innovation and creative activity, including contributions to the broader civil society.
3. Expand institutionally coordinated visits to selected international priority partners and other emerging or potential partners annually to promote our research brand and build relationships.
4. Develop an annual report on research and innovation, including research outcomes, institutional rankings, funding data and success rates to share with internal and external partners.

### **Key Indicators**

1. In alignment with the University Strategic Plan, increase annual sponsored research revenue to \$650 million by 2028 and \$750 million by 2033.
2. In alignment with the University Strategic Plan, become one of the top three

- ranked U15 universities in annual sponsored research revenue by 2033.
3. In alignment with the University Strategic Plan, become one of the top 50 internationally ranked universities by 2033.
  4. Increase annual sponsored research revenue from the Tri-Agencies by 15% by 2028.
  5. Increase sponsored research revenue per faculty member by 20% by 2028.
  6. Increase the university's SDG ranking to 5th overall in the world by 2028 by addressing grand challenges for maximum impact.
  7. Create at least six new bilateral research partnerships with institutions in the Global South by 2028.
  8. Increase research grant applications involving government, industry and community partners by 30% by 2028.
  9. Establish partnerships with industry, not-for-profit organizations and communities in local and regional contexts that result in a 15% increase by 2028 in Tri-Agency partnership programs and other partnership program funding.
  10. Establish two college-led initiatives per college per year targeting interdisciplinary, high impact, collaborative funding.

# Addressing Grand Challenges for Maximum Impact

## Addressing Grand Challenges

Our university values and is committed to supporting high-calibre research and creative activities across all disciplines and in all areas of research. Highlighting research areas in which we have global excellence, as well as areas of leadership primed for further growth to address grand challenges, provides a way of focusing attention and investment in order to achieve maximum impact.

Investments and initiatives will be designed in ways that underpin the areas of excellence and growth to address grand challenges, while enhancing research and creative activities in new and emerging areas.

As a comprehensive, research-intensive university, we are proud of our commitment to high-impact research and creative activities across all disciplines. Our university has opportunities to harness this robust body of scholarship in ways that allow us to address grand societal challenges through research and innovation.

The goal of addressing these grand challenges will guide our investments and initiatives to significantly enhance capacity and multidisciplinary collaboration.

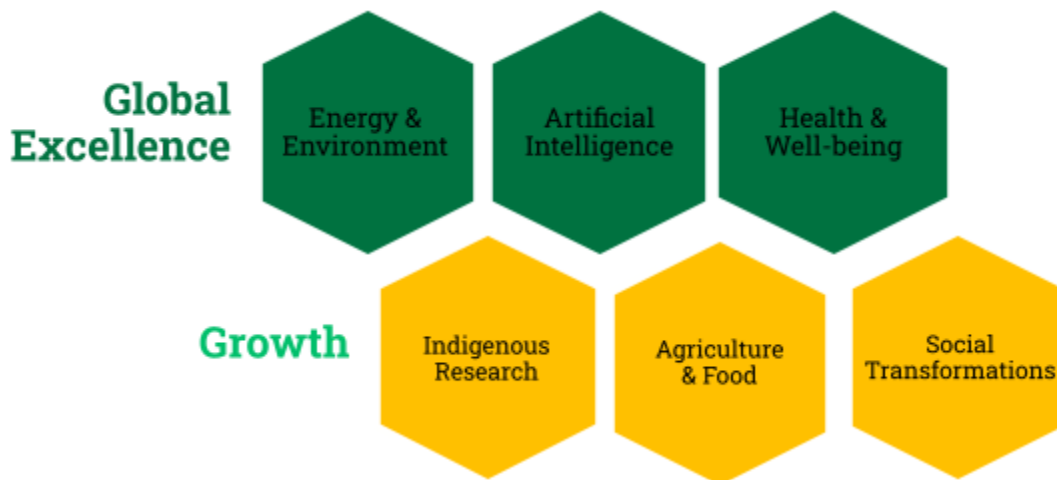
## Curiosity-Driven Research Today Produces Tomorrow's Areas of Global Excellence

We have been a national leader in fostering ideas that have long-term impact on Edmonton, Alberta, Canada and the world.

Supporting new and emerging research and scholarship activities in areas such as quantum science, security and defence, planetary health, space technologies, social implications of climate change, diasporic African and Black communities, design studies, performing arts and global mental health will set the stage for global excellence in the future.

These grand challenges will be addressed under two themes:

- **Global Excellence** in areas where our university has broad, long-term and deep institutional strength
- **Growth** in areas of leadership that will continue to further position the University of Alberta as a top global research institution.



In the context of global excellence and growth, our goal is to leverage our unique strengths by providing detailed insight into how we can make the greatest impact. We recognize the importance of the intersection between and the multidisciplinary nature of these areas for maximum impact. Our approach therefore is synergistic and collaborative, designed to bring together the depth and breadth of our researchers with industry, government and community partners to co-develop deeper understandings of, and innovative solutions to, grand challenges of our time.

# Global Excellence

## Energy and Environment

Energy systems, resilience and climate change mitigation

Our deep and renowned expertise in energy has taken on new significance in the face of the environmental crisis and the global climate emergency. It is a challenge that demands innovative solutions for stable, reliable energy in a net-zero emissions future.

Our researchers are at the leading edge of developing the technologies to produce, store, transport and deliver cleaner, reliable energy sources in ways that drive us to net-zero emissions and help meet global climate change commitments. Importantly, this research is occurring across the continuum of energy systems – from production through to transmission, storage and consumer use.

It also includes robust social science and humanities research to address policy, regulatory and ethical issues and explore the unique implications of energy transition alongside diverse peoples and communities, including Indigenous communities.

### Impact in Energy

- One of the top 10 universities globally for energy systems research
- Ranked as one of the top 50 academic institutions for energy and climate subjects
- More than 50 research chairs in energy and environment
- More than \$1B invested in over 170,000 m<sup>2</sup> of energy research infrastructure
- First to discover technology to unlock bitumen from oil sands
- Researchers inform policies, such as Alberta's Hydrogen Roadmap

Energy and Environment Research and Innovation Directions:



- Discover, develop and translate resilient renewable energy technologies and energy transition solutions, including hydrogen, wind, solar, geothermal and biomass fuel sources.
- Develop new methods and technologies to make more efficient use of conventional energy sources, reduce greenhouse gas and carbon emissions, and support carbon capture, utilization and storage.
- Address the impacts of energy systems on humans and the environment, including soil, water, air and biodiversity.
- Formulate and improve land reclamation and contaminant remediation measures to address environmental impacts.
- Address energy systems in northern climates with below-freezing temperatures many months of the year.
- Broaden our understanding of the social implications of energy use and the transition to a net-zero economy.

## **Artificial Intelligence**

Artificial intelligence, machine learning and data science

Over the past three decades, our institution has been at the foundation and forefront of global research in artificial intelligence (AI) and machine learning. Our university's innovations have already made key contributions to reinforcement learning, video game design, health informatics, precision health imaging and diagnostics, smart prosthetics and robotics, automated legal reasoning, language learning, financial forecasting, artistic practice, linguistic research, smart agriculture tools, optimization of oil and gas recovery and water treatment.

Importantly, these inquiries also extend to exploration and a deeper understanding of the social, cultural, economic, ethical, ontological and privacy implications of AI, machine learning and data science. We will continue to lead the discourse around how

these technologies will interact with diverse peoples, including the incorporation of Indigenous worldviews and epistemologies.

### **Excellence in Artificial Intelligence**

- First to launch a computer science department in Canada
- Ranked #2 in Canada for AI research (based on US News Global University AI rankings)
- Partners with one of Canada's three national AI hubs
- More than 35 Canada CIFAR AI Chairs and 15 other research chairs
- Nearly \$100M in funding for AI since 2017

Artificial Intelligence Research and Innovation Directions:

- Advance applications of artificial intelligence to autonomous systems, space technologies, smart buildings and cities, quantum technologies, smart agriculture and health.
- Integrate artificial intelligence, machine learning and data science for autonomy, adaptability and reliability of net-zero energy systems.
- Analyze the intersectional, social, cultural, ethical and educational impacts of artificial intelligence, and use AI in artistic practice to study the ways in which it shapes race and gender relations, equity and diversity.

### **Health and Well-Being**

Health, disease prevention and life-course approaches to care and well-being

Our university's health research and innovation has a planetary health focus that establishes intersections among the environment, energy, food security, agriculture and physical activity. We are a leader in integrating social determinants of health —such as income, education, social status, gender, race, ability and other intersectional identities as well as access to nutritious food, physical activity, housing and employment — into scholarly discourse and actionable interventions to address health inequities. Our work in life-course approaches to advance the physical and mental health and well-being of

children, women, as well as aging and elderly populations is locally, nationally and internationally recognized.

With this incredible and versatile strength, we are ready to respond to an array of public health issues and threats, including emerging pathogens. Our deep expertise in clinical trials and translational research will bolster our institution's impact in areas such as disease management and prevention, biomedicine and next-generation therapies.

#### **Accomplishments in Health**

- 2020 Nobel Prize Laureate in Medicine, Dr. Michael Houghton, for discovery of the Hepatitis C virus
- More than \$90M for the Li Ka Shing Institute of Virology and \$55M for pandemic preparedness
- Home to one of five national Canadian Biomedical Research Fund Hubs, The PRAIRIE Hub for Pandemic Preparedness
- More than \$100M in research funding for precision health, intelligent medical devices and therapeutics
- Leader of the \$80.5M Canadian Critical Drug Initiative to create 1,000 high-paying pharmaceutical jobs
- More than \$100M for the Women and Children's Health Research Institute.
- More than 75 research chairs in health and well-being

Health and Well-being Research and Innovation Directions:

- Expand and translate knowledge from a life-course perspective and an intersectional lens through multidisciplinary and community-engaged research to advance the health and well-being of all, including underserved populations, with a focus on women and children.
- Discover and develop new vaccines, cell-based therapies and small molecule therapeutics.
- Accelerate cutting-edge research in digital health and applications of artificial intelligence.

## Growth

### **Indigenous Research**

Indigenous research, community engagement and relationships

The University of Alberta views research, creative activities and innovation as opportunities to build meaningful relationships and engage with First Nations, Inuit and Métis Peoples. This vision is strengthened by *Braiding Past, Present and Future: University of Alberta Indigenous Strategic Plan*, an Indigenous-led and Indigenous-written five-year plan that outlines how Indigenous Peoples, languages, cultures and worldviews are reflected in everything the university does.

As we respond to reconciliation Calls to Action framed around supporting the research priorities of Indigenous Peoples and communities, our university has expanded Indigenous resiliency and resurgence research to resist narratives of Indigenous deficiency and disappearance. Our institution is recognized for long-term excellence in research and teaching, with programs that place Indigenous self-determination at the core of theory, research and technology development.

Through collaborative partnerships with local and regional Indigenous communities and multidisciplinary research programs, the University of Alberta will excel as an engaging, inclusive leader in decolonial and anti-colonial research, championing Indigenous leadership and self-determination in research and innovation. Building on these initiatives and accomplishments, our university is forging a path to strengthen international recognition of our excellence in Indigenous research, Indigenous-led and community-engaged initiatives and theoretical and methodological innovations.

### **Community through Indigenous Relationships**

- More than 50 years of education and research in Indigenous Teacher Education
- Forty years of excellence in Indigenous Studies research
- Home of a Faculty of Native Studies, unique in Canada and one of the world's leading Indigenous Studies programs
- Numerous Indigenous-led and Indigenous-engaged community research initiatives
- \$24M Ārramāt Project supporting health and well-being of Indigenous communities and environments
- Growth in the number of Indigenous doctoral research students
- Home to seven academic and affiliated institutes, centres and initiatives dedicated to Indigenous research

### Indigenous Research and Innovation Directions:

- Expand Indigenous-led research capacity and foster initiatives that promote Indigenous self-determination and positively impact Indigenous community well-being.
- Encourage and resource ethical Indigenous community engagement and research.
- Broaden the capacity and impact of Indigenous research in both existing and new initiatives.
- Concretely respond and act upon the Truth and Reconciliation Commission of Canada Calls to Action, particularly, though not exclusively, through primary, secondary and post-secondary education.

### **Agriculture and Food**

Sustainable agriculture, resilient food security and value-added diversification

The University of Alberta is a leader in innovative agriculture, resilient food systems, nutrition and human health and animal science. Research in environmentally sustainable resource development and management underpins our strength in

climate-friendly agriculture and food, including activities related to natural resources, water, soil, biodiversity, forest and land use management, ecosystem services, cropping systems and livestock. Our multidisciplinary approach has allowed us to tackle major national challenges to optimize the sustainable use of rangelands, develop technologies (e.g., “omics”), including digital technologies to create smart agriculture systems, develop new value-added oils for health, and drive innovation in Alberta’s world-recognized beef and canola sectors.

We will continue to use our expertise to shape public policy and clinical practice, such as policies to promote the provision of safe, healthy and nutritious food to children and in school food environments and defining nutritional requirements for different population groups through an intersectional lens.

#### **Leadership in Agriculture**

- More than 100 years of training and research in agriculture
- Leading innovation in 5G living lab and smart agriculture
- Ranked in the top 20 globally for UN Sustainable Development Goals of Zero Hunger and Life on Land
- Forestry school is ranked in the top five globally
- Leading growth in digital and cellular agriculture research and innovation

Agriculture and Food Research and Innovation Directions:

- Develop a deeper understanding of, and create solutions for, resilient food systems that will improve the health of individuals, enterprises and communities.
- Develop value-added products built on sustainability principles for climate-friendly economies in collaboration with local communities.
- Critically engage with and use artificial intelligence and digital technologies to create next-generation smart agriculture and food systems and to advance forest and land use management.

- Advance the future of food from petri dish to protein, developing new industries and new sustainable, climate-smart options for consumers through cellular agriculture.

## **Social Transformations**

### **Advancing social betterment in the 21st century**

Exploring what it means to live, learn, work, express ourselves and advance social change drives University of Alberta researchers engaged in critical, creative and empirical research. Across many fields of inquiry, we are tackling challenging questions about the diversity and interconnectedness of the human condition, through the interpretation of cultural, historical, literary, political, religious and social narratives, and by understanding societies through their legal traditions, organizational structures, pedagogical practices and creative, performing and fine arts as well as research creation.

There has never been a more urgent need for artistic, cultural, educational, legal, organizational and social sciences expertise to address global conflicts, violence and ongoing colonialism. Intersections with environmental and health crises, growing racism, high levels of transphobia, ableism, gender inequities and other forms of societal injustices are part of this complicated picture.

Our creative practices, critical analyses and local, provincial, national and international community-based interventional research continue to explore and implement social improvements for individuals and communities. We also recognize the value of community-led, industry and government partnerships for the co-creation of knowledge and solutions for local, regional, national and global challenges.

### **Social Responsibility through Research**

- The University is a top seven global leader in achieving the United Nations' Sustainable Development Goals
- Long-term multi-million dollar funding, and multiple awards for excellence, in the histories of race, gender and colonialism
- More than 1,500 trainees involved in community service learning and research
- Significant growth in energy policy research, health law, and criminal justice and injustice
- Multiple Canada Research Chairs in critical disability studies, feminism and intersectionality, deaf education, politics of citizenship and human rights, Black global studies and decolonial practice, and educational measurement
- Internationally-recognized centres and institutes dedicated to people, community and change

### Social Transformations Research and Innovation Directions:

- Advance knowledge, social innovation and public policy to tackle inequities and better address intersectional forms of social oppression.
- Deepen community-engaged research commitments, methods and impacts to collaboratively redress social injustices.
- Engage interdisciplinary, arts-based and social sciences expertise necessary to effectively address complex human behaviours in the face of the global climate crisis.
- Develop international partnerships for further research and solutions in support of the UN Sustainable Development Goals that aim to confront the most pressing issues affecting our world today.



## Next Steps

This plan is a living and evolving strategic vision for research and innovation at the University of Alberta. The next steps for implementation will:

- Continue to integrate and align this plan with the implementation of the *University Strategic Plan*.
- Support the colleges, faculties, centres and institutes to develop their own strategic plans, including guidance on how their individual strategic plans can be integrated with this plan.
- Conduct annual reviews of progress made in achieving the goals and objectives of this plan, including measurement of key indicators.
- Review the plan, including the focus areas to address grand challenges for maximum impact, after three years.
- Support the development of a comprehensive research impact framework that recognizes the importance of assessing research impact fairly, inclusively and holistically.
- Ensure an ongoing commitment to reconciliation through engagement, dialogue and consultations with Indigenous researchers and communities.

## Note on the Timeline

Our journey to sustained research and innovation excellence is measured in milestones and marked by clear targets. This vision will propel the university forward over the next five years, with specific indicators to help us chart our progress.

- One Year (2024): As we strengthen our strategic foundations, we will foster new partnerships, enhance interdisciplinary and local, national and international collaborations, and further reinforce principles of academic freedom, equity, diversity inclusion and decolonization.

- Three Years (2026): Our intended goal is a diverse research and innovation portfolio with global impact that addresses grand challenges and contributes to enhancing our societies, the economy and the environment.
- Five Years (2028): By the end of five years, we aim to establish the University of Alberta as a global leader in research and innovation in the areas of Indigenous research, agriculture and food and social transformations for advancing social betterment, in addition to creating broader and deeper local, global and national impacts in our established areas of excellence. Our success will be marked by significant contributions to policies and practices at local, regional, national and international levels, thereby enhancing our global impact.

In addition to the milestones outlined above, the Office of the Vice-President (Research and Innovation) will undertake an annual assessment of our progress in achieving the plan's key indicators.

The Office of the Vice-President (Research and Innovation) is dedicated to regular and transparent engagement with all university partners. We will not only share updates and seek feedback but also celebrate our achievements together, reflecting the shared nature of our journey.

This *Strategic Plan for Research and Innovation* will guide us through each step, from today's efforts to tomorrow's successes, and beyond.

## **Conclusion**

Through decades of research and creative activities across a wide range of disciplines, the University of Alberta has built a proud and impressive legacy of learning, knowledge creation and innovation. It is a legacy that has been fashioned through the curiosity, dedication and tenacity of high-calibre researchers and a fervent belief in the transformative power of knowledge.

Now, our university will harness these strengths to even greater effect – to maximize our impact for the betterment of Edmonton, Alberta, Canada and the world. Energized by a forward-looking, aligned research and innovation ecosystem, and an ongoing commitment to multidisciplinary collaboration, we will pursue a new chapter in our legacy of knowledge generation, mobilization and impact through innovation.



UNIVERSITY  
OF ALBERTA

2023

# What We Heard: Strategic Plan for Research and Innovation Consultation Sessions

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Prepared by Berlin Communications



# Executive Summary

This report presents an overview of the consultation sessions conducted to inform the development of the University of Alberta's **Strategic Plan for Research and Innovation** (SPRI). A total of 16 sessions took place between April 28th and May 18th, 2023, aiming to capture diverse perspectives by accommodating different groups, including faculty members, researchers, administrators, government partners, and industry representatives.

We had 269 participants engage within the formal consultation process. This figure does not include participants such as the Working Group members or University of Alberta staff involved in drafting the SPRI. Of the 269 total participants, 77 participants attended virtually, 9 submitted comments through an online feedback form, and 44 participants remained mostly silent throughout the sessions.

Valuable feedback, recommendations, and actionable insights were shared throughout these sessions, leading to several noteworthy changes and actions, broadly categorized into three sections: content, format/language, and strategic communications. We have outlined a series of recommendations for updating the SPRI document to reflect the feedback we heard.

**Content Changes:** Key areas addressed included highlighting areas of world-leading expertise, promoting work-life balance, emphasizing overall researcher support, prioritizing quality of outcomes over quantity, exploring co-ownership of data and research, improving communication of research goals, clarifying the role of centres and institutes, integrating Indigenous perspectives, and focusing on social disparities.

**Format/Language Changes:** Recommendations in this category centered around using inspiring language, avoiding exploitative terms, highlighting community-led research, incorporating visual elements, ensuring consistent formatting, and appropriately engaging with Indigenous perspectives in language usage.

**Strategic Communications:** Participants stressed the importance of engagement with industry and community, alignment with innovation strategies, establishment of a research impact and community engagement unit, clarifying how the plan captures research impact for external partners, and creating an inspiring narrative for the SPRI.

Each consultation session was a crucial step towards shaping a comprehensive, inclusive, and future-focused SPRI. This final report serves as a testament to the collective effort and collaborative dialogue that underpins the University of Alberta's commitment to driving research and innovation.

# Summary Themes

During the consultation process for the **Strategic Plan for Research and Innovation** at the University of Alberta, participants shared valuable insights that shaped the high-level themes and overarching perspectives on the plan. These themes provide a comprehensive understanding of the participants' perspectives and expectations.

**Embracing Narrative and Identity:** Participants expressed a desire for a compelling and inclusive narrative that goes beyond traditional disciplinary boundaries. They emphasized the importance of recognizing the university's unique strengths and diverse research areas. Participants sought a narrative that reflects the province's impact, highlights the University's transformative nature, and showcases its global leadership in research. They also underscored the significance of language and messaging that demonstrates the university's commitment to reconciliation and inclusivity.

**Expanding Areas of Focus:** Participants called for a broader focus that encompasses social justice, Indigenous studies, and land-based knowledge. They recommended highlighting specific areas such as arts and fine arts, health research, and the university's expertise in sectors like oil and gas. Participants emphasized the need to align the plan with global challenges, sustainability goals, and growth areas such as agriculture and agri-food. They also emphasized the importance of interdisciplinary collaboration and bridging the gap between different disciplines to create well-rounded students and citizens.

**Cultivating Collaboration and Partnerships:** Participants emphasized the importance of fostering collaboration and partnerships with industry, government, and external organizations. They stressed the need to engage and involve Indigenous communities, incorporating their perspectives and research needs. Participants also highlighted the significance of strengthening relationships with countries in the Global South and positioning the University as a desirable partner. They called for clearer pathways and roadmaps for engagement, aligning with national innovation conversations, and leveraging existing partnerships and networks.

**Enhancing Support and Development:** Consultation participants recommended efforts to address infrastructure needs, administrative burdens, and support for research administration. They emphasized the importance of addressing these challenges to facilitate research activities. Participants called for greater support in areas such as recruitment, retention, and early career academic development. They also stressed the need for mentorship, teaching, and support for undergraduate and graduate research. The value of nurturing future research leaders, promoting entrepreneurship, and fostering interdisciplinary collaboration were heavily emphasized.

**Effective Plan Communication and Implementation:** Participants highlighted the need for effective communication of the SPRI to all relevant groups. They suggested the importance of clear and specific goals and objectives that are ambitious yet achievable. Participants pointed to the need for transparency, accountability, and ongoing engagement throughout the implementation process. They called for incorporating feedback, monitoring progress, and adjusting as needed to ensure the successful execution of the plan. Participants also emphasized the importance of user-friendly language, clarity in key indicators and actions, and effective dissemination of the plan's goals and achievements.

# Appendix A: Key Insights by Consultation Question

## **Question 1: What story (or stories) do you see evolving in the SPRI about research and innovation at the University of Alberta? Do you think this story (or these stories) will distinguish the U of A uniquely when compared to other institutions, and highlight the impact it has?**

- Attendees expressed a desire for a more comprehensive narrative that includes diverse research areas, acknowledges the province's impact, and recognizes and expands upon the University's unique strengths.
- The document should focus more on tangible impacts and include research beyond discovery-based fields, highlighting the importance of Indigenous and community-led research.
- Attendees emphasized the need for an inspiring narrative that reflects the University's transformative nature, commitment to innovation, and global leadership in research.
- Concerns were raised about the document's approach to expansion, growth, redundancies, clarity, and its sensitivity to non-named faculties and different research areas.
- Attendees indicated a desire for more self-reflection, focus on personal growth, emphasis on inquiry, and exploration of different ways of thinking. They also suggested addressing barriers to collaboration and clarifying the term "global".
- The document could consider climate change and Indigenous research, as well as provide support for a broader range of research areas.
- The SPRI could emphasize the importance of resiliency and acknowledge the challenges faced by researchers, including recruitment and pandemic-related issues.
- The document could also highlight the need for more specific goals, research applications support, funding for graduate students, and increasing awareness.
- The SPRI could be more user-friendly and highlight areas of leadership, including infrastructure, undergraduate involvement, and research support

## **Question 2: After reading the goals, objectives, and tactics, which ones resonate with you the most? Why? / (External) When you view the plan holistically, is it focused and targeted to engage with communities and support the needs of industry or government? / (Indigenous and Native Studies) If you're familiar with the Braiding Past, Present and Future: University of Alberta Indigenous Strategic Plan, how do you see both documents aligning?**

- Attendees expressed a desire for a heightened focus on teaching and education, emphasizing how nurturing future leaders can be achieved through better support for undergraduate research, strengthened early career support, and preparation for future challenges.
- Participants suggested prioritizing global partnerships, particularly with developing countries, to broaden the University's impact.
- Attendees suggested that the communication of the plan's applicability could be improved across all disciplines, including social sciences, humanities, and fine arts.

- Attendees appreciated and further encouraged the emphasis on infrastructure needs and reducing administrative burdens to facilitate research activities.
- There were suggestions to specify the role of centres and institutes within the research ecosystem and provide sufficient resources for them to support research and collaboration.
- Consider Indigenous perspectives, language, and values throughout the plan and a stronger emphasis on social justice, and land-based knowledge.
- Strengthened collaboration with industry, government, and external partners and clearer engagement roadmaps was articulated as an important piece.
- Highlight the University's strengths, aligning the plan with national innovation conversations and provide more specific examples.
- Prioritizing health-related research and enhancing knowledge mobilization strategies was recommended.
- Tackling recruitment, retention, development, and support challenges for researchers and their families was frequently highlighted as a need.
- Attendees consistently suggested aligning the plan with global challenges.
- Attendees stressed the importance of entrepreneurship and providing robust support for spin-offs and startups.

**Question 3: In your opinion, do the goals, objectives, and tactics adequately respond to the significant trends, drivers, challenges, and opportunities shaping research and innovation in the world today? If yes, how does it do this? If not, what is missing?**

- Balancing between university rankings, reputation, and research impact is considered important.
- Attendees urged the use of language that promotes mutual benefits and reciprocity in partnerships.
- They also highlighted the need to connect community involvement in research to student recruitment and engagement.
- It was suggested that the definition of health should be consistent and broad, focusing on holistic solutions.
- Attendees recommended the prioritization of mentorship, teaching, and students' roles within the plan, advocating for the fostering of a supportive, inclusive research culture that adeptly manages workload and environmental concerns.
- Attendees believe it is crucial to acknowledge the University's historical shortcomings with honesty and to intensify the focus on the humanities, showing a commitment to continuous improvement and diverse academic fields.
- Addressing faculty renewal, attrition, capacity concerns, and the importance of competitive salaries is regarded as important.
- Attendees emphasized the importance of open access, open education, and open science.
- They also suggested incorporating long-term impact considerations and democratic institutions into the plan.
- It was proposed that some acknowledgement of the feasibility of achieving stated tactics and indicators is important.



- Attendees consider the balance between commercialization and knowledge generation important and understand it is difficult.
- Attendees recommend increasing community engagement and translating knowledge to the community, focusing on Indigenous relationships.

**Question 4: Do you have any feedback on the key indicators or suggestions for additional key indicators? / (External) Does this Plan align with the priorities of your organization or sector? Does it motivate you to engage or partner with the University on research and innovation activities? Are there any major areas of focus that are missing?**

- Attendees emphasized the importance of aligning the plan's indicators with internal processes and international goals such as the 2030 Sustainable Development Agenda.
- Clear and appropriate language throughout the document was highlighted, with specific attention to terms like "tactics" and language surrounding Indigeneity and Indigenous research.
- Suggestions were made to consider alternative metrics for research impact and foster an entrepreneurial culture within the institution.
- Attendees stressed the need for effective data collection methods to capture diverse research outcomes.
- Key indicators should be relevant to different audience needs, qualitative to provide a more holistic view, and better aligned with the plan's priorities.
- Incorporating support systems for securing Tri-Council funding and implementing efficient measures to track progress was recommended.
- The plan should acknowledge the impact of the pandemic and address decolonization and anti-oppression.
- Attendees emphasized the importance of involving partners in decision-making processes and ensuring transparency in indicator data production.

**Question 5: Will this plan advance the impact of the University of Alberta? If so, in what ways? If not, what is missing?**

- Attendees believed the plan could enhance the University's societal impact and position it as a desirable partner by providing a framework for research efforts.
- Successful implementation and effective communication were seen as catalysts to energize researchers and administrators, fostering hope and positivity.
- The importance of interdisciplinary collaboration and community impact was emphasized, along with better alignment with the Indigenous Strategic Plan.
- Balancing ambition for funding with a focus on humanities and arts may not be as financially lucrative was suggested for consideration.
- Exploring synergies with other institutions in Alberta was seen as a way to strengthen the University's impact.
- Continuous engagement and incorporating feedback into ongoing implementation were deemed essential.
- Providing incentives to encourage exploration of new research areas and ensuring infrastructure and funding support were seen as crucial.
- The achievement of key indicators would demonstrate impact, but attention to implementation details, milestones, and setting realistic expectations was also emphasized.

**Question 6: What immediate successes/achievements do you see this plan enabling when it is implemented? [NOTE: this question was often not asked or reworded as final advice]**

- The recognition and acknowledgment of attendee input and the importance of policies were seen as immediate successes, further ensuring attendees feel informed, interested, inspired, and involved.
- The role of the Indigenous Strategic Plan as a model for strategic planning should be recognized.
- Addressing the need for tangible change and alleviating concerns about potential inaction were seen as positive outcomes.
- Attendees highlighted the importance of mitigating tensions and competition among equity-denied groups.
- Recognizing the importance of tangible change, interdisciplinary collaboration, and clear pathways for researchers were seen as immediate successes.
- Acknowledging achievements in faculty renewal and critical infrastructure recognition were noted.
- Consideration of social betterment as a key pillar was suggested.



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