


Strategic Plan

2019–2023



FACULTY *of* SCIENCE & TECHNOLOGY

A photograph of the Aurora Borealis (Northern Lights) in shades of green and purple, viewed from a dark forest silhouette at night. The text is overlaid on the upper right portion of the image.

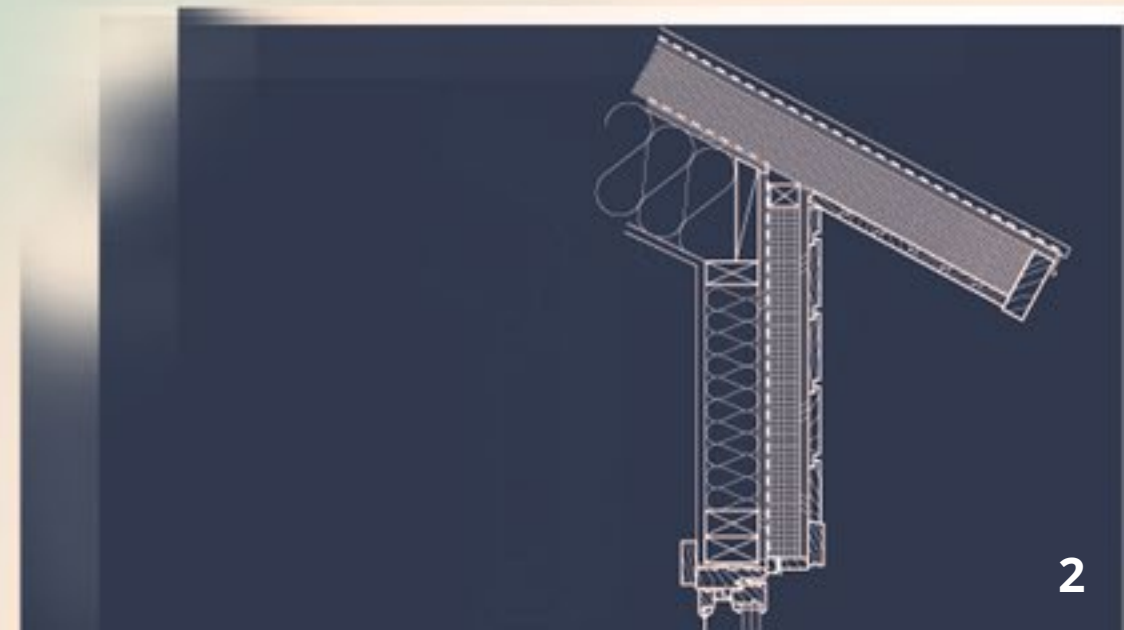
Athabasca University respectfully acknowledges that we are on and work on the traditional lands of the Indigenous peoples (Inuit, First Nations, Métis) of Canada. We honour the ancestry, heritage and gifts of the Indigenous peoples and give **thanks** to them.



OVERVIEW

The Faculty of Science & Technology aspires to be innovative in education and research, offering a unique experience to our global student community and contributing positively to the improvement of our global society. Our understanding of our current position, along with our vision for the future, emphasizes the importance of our work to individual learners, the scientific community, and the world.

This is the starting point from which we embark on our journey of transforming the lives and communities of our learners.



UNIVERSITY DIRECTION

Athabasca University's four guiding strategic themes as stated in *Imagine: Transforming Lives, Transforming Communities*:

Moving beyond **Open** – Bridging open and inclusion

Moving beyond **Place** – Transforming communities through belonging and relationships

Moving beyond the **Now** – Supporting transformative and incremental change through agility and adaptability

Moving beyond the **Norm** – Adopting innovative ideas, taking calculated risks

These four strategic themes are supported by the I-CARE values of Integrity, Community, Adaptability, Respect, and Excellence and are guided by the following commitments: Investing in ourselves and others, Shared responsibility, Accountability, Transforming, and Technology.

The foundation of the *Imagine* plan is *kwayskahsatsowin* (conciliation). Through conciliation, Athabasca University is committed to learning from and working in partnership with Indigenous peoples, nations, and communities.

FACULTY DIRECTION



Following extensive consultation and discussion, the faculty and staff of FST identified areas that impact each School and Centre. This resulted in a collaborative creation of strategic priorities and themes for FST that flow from the four University strategic themes outlined in *Imagine*. The three priorities and associated themes within our Faculty are illustrated in the table. These priorities and themes are aligned with the themes of *Imagine* and are guided by the same values and commitments. *Kwayskahsatsowin* (conciliation) is also woven into the strategic themes and actions of the FST Strategic Plan.

STRATEGIC PRIORITIES AND THEMES	
Academic excellence	Quality of research
	Teaching and learning
Making a positive difference	Social integrity
	Academic freedom
	Creativity
Impact beyond borders	Collaboration
	Community
	Recognition

Our Vision

The Faculty of Science & Technology aspires to lead in education and research, offering a unique experience to our global student community and contributing positively to the improvement of our global society.



Strategic Priority 1: Academic excellence



Quality of research

We foster diverse research initiatives in areas of architecture, natural and applied science, mathematics, computing science, and information systems. Through collaborative and collegial partnerships with industry, government, and other post-secondary stakeholders, our faculty will deliver innovative research that is meaningful in a changing environment. The research produced will attract undergraduate and graduate students, both nationally and internationally, through various internship and scholarship programs and will contribute to meaningful outcomes and products.

Teaching and learning

Our programs and courses are integral to sustainability and the success of our students and graduates. Over the next five years, FST will excel in the teaching and mentorship of our students by providing programs and courses relevant to a world that is diverse and relies on emerging technologies, social interactions, and systems. Through excellence in multidisciplinary research, FST will aspire to thinking outside the box and will be challenging current views around programs and courses. Our exceptional approach to distance delivery and laboratory practice will foster innovative ways to recruit, retain, and ensure the success of our students. We will be a global leader in knowledge transfer.

Strategic Priority 2: Making a positive difference

Social integrity

We pride ourselves on the commitment to make a difference in supporting our students and staff through innovative educational opportunities, entrepreneurship, research, collaborations, and strategic directions. In past years, FST staff and faculty have engaged in a comprehensive environmental analysis of our strengths, opportunities, and challenges. By acknowledging the past and recognizing the diversity and talents of FST members, the principles of integrity and moral practice are our ongoing commitments.

Academic freedom

We meet the challenges of an increasingly complex post-secondary environment with integrity and sincerity. FST is committed to supporting the freedom of our staff and our students, removing barriers wherever possible, and being respectful of the uniqueness and autonomy of all our members. This is important in that it also encompasses academic freedom, which is central to our commitment to create and share knowledge transfer. This will serve us well by increasing our global profile, attracting new students, improving our learning and teaching, and opening up new opportunities to innovate.

Creativity

Creative engagement is key to FST's mission. It forms the intersection between imagination and freedom to accomplish tasks or invent new theories or ways of doing things. Approaching issues, ideas, and topics in unique ways will advance us as an established leader in innovation, whether it is operational in nature or academic. We will stand above all other departments as creative innovators who will develop and share what we do with others.





Strategic Priority 3: Impact beyond borders

Collaboration

Our commitment to form meaningful relationships has been a testament to many national and international links and partnerships. This has served our researchers and community at large well and has ensured productive initiatives, resulting in increased dissemination of results through workshops, conference presentations, training of highly qualified personnel, and generation of manuscripts and books.

Community

Aligned with Athabasca University's *Imagine and Comprehensive Institutional Plan*, we are deeply committed to developing strong relationships with internal and external parties to support its goals and values. The sense of community is important, as it not only allows different people working on a particular task, but also fosters intellectual and social development. Community involves individuals from within our personal circles and extends to our students, to research, and to disciplinary communities. These all embrace local, national, and global reach. The spirit of community allows personal and professional growth of our FST faculty and staff. Community engagement augments personal, cultural, and social well-being.

Recognition

The ability to support FST faculty and staff is key to building morale and teamwork. There are many ways to recognize the accomplishments of our staff, students, and academics. *Recognition* is a powerful word, as it praises the work and behaviour of those in the AU community. It celebrates exemplary work and acknowledges our people going the extra mile. We have made a commitment to increase these efforts not only looking inwardly, but also acknowledging the bigger picture around the mission and goals of the Faculty.

Our Path

To direct FST on this shared journey,
we have set ourselves strategic
initiatives to further focus our efforts.



Strategic Priority 1: Academic excellence



FST is committed to upholding the principles of academia to provide research and teaching excellence that contributes to knowledge transfer and economic prosperity for our students and community in a global environment. We strive to actively bring about positive change, locally and globally, through research, teaching, and scholarship.



Strategic Priority 1: Academic excellence

THEMES	STRATEGIES	ACTIONS
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Quality of research, Teaching and learning

Expand our research programs through investment in our researchers and research programs.

Prepare our students for global demands by offering a breadth of programs to meet current and emerging AU student needs/ interests.

Invest in our people

- Implement a mentoring program that will foster the journey of researchers throughout their career. (Beyond NOW)
- Nurture and support researchers, research teams, and interdisciplinary research by investing in world-class facilities and equipment. (Beyond NOW)
- Expand the research teams of FST Canada Research and Campus Alberta Innovates chairs. (Beyond NORM)

Develop new research programs

- Recruit research chairs for emerging and innovative areas within FST. (Beyond NORM)
- Establish meaningful research programs in collaboration with communities in the north, including Indigenous communities, to understand and mediate environmental change. (Beyond OPEN)

Support our students as they learn with us

- Provide a strong, seamless interface that continuously improves the student learning experience. (Beyond PLACE)

Engage and challenge our students

- Use the Learning Framework to guide decisions about how we design, deliver, support, assess, and continuously improve all aspects of the learning experience. (Beyond NORM)
- Conduct regular program reviews to ensure both undergraduate and graduate programs remain current and relevant. (Beyond NORM)
- Ensure courses are effective via periodic pedagogical reviews, student feedback, and informatics. (Beyond NORM)
- Continuously optimize the course development, revision, and production processes from conception to online release to ensure timely updates to all courses. (Beyond NORM)

Strategic Priority 1: Academic excellence

THEMES

STRATEGIES

ACTIONS

Quality of research, Teaching and learning (cont.)

Prepare our students for global demands by offering a breadth of programs to meet current and emerging AU student needs/interests. (cont.)

Involvement of our students in research

- Foster reciprocal training opportunities for graduate and undergraduate research students. (Beyond PLACE)
- Expand training internships through FST researchers in the Mitacs Globalink and Accelerate research programs. (Beyond OPEN)

Adapt our offerings

- Use evidence-based approaches drawn from scholarship of teaching and learning. (Beyond NORM)
- Develop innovative new programs to meet emerging AU student needs/interests. (Beyond NOW)
 - i. Adapt existing undergraduate programs to reflect emerging demands.
 - ii. Create new graduate programs.
 1. MSc in Earth System Science
 2. MArch in Architecture
 3. PhD in Information Systems
 - iii. Explore the creation of continuing education, professional development courses, and workshops for public and industry.

Promote digital literacy

- Provide integrated and practical training in relevant real-world technologies. (Beyond OPEN)





Strategic Priority 1: Academic excellence

Measures of Success

- External funding for research
- Number and diversity of research opportunities
- Number of students, graduates, and post-docs
- Responsiveness of online course development process
- Launch of new graduate programs
- Student support for research of graduate students (AU Student Satisfaction Survey)
- Student engagement (e.g., NSSE report)
- Quality of interactions with students (e.g., NSSE report)
- Survey of key research and course success indicators:
 - Open dissemination of our research
 - Innovative approaches in teaching and research
 - Quality and amount of research output
 - Faculty utilization of social technology
 - Research partnerships with northern communities, Indigenous communities, and other institutions
 - Increase in citizen science opportunities as part of research and teaching

Strategic Priority 2: Making a positive difference



Our second priority involves a reflective process of all staff and faculty in engaging in various Faculty activities. Aligned with the mission and vision of Athabasca University, FST strives to bring about positive change, locally and globally, by fostering and supporting the growth and development of our students and staff through our teaching, research, and community outreach.

Strategic Priority 2: Making a positive difference

THEMES

STRATEGIES

ACTIONS

**Social integrity,
Academic freedom,
and Creativity**

Change the way we share knowledge so it is more open and inclusive to break down barriers to learning and scholarship.

Incorporate a sense of community within our teaching

- Introduce social approaches and technologies to open up dialogue through online tools, structures, and techniques. (Beyond NORM)
- Engage students using different platforms such as the Landing, Skype, and Adobe Connect. (Beyond OPEN)
- Provide accessible and flexible service to students, to the general public, and to our communities. (Beyond PLACE)

Improve the design experience for the digital age

- Create a shared FST knowledge base and dissemination network to promote the use of cutting-edge pedagogical approaches and educational technologies. (Beyond NOW)

Improve access by breaking down the barriers that prevent scholarship

- Remove barriers to learning by FST members adopting, creating, and sharing open educational resources in courses and programs. (Beyond OPEN)
- Develop remote laboratory and home labs. (Beyond OPEN)
- Increase the flexibility in our programs through modularized course offerings. (Beyond OPEN)





Strategic Priority 2: Making a positive difference

THEMES

**Social integrity,
Academic
freedom, and
Creativity**
(cont.)

STRATEGIES

Change the way we work to value the person, foster social interactions, and build on sincerity and integrity.

ACTIONS

Work with integrity

- Impart our values with sincerity and ethical standards. (Beyond PLACE)
- Build work-life balance into our operations to ensure momentum and sustainability. (Beyond NOW)

Collaborate

- Form teams and collaborations to find solutions to issues. (Beyond PLACE)
- Foster creative inquiry and community engagement in all aspects of teaching, research, and work. (Beyond NORM)

Measures of Success

- Concerted and active communications of FST activities (also a strong measure for priority 3)
- Number and quality of social/academic events
- Impact of barriers on students (AU Student Satisfaction Survey)
- Survey of key research and course success indicators:
 - OER content within FST learning materials
 - Knowledge dissemination beyond peer-review manuscripts (e.g., Creative Commons license, social media, the Landing)

Strategic Priority 3: Impact beyond borders



The themes of collaborations, community, and recognition in this strategic priority reflect the influence FST has on the relationships we form, not only locally but also extending beyond our borders. We firmly believe that whatever has been achieved within FST has effects and value outside the Faculty. This extends to our staff, academics, students, research fellows, and trainees.

Strategic Priority 3: Impact beyond borders

THEMES

STRATEGIES

ACTIONS

Collaboration, Community, and Recognition

Expand our reach beyond AU by increasing our partnerships with outside institutions.

Build new partnerships

- Foster reciprocal training opportunities for graduate and undergraduate research students. (Beyond OPEN)
- Increase partnerships with high schools to initiate dual credit offerings for students. (Beyond PLACE)
- Increase the number of memoranda of understandings and partnership agreements with international institutions. (Beyond PLACE)

Increase our presence in the wider community

- Conduct regular events and activities to foster positive relationships. (Beyond PLACE)

Disseminate knowledge and celebrate our successes with the wider community.

Disseminate knowledge to the wider community

- Grow our community outreach programs. (Beyond PLACE)
- Share best practices both internally and externally. (Beyond NOW)
- Create or use a shared space to communicate ideas and collaborate. (Beyond NOW)

Celebrate our successes with the wider community

- Broadcast accomplishments and celebrate widely using social media. (Beyond PLACE)



Strategic Priority 3: Impact beyond borders

Measures of Success

- Number of activities in Science Outreach Program
- Number and impact of partnerships
- Research opportunities and collaborations for students
- Survey of key research and course success indicators:
 - Number of Faculty activities in community engagement and outreach programs





Conclusion

Together, these three strategic priorities are intended to advance and enhance research, scholarship, teaching, and technical and administrative processes as envisioned in the *Imagine* plan. The three priorities will harness creativity and challenge others to think differently in preparing global leaders of the future. FST will contribute to the communities we serve and the special relationships we foster. Moreover, FST takes pride in the contribution the faculty and staff make in supporting the success of the Faculty's members and students. We are proud to be part of the transformational vision outlined by *Imagine*.



Athabasca University

FACULTY OF SCIENCE & TECHNOLOGY