



# UNBC READY:

## Research Roadmap 2025-2030

**‘Advancing Knowledge, Inspiring Discovery, and  
Empowering Tomorrow’**



**March 2025**

# **Territorial Acknowledgement**

Since time immemorial, Indigenous Peoples have walked gently on the diverse traditional territories where the University of Northern British Columbia community is grateful to live, work, learn, and play. We are committed to building and nurturing relationships with Indigenous Peoples, we acknowledge their traditional lands, and we thank them.

## ***Prince George Campus***

The Prince George campus is situated on the unceded traditional territory of the Lheidli T'enneh First Nation, part of the Dakelh (Carrier) Peoples' territory.

## ***South-Central Campus***

The South-Central campus in Quesnel is situated on the unceded traditional territories of the Lhtako Dene Nation, Nazko First Nation, Lhoosk'uz Dené Nation, and ?Esdilagh First Nation (formerly Alexandria Band). Lhtako, Nazko, and Lhoosk'uz are on traditional Dakelh territory, and ?Esdilagh is a member of the Tsilhqot'in Nation.

## ***Peace River-Liard Campus***

The Peace River-Liard campus in Fort St. John is situated in Treaty 8 territory on the traditional lands of the Dane-zaa people of the Doig River First Nation, Blueberry River First Nation, and Halfway River First Nation.

## ***Northwest Campus***

The Northwest campus in Terrace is situated on the unceded traditional Ts'msyen (Tsimshian) territory of the Kitsumkalum and Kitselas First Nation. It includes a satellite campus in the coastal community of Prince Rupert, situated on or near unceded traditional Tsimshian territories including the Lax Kw'alaams Band, Metlakatla First Nation, Gitxaała Nation (Kitkatla), Gitga'at First Nation (Hartley Bay) and Kitasoo Band (Klemtu).

## ***Wilp Wilxo'oskwhl Nisga'a Institute***

UNBC has a federated agreement with the Wilp Wilxo'oskwhl (House of Wisdom) Nisga'a Institute (WWNI). Established by the Nisga'a Lisims Government in 1993 and situated on Gitwinksihlkw Village Lands within Nisga'a Treaty territory, WWNI is a fully accredited university-college serving all people in northwestern British Columbia.

# Message from the Vice President, Research and Innovation

The UNBC READY: Research Roadmap (2025-2030) is a key strategic document providing a pathway for research and innovation. This plan reflects our commitment to research excellence at UNBC, as well as provides a roadmap to future investment, impact, and successes.

## A Journey Together

When we began this refresh process, we committed to enacting a broad and transparent consultation, building on the foundation of the UNBC Strategic Plan READY and existing Strategic Research Plan. To assist us in this process, we engaged an Advisory Group of diverse and outstanding members of the UNBC community and are grateful for their guidance and support.

## A Bold Vision for Bold Research Impact

Over the course of Fall 2024, we conducted extensive consultations with over 500 interest holders from the UNBC community and beyond, including students, alumni, faculty, administrators, and community partners. We captured diverse inputs and used these to curate our research mission, vision, and values, along with refreshed strategic research areas and strategic priority actions. We are delighted to share these in this document and to enact these in our ongoing work.

## Using this Plan:

This plan outlines a framework for research support at UNBC, guiding the allocation of resources, decision-making, and the prioritization of research and innovation efforts. The Office of Research and Innovation will integrate these strategies and priorities into the annual cascade planning process, allowing faculties to align their activities with institutional research goals. We will continuously assess our outcomes, engaging with the UNBC community to gather feedback, monitor progress, and adjust our approach as needed.

## Dr. Paula Wood-Adams



Research and innovation are flourishing at UNBC. The future is in the North and we are Ready!



## RESEARCH AT UNBC

Over the past three decades, the University of Northern British Columbia has established a remarkable legacy of collaborative, dynamic, and impactful research. Spanning diverse disciplines and aligning to local needs, global challenges, and traditional Indigenous knowledge(s), our research continues to advance knowledge, promote sustainability, and ignite, inspire, and lead change at the local and global level. As one of Canada's top small research-intensive universities, UNBC will continue to harness and amplify these strengths to optimize impact and innovation.

### Mission

Guided by the UNBC Strategic Plan READY (2023-2028), researchers at UNBC are committed to building a sustainable and empowered future by cultivating curiosity, acting on truth and reconciliation, empowering northern communities, and fostering local solutions for global impact.

### Vision

'Advancing Knowledge, Inspiring Discovery, and Empowering Tomorrow'

### Our Core Values

Through deep connections with the diverse local and global communities we serve, UNBC researchers aspire to broaden the frontiers of knowledge through impactful applied, community-driven, discovery-oriented, and interdisciplinary research. Underpinning this are five core research and innovation values:

- Collaboration
- Interdisciplinarity
- Action for truth and reconciliation
- Fostering Knowledge Mobilization
- Reciprocity and accountability

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## **UNBC RESEARCH AT A GLANCE [Infographic]**

Infographic content:

- Macleans rankings/Times Higher Education
- Sponsored research totals over five years
- Research centres, services, and forests
- Research chairs
- Student and youth engagement

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## **ENGAGEMENT PROCESSES**

### **Infographic Content**

Fall 2024 – Over 500 individual engagements

- Eight engagement sessions and townhalls
- Descriptive survey
- ORI in the Wild – Pop up engagement booths
- Faculty and Division of Medical Sciences meetings
- Focus groups and individual interviews

Winter 2025

- Analysis, interpretation, and synthesis of the data
- Revision and completion of UNBC READY: Research Roadmap
- Feedback Survey
- Faculty and Division of Medical Sciences meetings
- Ongoing alignment with UNBC READY: Academic Roadmap

## STRATEGIC RESEARCH AREAS

At UNBC, we are committed to advancing knowledge and fostering impact through a diverse spectrum of applied, community-driven, discovery-oriented, and interdisciplinary research. Through this, we work to tackle the complex challenges of today for an empowered tomorrow. While not exhaustive of the broad scope of research and innovation at UNBC, **five strategic research areas** were crafted to represent the core domains of our research and impact. We recognise that these strategic research areas will be enhanced by boundary-crossing work that reflect intersections and synergies across themes, further drawing upon our commitment to integrative and collaborative approaches to research. The strategic research areas are:

- Indigenous Peoples, Place, and Leadership
- Climate Action, Sustainable Environments, and Natural Resources
- Northern and Rural Community Engagement and Empowerment
- Health, Society, and Wellbeing
- Science and Technology

### Indigenous Peoples, Place, and Leadership

Northern British Columbia is home to many Indigenous communities, encompassing diverse communities and linguistic groups. UNBC also has a growing community of Indigenous scholars, students, and leaders, with over 10% of all students identifying as Indigenous. UNBC is actively working to support authentic, meaningful, respectful, and reciprocal partnerships with Indigenous communities and to act on truth and reconciliation. The university acknowledges a special responsibility to the First Nations in its service area in terms of education, research, and economic development, as well as in supporting Indigenous communities in their self-governance and creating meaningful opportunities for knowledge exchange between Indigenous and non-Indigenous peoples.

Indigenous scholars, researchers, and students at UNBC work collectively with Indigenous communities and organizations locally, nationally, and internationally, recognizing the importance of diverse knowledge systems and worldviews when addressing complex challenges and priorities. Of note, UNBC is home to the National Collaborating Centre for Indigenous Health, with researchers establishing broad partnerships to foster innovation, improve access to healthcare, enhance quality, and reduce costs. Likewise, natural resources and plant ecology researchers work on land-based project to gather historical insights and provide future solutions. Some examples of research areas:

- Design and application of Indigenous-informed and -led environmental science, resource management, and planning strategies
- Understanding definitions and drivers of Indigenous health and wellness, and how to improve them



- Preservation and revitalization of Indigenous languages and cultures

## **Climate Action, Sustainable Environments, and Natural Resources**

Resource extraction and climate change continue to have significant impacts on ecosystem function in our region and beyond. These impacts are especially acute in Northern BC, where many communities are reliant on resource-based economies and are vulnerable to environmental disasters and climate events, such as extreme heat, wildfires, floods, and landslides. Responsible stewardship of resources and the natural environment requires an advanced understanding of our rich natural heritage and drivers of environment and climate change.

With a dynamic landscape of cutting-edge research infrastructure and sites, including research forests, rivers, labs, and sustainable energy initiatives, UNBC has developed an international reputation for research that examines both the human and natural dimensions of natural resources and environmental sustainability. Of note, the Natural Resources and Environmental Studies Institute (NRESi) provides critical infrastructure to advance environmental and natural resource-related research. NRESi engages scholars from across the spectrum of natural, physical, and social sciences and humanities research, by supporting research that extends from molecular to global scales. Examples of research areas:

- A highly developed understanding of the fundamental workings of natural systems: their complexity, resilience, adaptive capacity, economic impacts, and sustainability especially with respect to the impacts of human pressures
- Identification and integration of sound social, economic, and ecosystem principles for natural resource management and environmental protection
- Design and application of new products and technologies for economic diversification and sustainable management, extraction, and processing of natural resources.

## **Northern and Rural Community Engagement and Empowerment**

UNBC strives to improve understanding of the evolving needs of northern and rural communities from a range of disciplinary perspectives, to inform public policy and practice, and empower community decision-making. Indigenous and non-Indigenous communities across northern and rural British Columbia and Canada are faced with planning for the future in the face of a range of complex, nuanced, and interconnected social, economic, health, and environmental pressures. Frequently dependent on natural resource-based industries and subject to the vulnerability this engenders in an increasingly globalized economy, northern and rural communities have struggled to remain viable and are actively searching for opportunities to enhance both stability and resilience. UNBC researchers are actively engaged in applied, collaborative, community-based, and interdisciplinary research addressing complex challenges and seeks to foster community engagement and empowerment. Of note, for over two decades, UNBC's Community Development



Institute (CDI) has worked in partnership with communities, industry, business, non-profit and community organizations, First Nations, and all levels of government, to address cultural, social, and economic development challenges and to develop and implement strategies for economic diversification and community resilience. Example research areas:

- An understanding of the interwoven factors that contribute to communities remaining resilient in the face of change and challenges
- Analysis of globalization processes affecting the societies, cultures, and economies of Northern British Columbia and similar regions, including population aging, workforce renewal, a growing Indigenous population, and increased international immigration
- Exploration and development of the culture and cultural economy and service needs of small cities and rural communities and their contribution to quality of life

### **Health, Society, and Wellbeing**

Canadians who live in rural and northern regions have a reduced health status and health outcomes that are markedly worse than those of their urban and southern fellow citizens. Factors contributing to these disparities include lack of access to a full range of healthcare services and providers, lifestyle, socio-economic status, and environmental sustainability. Such disparities are even greater for Indigenous peoples who experience significantly higher morbidity and mortality rates, greater inequities in access to healthcare, and systemic racism. The health and social determinants that produce these disparities include individual, community, population, systems, and environmental factors, necessitating a collaborative and comprehensive approach to the study of health, society, and wellbeing.

UNBC researchers conduct broad interdisciplinary research, spanning basic sciences and biomedical research, creative social sciences and humanities, economics and business studies, education and politics, and applied clinical and health services research. This research has wide ranging impacts on health, society, and wellbeing. Of note, the Health Research Institute (HRI) supports health researchers to connect, convene, collaborate across the many disciplines concerned with health and its determinants, and to foster innovative research and partnerships across UNBC and beyond. A unique Memorandum of Understanding between UNBC and the Northern Health Authority also supports the HRI mission to facilitate the creation and translation of knowledge that will enhance the health and well-being of individuals, families and communities. Likewise, the Centre for Technology Adoption for Aging in the North (CTAAN) is a national innovation hub that supports aging in northern and rural communities by integrated innovative technology for older adults, caregivers, and related health systems. Example research areas:

- Identification of the determinants of health status across diverse populations, including Indigenous, rural, and northern communities

- Understanding of health services and health human resources, and the development of enhanced models of service delivery and health professional education
- Application of arts and humanities in health and medical sciences to advance anti-oppressive healthcare

## **Science and technology**

Grounded in curiosity and in response to local and global challenges, UNBC researchers in science and technology work to advance knowledge, understand the complexities of nature, and to develop tools to shape the future. As a research-intensive university embedded within the dynamic and resource-rich northern region of British Columbia, UNBC is uniquely positioned to leverage its expertise, partnerships, and regional strengths to drive impactful innovations. Through this, we work to foster a thriving ecosystem that supports the development and commercialization of ideas generated by our students, faculty, and partners, ensuring they benefit society and contribute to regional, national, and global progress.

At UNBC, the Northern Analytical Laboratory Services (NALS) is an environment and climate-solutions innovation hub leading research and testing in analytical, environmental, and material chemistry. The Wood Innovation Research Lab (WIRL) provides students, faculty members, and industry/endowed research chairs with the ability to build and test large-scale, integrated wood structures using engineered wood products such as Cross-Laminated Timber, Glue Laminated Timber, and Laminated Veneer Lumber. Examples of studies include:

- Biological, chemical, environmental, and engineering systems
- Technology and innovation to advance health and society
- Identification and formulation of place-based sustainable options for economic diversification

## STRATEGIC PRIORITY ACTIONS

Through our engagement activities, we worked to identify and explore emerging trends and research support needs and priorities. Six core priority action areas were generated. These will provide a pathway for research and innovation over the coming five years and will guide us as we endeavour to meet the needs of rural, remote, northern, and Indigenous communities, locally to globally, through research.

The **six core priority action areas** include:

- Strengthen, Sustain, and Grow Research Capacity at UNBC
- Manage and Enhance Research Resources at UNBC
- Attract, Develop, and Retain Outstanding Faculty
- Enhance Research Experiences for Students and Trainees
- Build, Grow, and Sustain Research Partnerships
- Foster Knowledge Mobilization

### **Strengthen, Sustain, and Grow Research Capacity at UNBC**

Excellent and impactful research is contingent on practical supports to strengthen, sustain, and grow research capacity at UNBC, allowing researchers to work to their best and achieve their highest potential.

- Enhance, diversify, and support relationships with citizens, communities, funders, research partners, and industry
- Prioritize, support, and invest in research that responds to local and global challenges, including truth and reconciliation and climate action
- Develop strategic research areas through increased external funding
- Strengthen, sustain, and support research centres, forests, and institutes at UNBC
- Provide access to specialized research supports, including statisticians
- Develop comprehensive resources and infrastructure to assist students and faculty in navigating the innovation lifecycle, from idea generation to market entry.

**“UNBC can support communities to be ready for the realities of climate change and the ongoing events to come ... Research can serve and impact communities locally, but can also lead and contribute globally” [Faculty, UNBC Prince George]**

## **Manage and Enhance Research Resources at UNBC**

To sustain and promote research activity at UNBC, we must manage our support programs (e.g. administrative, financial), facilities, field operations, and research equipment in innovative ways that provide the best service and access for faculty and students, and the best value to our communities and partners

- Enhance and streamline research administration processes and systems to increase efficiency and support faculty to do their best work
- Clear and transparent policies and procedures for allocation of resources
- Investment in adaptable, enhanced, and flexible research space, infrastructure, equipment, and support across all UNBC campuses and facilities
- Develop additional pathways to optimize, monitor, and showcase research impact
- Optimization of access to research facilities and space at UNBC, including equitable, fair, and transparent allocation of research office and laboratory space
- Support for consistent and complete regulatory compliance for research

## **Attract, Retain, and Develop Outstanding Faculty**

UNBC recognizes the importance of attracting and retaining outstanding faculty to enable the university to continue to build on the extent and merit of its research portfolio.

- Attract, retain, and invest in outstanding researchers, especially from equity-deserving and underrepresented groups, to work at or with UNBC, contributing to a vibrant research environment
- Promote inclusive spaces that foster collaboration, innovation, interdisciplinarity, and impact
- Enhance UNBC's profile by highlighting the diverse research achievements and contributions of faculty
- Create strategic supports to amplify visibility of achievements of researchers from equity-deserving and underrepresented groups
- Establish formalized pathways for mentorship and support to empower and guide new faculty

**“We need to continue to be aspirational and to lead research that is nimble and adaptable to the world in which we live in ... we need to continue to be relevant locally, provincially, nationally, and globally” [Dr. Geoff Payne, President, UNBC]**

## **Enhance Research Experiences for Students and Trainees**

Students and research trainees continue to be a critical part of UNBC's research ecosystem. There will be a continued strong emphasis on supporting research experiences for students at all levels and research trainees, including postdoctoral research fellows.

- Enhance support for students and trainees at all levels across the research life cycle
- Expand funding opportunities to support and retain engagement of undergraduate students in research, including paid research opportunities and internships
- Create new pathways of support for Indigenous students and research trainees
- Raise awareness of graduate and research trainee pathways among undergraduate students at UNBC
- Support opportunities for students and postdoctoral research fellows to present and disseminate their work

**"I was able to easily get involved in research and work alongside my professors, I was even given my own project, something I never expected as an undergrad student" [UNBC Student, Prince George]**

## **Build, Grow, and Sustain Research Partnerships**

Collaborative research partnerships are an area of significant strength for UNBC and continue to be critical to UNBC's mission and overarching strategic plan READY.

- Foster meaningful, reciprocal, and respectful partnerships with Indigenous Peoples and communities.
- Support the development of bold and dynamic partnerships with community organizations, industry, not-for-profit, and others to foster new opportunities for exploration, innovation, and entrepreneurship
- Create linkages across faculties to maximize boundary-crossing and interdisciplinary research partnerships and impacts across all UNBC sites and beyond
- Strengthen collaborations with industry, government, and Indigenous communities to co-develop innovations that contributes to the resilience and diversification of the regional economy and addresses societal challenges
- Increased collaboration with other research-intensive universities across Canada and worldwide.

**"UNBC researchers make a difference by collaborating and building relationships, and when trust is established, a new path forward is created with our Indigenous communities, we then can explore different ways of knowing and being" - Elder McIntosh.**

## **Foster Knowledge Mobilization**

The mobilization of knowledge is critical for researchers and ensures that research findings get into the right hands and in an expedient manner. We aspire to not only be excellent in ‘traditional’ methods of dissemination, such as publishing books, articles, and reports, but also in other forms of knowledge translation, such as public scholarship, workshops, and creative activities.

- Promote knowledge mobilization across the research continuum, from discovery to impact
- Enhance innovative knowledge dissemination methods and technology
- Increase engagement of students and research trainees in knowledge mobilization
- Increase visibility of UNBC research
- Support for diverse forms of knowledge mobilization, including adoption of open science the Declaration on Research Assessment (DORA) principles.

## **Key Performance Indicators (2025-2030)**

Key performance indicators will be central to our ongoing evaluation processes and crosscut our strategic themes and priorities. We will measure and report on these annually.

1. Increased funding applications and success rates across all sectors, including tri-agency funding and other sponsored research
2. Sustained or improve university rankings, including Maclean’s and Times Higher Education Impact rankings
3. Refreshed and transparent procedures for allocation of resources and space
4. Expanded funding opportunities to support and retain undergraduate students in research
5. Increased meaningful, reciprocal, and respectful partnerships with Indigenous Peoples and communities
6. Expansion and diversification of formalized partnerships between diverse UNBC researchers and industry, government, and other research-intensive universities
7. Dedicated research supports to empower and guide faculty, particularly newly appointed faculty, along with transparent pathways to access that support.
8. Strengthened support for diverse forms of knowledge mobilization, including adoption of the Declaration on Research Assessment (DORA) principles.

## UNBC Strategic Research Plan Advisory Committee

We extend our sincere thanks to the UNBC Strategic Research Plan Advisory Committee for their guidance and support over the course of this process.

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Dr. Davina Banner (Co-Chair), Office of Research and Innovation, UNBC

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