

Strategic Research Plan (2018 – 2022)

Overview

This *Strategic Research Plan (2018 – 2022)* follows from the Athabasca University *Imagine: Transforming Lives, Transforming Communities Strategic Plan*¹ and flows into the integrated planning framework adopted by the university. It attests to the capacity of our researchers, be they academics, students or staff, to generate knowledge about *Transforming Lives, Transforming Communities* – past, present and future, as chronicled in their research outputs – and crafts a vision for our future research endeavors. It also provides direction for the integration of research and teaching across the academy and for training the next generation of researchers.

*Imagine: Transforming Lives, Transforming Communities*¹ comprises four strategic directions:

- Moving beyond open – Bridging open and inclusion,
- Moving beyond place – Transforming communities through belonging and relationships,
- Moving beyond the now – Supporting transformation and incremental change through agility and adaptability, and
- Moving beyond the norm – Adopting innovative ideas, taking calculated risks.

Emanating from these four strategic directions are three broad strategic impacts related to our Learners, our Research and our University. The intended impacts of each are highlighted in the diagram below from *Imagine: Transforming Lives, Transforming Communities*. This Strategic Research Plan centers on attaining the impacts related to Research and Development Success and is a dynamic entity that will evolve over time, in conjunction with implementation of *Imagine: Transforming Lives, Transforming Communities*, and with emerging opportunities and societal concerns.



¹ *Imagine: Transforming Lives, Transforming Communities Strategic Plan (2018-2022)* can be found at [http://president.athabascau.ca/strategic-plan/documents/Imagine-to-AU-Community-\(18.0119\).pdf](http://president.athabascau.ca/strategic-plan/documents/Imagine-to-AU-Community-(18.0119).pdf)

Attaining the proposed impacts related to Research and Development Success requires strategic enablers, including strategic investments in research and in research infrastructure, that allow researchers to seek out, identify, pursue, and explore diverse interests and perspectives.

Strategic Research Plan (2018 – 2022)

This Plan sets the direction for Athabasca University's investments in research, scholarship and creativity for the next five years. It serves as a guide for the development of the infrastructure and services required to nurture research excellence, foster research performance comparable to that of other research-intensive universities in Canada, and enrich the social, environmental and economic value and relevance of research conducted by its faculty, students, and staff.

The Plan signals a shift from merely doing research to identifying strategic research priorities and building an infrastructure that has the capacity to foster and sustain research success in key areas. As a result, Athabasca University's research agenda will become more focused, yet nimble and responsive to emerging societal concerns. The Plan creates a compelling research value proposition that reflects the outcomes and impacts outlined in *Imagine: Transforming Lives, Transforming Communities* and positions Athabasca University to drive innovation, optimize its social, economic and environmental impact, and take advantage of opportunities to leverage scarce research resources by spearheading generative research collaborations and partnerships within the academy and beyond.

In addition, the Plan supports intellectual inquiry and advocates building a sustainable ecosystem that promotes excellence in research, education, and training for the next generation of researchers through the recruitment and retention of world-class researchers. It identifies research priorities, based on existing and emerging research strengths, including those embedded in Athabasca University's Research Institutes,² and commits to the transfer and mobilization of knowledge beyond traditional academic settings for the benefit of society.

Strategic Research Directions

Athabasca University's existing and emerging research strengths can be grouped into four broad themes. The four broad themes represent clusters of researchers and research expertise and serve to identify Athabasca University's strategic research directions for the upcoming five years.

The intent in identifying strategic research directions is not to limit research and creative endeavors but rather to identify, strengthen and prioritize existing and emerging areas of research excellence and foster the development of nationally and internationally competitive research programs in key areas. In addition, they afford opportunities to align strategic research infrastructure investments with research capacity.

Included among the four themes are *environmental and societal dynamics of sustainability*; *disruptive pedagogies*; *society, culture, health and well-being*; and *digital futures*. The four themes inspire individual and collective research and afford opportunities to address ideas and enquiries emanating from more than one category. Perhaps more importantly, they foster development of a critical mass of researchers within the university to cultivate the growth of leading edge disciplinary and interdisciplinary research.

Environmental and societal dynamics of sustainability encompasses research related to the complex social, economic and ecological dimensions of sustainability, including but not limited to conserving and restoring ecosystems; environmental governance, justice and ethics; food and water security; geophysical and biological change; green technology; social innovation; and urban design and

²Athabasca River Basin Research Institute (ARBRI); Technology Enhanced Knowledge Research Institute (TEKRI)

architecture. Of primary concern is research about environmental and societal dynamics of sustainability that supports decision-making, cultivates sustainable futures within the Athabasca River Basin and beyond, and honors Indigenous communities, cultures, and ways of knowing. Particular areas of existing and emerging expertise include climate change; environmental ethics and governance; management of the cumulative effects of land and water use over time; sustainability transition; and watershed and fish health.

Disruptive pedagogies advance pedagogical theory and practice by calling into question traditional views of education and training, including commonly held assumptions about how people learn and how learning can be nurtured and measured. This theme embraces a diverse spectrum of topics, including but not limited to best practices in the design and delivery of open, digital, distributed, and blended learning across educational settings and learners' lifespans, with a particular emphasis on the measurement of learning outcomes and the use of non-traditional means to credential learning. It also addresses emerging technologies (e.g., artificial intelligence; augmented reality; immersive learning; gaming; learning analytics; robotics; virtual reality) and their potential for personalizing individual's learning experiences, based on their specific learning styles and needs.

Society, culture, health and well-being addresses questions related to the human experience, be it individual or collective, past, present or future. Related areas of research include ancient civilizations; arts and humanities; civil society; culture; economy; entrepreneurship and innovation; ethics; financial regulation; gender identity and expression; globalization; governance and social justice; health, wellness and well-being of individuals and communities; organizational change; religion; and sustainable community development, among others. Of particular significance is the preservation of Indigenous knowledge, language and culture and the co-creation of paths to reconciliation.

Digital futures embody the design, application and impact of digital technology on society and the potential of open data and open science to advance knowledge and address social, economic, and environmental concerns. Existing and emerging areas of expertise include, but are not limited to, bioacoustics; bioinformatics; crowdsourcing and crowdfunding; digital humanities; digital accessibility and inclusivity; data security and evolving definitions of privacy in the face of the increasingly pervasive use of digital technology, big data, data mining, and data analytics in everyday life.

Strategic Research Goals

Attaining the impacts outlined in the *Research and Development Success* component of *Imagine: Transforming Lives, Transforming Communities* demands the establishment of strategic research goals. The strategic research goals that follow are broad in nature and are subject to change over time. They do however provide a point of departure for the creation and implementation of specific goal-attainment strategies and for the development of a robust suite of metrics to track and report research outputs impacts.

Beyond open: Reputation for open scholarship, data, and scholarly achievements

- Develop a scalable and sustainable Open Scholarship Framework
- Nurture sound open science and citizen science initiatives, including crowdsourcing
- Promote knowledge transfer and mobilization for the benefit of society, including via the dissemination of research outputs in reputable open access publications
- Foster the digital preservation of research data and research outputs to provide open access to research outputs and scholarly achievements

Beyond open: Researchers, including learners, impact their community through research

- Extend research networks and collaborations with rural, remote, and northern communities and with Indigenous peoples
- Foster innovation and entrepreneurship
- Leverage scarce research resources through generative collaborations and partnerships
- Increase the number of industry-based research training opportunities for students and postdoctoral fellows
- Maximize the translation and application of research results

Beyond place: Reputation for balanced disciplinary and interdisciplinary research that optimizes social, economic, and environmental impact on communities

- Build a strong research culture that embraces diverse perspectives, methods, and ways of knowing
- Foster equity, diversity and inclusion, including the participation of women, persons with disabilities, Aboriginal Peoples, and members of visible minorities in research
- Initiate and advance community involvement in research
- Optimize the recruitment, development and retention of talented researchers, including research chairs, academics, undergraduate and graduate students, alumni, postdoctoral fellows and other research personnel

Beyond the norm: Reputation for scholarly activity, dissemination, and impact reflecting our comprehensive research university status

- Build a sustainable research infrastructure (e.g., human and material resources; hardware, software and technical expertise; library; policies and procedures; space and equipment) to support research and innovation excellence
- Be intentional in integrating research and teaching within the curriculum and the academy
- Provide outstanding research training opportunities for students and postdoctoral fellows
- Increase the amount of funding available to support research training
- Adopt a robust suite of metrics to track and report research outputs and impacts
- Enhance grantsmanship competency
- Diversify and increase research revenues
- Streamline and optimize the provision of research services through all phases of the research process
- Explore and initiate shared service agreements to enhance research services
- Safeguard research integrity and ensure compliance with applicable research-related legislation, regulations, policies, and guidelines

Beyond now: Adaptable and innovative research areas of excellence that optimize social, economic and environmental impact

- Advocate research programs that are focused and consistent with the identified themes, yet nimble and responsive to emerging concerns and opportunities
- Increase research competitiveness and impact through differentiation and specialization
- Make visible, celebrate, and reward research excellence

Measures of Success

One of the aforementioned strategic research goals is to adopt a robust suite of metrics to track and report research outputs and impacts. This work is in the early stages; however, doing so will allow us to systematically use both quantitative and qualitative measures to report the social, economic, and environmental contributions of AU's researchers, be they academics, students, or staff.

Examples of potential measures of the outcomes and impact of Athabasca University's strategic research goals include the following. Particular measures may be applicable to more than one strategic outcome or impact but are listed only once for the sake of brevity. Some require further refinement; yet others will be developed over time. Ultimately, the goal is to develop a select (as opposed to all-inclusive), meaningful set of metrics that provides a succinct, yet fulsome description of the outcomes and impacts of the research conducted by our researchers. Most will be reported annually to provide evidence of research outcomes and impacts over time.

Beyond open: Reputation for open scholarship, data, and scholarly achievements

- Number of publications in reputable open access journals
- Number of research initiatives incorporating citizen science
- Use of social media to mobilize knowledge
- Adoption of a plan for the digital preservation of research data and research outputs

Beyond open: Researchers, including learners, impact their community through research

- Number of research collaborations and partnerships with rural, remote, and northern communities, with Indigenous Peoples, and with industry, government, and public and private sector organizations
- Leveraged research revenue
- Quantitative and qualitative reports of impact on communities

Beyond place: Reputation for balanced disciplinary and interdisciplinary research that optimizes social, economic, and environmental impact on communities

- Progress in meeting equity, diversity, and inclusion targets³
- Proportion of researchers engaged in disciplinary and multidisciplinary research
- Number of research chairs and area(s) of focus
- Number of research institutes and area(s) of focus

Beyond the norm: Reputation for scholarly activity, dissemination, and impact reflecting our comprehensive research university status

- Research revenue from Tri-Agency⁴, industry and community sources

³ Equity, diversity and inclusion refers to the participation of women, persons with disabilities, Aboriginal Peoples, and members of visible minorities in research. Targets are currently tracked in relation to the Canada Research Chair program; however, similar metrics could be developed in relation to other aspects of AU's research enterprise (e.g., recruitment of researchers and research personnel, as well as a diverse academic, student and staff complement).

⁴ Tri-Agency/Tri-Council includes the federally funded Canadian Institutes of Health Research (CIHR), Natural Sciences and Engineering Research Council (NSERC), and the Social Sciences and Humanities Research Council (SSHRC). Research Revenue from Tri-Agency sources subsequently determines, for example, the amount of funds

- Percentage of research revenue from Tri-Agency sources
- Value of sponsored research revenue per academic with research responsibilities
- Ratio of research revenue to research services expenditures
- Number of peer-reviewed publications
- Number of books published
- Number of citations per academic with research responsibilities
- Number of presentations at conferences, symposia, workshops, and public forums
- Number of researchers engaged in scholarly activities such as peer review, service on editorial boards or as editors of special editions of peer reviewed journals
- Number of researchers engaged in dissemination to non-academic audiences
- Number of undergraduate and graduate students involved in research as part of their academic studies
- Number of students hired as research assistants
- Number of postdoctoral fellows
- Number of research-related shared service agreements

Beyond now: Adaptable and innovative research areas of excellence that optimize social, economic and environmental impact

- Number of sponsored research projects related to each of the four identified themes
- Number of research awards acquired by academic and student researchers

Summary

This *Strategic Research Plan* reflects the outcomes of a robust consultation and development process and seeks to build a vibrant research culture that becomes visible by way of its focus on *Transforming Lives, Transforming Communities*. It affords myriad disciplinary and multidisciplinary opportunities to address questions of local, national and global concern related to four strategic themes.

awarded to the university via the Canada Foundation for Innovation (CFI) and Research Support Fund, as well as the number of Canada Research Chairs allocated to the university.