



Taking Care of
our Campuses

January
2024

Integrated Asset Management Strategy



UNIVERSITY
OF ALBERTA

Leading
with purpose.



The University of Alberta, its buildings, labs and research stations are primarily located on the territory of the Néhiyaw (Cree), Niitsitapi (Blackfoot), Métis, Nakoda (Stoney), Dene, Haudenosaunee (Iroquois) and Anishinaabe (Ojibway/Saulteaux), lands that are now known as part of Treaties 6, 7 and 8 and homeland of the Métis. The University of Alberta respects the sovereignty, lands, histories, languages, knowledge systems and cultures of all First Nations, Métis and Inuit nations.

Vice-President Facilities and Operations Message

The University of Alberta's Strategic Plan (2023-2033), *Shape*, outlines a bold vision and emphasizes purposeful action across the university's three core areas: education, research and community engagement. This determines the institution's focus and resources and provides a framework for ensuring our campuses, facilities and utilities meet the institution's needs and goals while continuing to grow.

This *Integrated Asset Management Strategy* outlines how we can better utilize owned space, reduce reliance on leased space, appropriately renew or dispose of buildings, prioritize where the university needs to invest its limited resources to address deferred maintenance liabilities, reduce our ecological footprint and decrease operating costs. This all must occur while increasing a focus on preventive maintenance. Publicly funded infrastructure will be increasingly scrutinized to ensure renewal, repurposing and optimization occurs in advance of any new construction. This continues to put pressure on all public organizations to better use and maintain their assets.

This strategy is a guide to ensure all aspects of managing the physical assets of the university are considered. This means optimizing the facilities that are key to the institution's mandate and prioritizing inventory based on whether its current state is deemed critical, necessary or unnecessary. As the University of Alberta evolves to continue meeting its community's needs, its infrastructure must be positioned to enable growth and transformational impact, now and into the future.

Andrew Sharman

Vice-President Facilities and Operations

Strategic Context

Over the next 10 years, the university is sharply focused on delivering innovative and flexible learning and student experiences; reinforcing and enhancing our research, innovation and creative activities; and fulfilling our responsibility as a leader and convenor to help shape and positively impact communities in Alberta, across Canada and around the world.

To do this, we will continue developing campus environments that give our students rich, memorable and meaningful experiences, ensuring our high-impact researchers benefit from quality research spaces and supports while delivering transformational opportunities where students can flourish through experiential learning, residence communities, athletics and recreation, creative activity and volunteer opportunities. It also means creating more opportunities for students to experience

education at Campus Saint-Jean and Augustana Campus and continuing to support access to our facilities, events and activities for the public.

The university remains committed to incorporating Indigenous identities, languages, cultures and worldviews and achieving a more diverse, equitable, accessible and inclusive environment for all who work, learn and live within our community. This also includes providing safe and healthy work and study environments, enabling high-quality education and research; leading through the prudent stewardship of resources; embracing opportunities to innovate to make things better; and working together, within and beyond the university, and across traditional boundaries.

Within this context, campus infrastructure must be capable of supporting growth and providing 21st century learning environments and accessible spaces. This strategy identifies the direction and actions to be taken to achieve this. An important focus is that all students, faculty, staff, visitors and members of the community are stewards of the University of Alberta's buildings and grounds, and how each uses the institution today directly impacts its future state.

Most importantly, this strategy sets out principles, goals and actions to guide decisions that support the infrastructure needs of learners, researchers, faculty, staff and the community at large, while balancing the financial and reputational risks, opportunities and fiscal environment in which the institution operates.

The university manages almost 1.63 million square metres in over 400 buildings across its campuses and research facilities. This is one of the largest volumes of buildings across the greatest land base of Canadian universities, and over 60 percent of these buildings are over 40 years old.

The lifespan and ongoing functionality of infrastructure is affected by how it was constructed, how it was maintained and how it has been treated by its users. Impacts from sudden weather or temperature changes also affect buildings and grounds. Because limited funding needs to be stretched as far as possible, it is important to ensure evidence drives all infrastructure decision-making. For too many years, necessary maintenance and renewal activities have been delayed due to insufficient funding and, if this trajectory is not

altered, the institution will face an increasing magnitude of disruptions to facilities and, consequently, the ability to support its academic and research objectives.

Tackling deferred maintenance, future-proofing infrastructure and continuing sound stewardship in times of fiscal constraint will require new ways of thinking and decision-making. Even though better data and strategic analytics will inform decisions and improved coordination across campuses and with other partners will reduce concern, optimizing campus infrastructure will require some difficult decisions to be made.

The priority across all campuses is on the renewal and refurbishment of existing buildings with very limited consideration for facility expansion or new construction. As facilities are considered for disposal or removed from



our infrastructure inventory, the associated operating resources will be retained and directed towards operating, maintaining and renewing the remaining assets.

By prioritizing our building inventory, a natural process for determining the allocation of available investment can be developed. In practice, this means a building that is nearing end-of-life and not capable of being reasonably renewed to meet teaching and research expectations will be identified for decommissioning and, as such, will receive only critical maintenance investments. For those buildings, efforts to increase awareness of these decisions are needed. Repurposing and/or removing any infrastructure from an institution with over a century of history will require discussion to understand concerns and areas of potential resistance. These collaborative discussions and ultimate choices embody sound asset management practices grounded in principles.

The University of Alberta is not unique in facing a challenge of growing costs for managing infrastructure that exceed available resources, while balancing on-going and changing space needs, changing expectations of users, and increased innovation in building design and delivery. This is a challenge of many post-secondary institutions and public organizations world-wide. What will be unique is how the university is strategic in its use of analytics, the disciplined choices it will make to meet the growing needs and expectations for space, and its decisions in managing these costs. Simply stated, decisions related to identifying buildings for renewal, repurposing, closure, disposal and even demolition will be driven by the evidence of today with projections of tomorrow. They will also look at partnerships and collaborative opportunities in infrastructure design, operations, maintenance and funding.

While this strategy provides an overarching direction, an accompanying asset management master plan aims to be the university's single plan for infrastructure utilization, space optimization and investment prioritization. Such a plan presents a long-term view of our campus infrastructure and the path to get there and highlights evidence-based decision-making to optimize the university's infrastructure portfolio. By using a robust framework for assessing where infrastructure investments return the greatest value to the institution, we will be better able to manage risk and legislative/code compliance; effectively engage and communicate decisions to stakeholders; lower building lifecycle costs; and improve financial and environmental sustainability. An asset management master plan connects the university's broad-based strategic objectives and a picture of what the university's infrastructure could look like over the next 20 years if investment is available.



Infrastructure Planning and Reporting at the U of A

The University of Alberta is renowned for its leadership, achievements and public service, ranking among the top universities in Canada. The institution also ranks amongst the highest in Canada for its volume and value of infrastructure assets. This volume of infrastructure assets, while supportive of space needs for all faculty and students, is increasingly difficult to maintain, and requires the university to strategically consider the life cycle of all buildings and grounds. Accordingly, university infrastructure assets are managed in four life-cycle stages, which are highly interdependent: planning; creating and acquiring; operating and maintaining; and renewing or disposing.

The following visual is a simplified representation of the numerous interdependent plans that the University of Alberta uses to prioritize its decision-making with respect to infrastructure investments. At its core is the University of Alberta's strategic plan, *Shape* as seen through the lenses of our commitments to diversity, equity, inclusion and reconciliation outlined in *Braiding, Past, Present and Future, University of Alberta's Indigenous Strategic Plan* and in the *Strategic Plan for Equity, Diversity and Inclusivity*. There is also direction established in *Forward with Purpose: A Strategic Plan for Research and Innovation* which strategically guides the creation, operation and financial sustainability of core and shared research infrastructure, as well as in *Igniting Purpose: The Student Experience Action Plan* which provides the critical link to ensuring all decisions positively impact student experiences at the university.

Subsequent infrastructure planning is guided by this *Integrated Asset Management Strategy (IAMS)* that reflects academic and research priorities as defined by the university's colleges and stand-alone faculties. An asset management master plan brings *IAMS* to life and is instrumental in developing implementation plans such as the university's annual capital plan, which, as legislated by the Government of Alberta, outlines requests for capital investment for the next three years.

Robust planning serves many needs, including: ensuring accessible space for learners, faculty, and staff; supporting utility needs of campuses; monitoring and maintaining capital assets; designing, renewing, building and removing capital assets; ensuring ancillary supports and services are available and financially sustainable; and maintaining legislated long-range development plans. Regular reporting ensures progress and accountability.



Principles, Goals And Actions

Principles set a foundation for a system of decision-making and actions. The subsequent goals guide all infrastructure decisions with corresponding actions to enable implementation. They have been validated by faculty leadership and students and reviewed and supported by both the General Faculties Council and the Board of Governors. The following principles, goals, and actions have a long-term lens in their application.



Principles

Student Success, Life Experience, Research and Scholarship

1. Campus spaces foster positive student learning and living experiences.
2. Building assets contribute positively to teaching, research, service and community impact.
3. Building environments, including staff space, reflect current and future pedagogies.
4. Facilities are capable of supporting world-class research across multiple disciplines.

Asset Management

5. Buildings are continually evaluated to optimize space utilization and prioritize investments in life-cycle renewal and in maintenance.
6. Recognize the inherent uniqueness in an institution of higher learning, while maximizing system-wide functionality.
7. Social, economic, and environmental sustainability is advanced and achieved by:
 - » Incorporating inclusive design principles into campus infrastructure (e.g. all-gender, barrier-free).
 - » Reducing our ecological footprint.
 - » Reducing operational costs.

Campus Character

8. Every building has a unique role and its strategic value in the institutional inventory is more than a mathematical computation.
9. Prioritizing the active transportation experience on all campuses.
10. Campus buildings and grounds are aesthetically coherent and maintained in a way that considers the community in which it resides.
11. Considerations for removing building inventory include a meaningful assessment of its historic value and placement in the university's architectural mosaic.

Decision-Making

12. Adhere to all government-mandated long range development plans, sector plans, urban planning principles and building codes and regulations.
13. Spending adheres to funding parameters and institutional priorities.
14. Decisions are evidence-based and supported by openly available data related to building occupancy, functionality, performance, environmental considerations and deferred maintenance.



Goals and Actions

Planning and Programming

01

Campus planning processes and outputs consider future events, innovation and risks.

Campus planning processes are the convergence of many collaborative planning events to understand, anticipate and design the campus and identify priorities of tomorrow, including alignment with the academic mission; research priorities and needs; supporting students' academic, social and wellness aspects; community engagement; broader community impact; and considering the emergent future risks to a post-secondary institution.

- a. Maintain current Long Range Development Plans and Sector Plans to ensure they act as frameworks to support academic visions and student experiences.
- b. Demonstrate consistency in direction and decisions for campus planning that exemplifies best practices in smart growth, healthy community and sustainable and inclusive design.
- c. Create more innovative approaches to the development of flexible and adaptable space to meet changing needs of users.

02

The University's infrastructure meets end-users' space needs while enabling a positive experience.

Sound planning and implementation inspires excellence, contributes to a positive educational experience, overall productivity, researcher retention and satisfaction of end users. Aligning programming, planning and functional design principles within an academic and research delivery framework is crucial to the success of the user experience. Planning inputs and cycles consider functional elements spanning the institution, including: academic and research plans, facility imperatives such as maintenance and risk building profiles.

- a. Advance a consistent approach in optimizing space that aligns with space standards, and provides guidance on how space connects to the overall academic mission, contributes to the student experience, accessibility of key user groups and unit cost impacts.
- b. Collaborate with colleges and faculties to ensure infrastructure decisions are best able to reflect academic planning outcomes in priority areas.

03 Stakeholders are appropriately informed and engaged when there are significant changes to buildings and spaces.

Based on the resource allocations in the planning and programming phase, ensure that stakeholder engagement, principle-based outcomes and alignment to effective stewardship principles are effectively considered and executed. This will occur in a transparent and responsible manner. Excellence in planning and execution are the cornerstones to both asset management and optimal space utilization.

- a. Develop a consistent approach to communications and engagement prior to any significant change to infrastructure.
- b. Seek input from key stakeholders throughout key design implementation phases to ensure the multitude of institutional perspectives are acknowledged and decisions are founded in a common understanding of approved requirements, limitations and/or compromises.
- c. Ensure compliance to institutional design and space standards as defined in university policy.

Creating and Acquiring

04 Space aspirations are aligned within a framework of established criteria.

At any given time, students, faculty and staff will express a desire for new, expanded or repurposed space. These requests will increasingly undergo a multitude of assessments to understand need, evaluate if stated requirements fall within a framework of established criteria, and seek assurance from leaders of the relevance and value of desired space needs.

- a. Provide guidance and direction to academic and business entities regarding space needs and seek endorsement of appropriate levels of leadership.
- b. Include an evaluation framework, capital and operating budget analysis, operational impact assessment and consideration of alternatives in planning and design processes.
- c. Prioritize and validate projects requiring government financial support or involving additional funding partners.

Operating and Maintaining

05 Funding is strategically invested in maintenance programs and capital renewal efforts to better manage the university's deferred maintenance liability.

Operating and maintaining infrastructure can account for up to 90 per cent of the total cost of building ownership. As investments in university infrastructure provide incremental savings or instances of cost avoidance, those funds will be diverted to supporting other buildings. Members of the University of Alberta community individually and collectively contribute to how infrastructure is used and cared for.

- a. Enhance predictive and preventative maintenance programming to support improved efficiencies.
- b. Establish and share campus service standards and levels and actively manage and measure across all campuses.
- c. Develop marketing and awareness campaigns that emphasize the role each member of the university has in stewarding and maintaining its assets.
- d. Advance sustainable operations' practices to support sustainability and environmental targets.

Renewing or Disposing

06 The renewal, repurposing and end-stage of assets or their components will inform decisions as part of an integrated process.

Optimizing capital and other infrastructure investments to improve their use with centralized asset management and tracking is fundamental. This integrated process reduces excess inventory with a clear understanding of actual needs; enables better decisions in renewal, repurposing or replacement to avoid unnecessary expenditures; and facilitates the decommissioning and/or disposal of assets.

- a. Undergo a regular review of aligning all assets to the academic and research mission, considering prioritization criteria and guiding principles.
- b. Utilize financial, space and academic modeling as part of the analytic framework to support choices of which buildings will (or will not) undergo change.



07

A strong information and analytics platform supports evidence-based decision-making.

Robust, consistent and transparent decisions can only be made when the information upon which they are based is complete, accurate and integrated. In order to support improved management of infrastructure, potential investment decisions, or monitoring of performance against service levels, a strong data inventory and analytics framework is needed.

- a. Strengthen front line processes and information gathering to instill higher confidence in facilities data.
- b. Complete technology and business needs assessments to identify integrated solutions that support business requirements.
- c. Build predictive modeling of key assets that consider multiple factors to the longevity and operational costs of assets.

08

Enhanced monitoring and reporting of progress ensures transparency and accountability

This strategy provides a framework for the effective and efficient management of the institutions' assets. This is a living document which is relevant and integral to the daily asset management activities across the campuses.

- a. Refresh the strategy as necessary to reflect changing university imperatives.
- b. Conduct quality assurance audits to ensure the integrity and cost effectiveness of data collected.
- c. Use reporting mechanisms to report on progress and performance.



Infrastructure for Tomorrow

In many tangible ways, a university campus replicates a small city. In the case of the University of Alberta's North Campus, 160 buildings of varying use, age and complexity are connected by a network of streets, sidewalks and tunnels. While comprising fewer buildings, Augustana Campus, Campus Saint-Jean, Enterprise Square and South Campus also each form key elements of the university's rich infrastructure mosaic.

All decisions related to investing in campus infrastructure are naturally very long-term in nature and, in a world with limited resources, must be made prudently and with an eye clearly focused on the future. The future of world-class teaching and research. The future of memorable student experiences. A sustainable future.

Shape, A Strategic Plan of Impact, reminds us of the imperative for us to be at the forefront of educating a growing province in a university with global ambitions. Key to this is having and maintaining university infrastructure - classrooms, labs, libraries, study spaces and other spaces to enhance the student experience - that meet today's expectations without constraining tomorrow's ambitions. With the necessary support of willing partners, the University of Alberta's *Integrated Asset Management Strategy* will get us there.



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