



Improving Our World Through Science

UBC Science Strategic Plan 2021-2026



THE UNIVERSITY OF BRITISH COLUMBIA
Faculty of Science



We acknowledge that the UBC Point Grey campus is situated on the traditional, ancestral, and unceded territory of the xʷməθkʷəy̓əm (Musqueam).



Message from the Dean

On behalf of the Faculty of Science, I am excited to present our new five-year strategic plan: *Improving our World Through Science*. Developing this plan gave members of UBC Science and our stakeholders the opportunity to assess the state of the Faculty and to explore our shared aspirations. This has proven to be a timely undertaking. UBC Science is at an inflection point, with real opportunity to be seized. The discussions in formulating this plan were exceptionally rich, inclusive, and candid.

We have affirmed the centrality of our research and education missions in advancing science and emphasized our firm intention to build on these strengths. Our research accomplishments rest on the disciplinary expertise of our faculty, while reinforcing the importance of pursuing research with impact across fields. Enhancing and forming new relationships within UBC Science, across UBC, and beyond are top priorities.

Our research serves not only the advancement of knowledge, but also the needs of society. We will strive to bring science to public debate and policy making, as well as to foster broader understanding of scientific issues. The title of this plan reflects our intent to work for the public good, through our discoveries and inventions, and by educating the next generations of informed citizens.

We are committed to building on the transformation that evidence-based pedagogy has brought to science education at UBC and to supporting the growing cadre of educational leaders who will help us to develop improved ways to teach—and for our students to learn. Ensuring that learning is an equitable experience for our increasingly diverse student body will be a focus going forward. We seek to identify and overcome barriers that may differentially impact student success, while taking a holistic view of how best to equip and empower our learners.

This plan was developed at a truly anomalous time. Together with the rest of the world, UBC Science faced multiple crises in the past year: the COVID-19 pandemic, the intensifying impacts of climate change, and the imperative to provide social justice to those who have been denied it. We have a new sense of urgency, paired with a knowledge that fundamental science, particularly in the areas of data science and advanced modelling, environmental, biodiversity, and climate science, can help provide solutions, even in the short term.

Our faculty and staff express the need for a greater sense of belonging and common purpose within the Faculty. The challenges in carrying out our work in isolation over the past year have made us intensely aware of the importance of community, and of the strength that we take from being a part of UBC Science. Our people are the basis of all we achieve, and our satisfaction and performance depend critically on our collective wellbeing. Our plan accordingly introduces a social contract that defines our shared aims and interests, while stating our responsibilities to each other and to society.

The best way to prepare for an uncertain future is to be certain about what we hold most important and to have a clear vision of our goals. This plan provides that certainty and vision, while the strength and commitment of our people will ensure that we prevail in our mission.

I would like to thank our students, faculty, staff, alumni, stakeholders, and friends for their remarkable engagement and enthusiasm in shaping this plan, particularly under the constraints placed on us by COVID-19. I have been humbled by the confidence and resilience you have brought to defining our future, and by your steadfast determination that it be extraordinary.

Meigan Aronson, *Dean, Faculty of Science*



Context

Home to science at one of the world's top public universities, UBC Science brings together a community of students and scholars internationally recognized for their commitment to advancing human knowledge and understanding, through invention, discovery, learning, and innovation.

Initiated in 2011, our previous strategic plan (*Advancing Science*) guided the Faculty for a decade, with significant strides made during this period. Research funding grew gradually in a highly competitive landscape, with UBC Science strengthened by Canada Research, Canada 150, and President's Excellence chairs. The Faculty launched the Stewart Blusson Quantum Matter Institute, recognized globally for its research impact, the Data Science Institute to incubate and accelerate innovation and training, and the Institute for Oceans and Fisheries, a world-leading research group. Almost 100 new faculty members came to UBC Science between 2015 and 2020 through an ambitious hiring program, maintaining our faculty complement and renewing its strength and continuing promise. The renowned Carl Wieman Science Education Initiative (CWSEI) transformed undergraduate science education through the evidence-informed renewal of teaching methods reaching over 16,000 undergraduates each year. The 60 educational leadership faculty in UBC Science may

represent one of the largest groups of scholars in the world focused on science pedagogy and learning. The number of students concentrating in a Science program specialization increased by 31% from 2010 to 2020, notably through attracting international students, while total Science teaching increased by 38%. UBC Science also established itself as a leader in data-based approaches to understanding the impact of gender and race on faculty hiring and progression, with women faculty representation rising by five percentage points during the timeframe of Advancing Science.

These achievements reflect the foundational academic strengths of UBC Science. They demonstrate the capacity and commitment of our people. They also reinforce the advantages of place. As part of UBC, we can work with colleagues, leverage connections, and access facilities that are among the best in the world. Our location in the Pacific Northwest, with its associated opportunities for study and partnership, is a key factor in the success of UBC Science in environmental science, biological science, quantum matter and algorithms, computer science, and data science. Our external context is starkly different to that which prevailed ten years ago, as is the complexity of societal challenges. Most of these problems can only be addressed through an interdisciplinary perspective,

data analytics and collaboration. The convergence and escalation in 2020 of global crises in public health, the environment, and racism only reinforced this dynamic. The pandemic has severely tested and damaged public trust in science, fueled by misinformation and polarized national responses. Research is increasingly conducted at scale, learning technologies are increasingly pervasive and effective, students are increasingly demanding a distinctive, holistic experience, and universities are increasingly competing for faculty and staff talent. Moreover, educational institutions have a crucial responsibility to help advance Indigenous reconciliation and social justice.

The world is at an inflection point, as is the Faculty. Building from the strength of our community, expertise, and relative advantages, UBC Science is poised to play a key role in preparing students, attracting and developing scholars and leaders, and building knowledge to help understand and address the challenges of today and tomorrow.

A photograph of four students in a classroom setting. Three students (two boys and one girl) are gathered around a desk, looking at a computer monitor. A fourth student (a boy) is leaning over them, pointing at the screen. The desk is covered with various small images or cards. The background shows other desks and chairs in a typical classroom environment. A blue banner is overlaid on the top right of the image, containing the text 'Approach and Engagement'.

Approach and Engagement

Having not conducted a comprehensive strategic planning process for more than a decade, this effort provided a critical opportunity for dialogue, challenge, and learning. It also provided an opportunity to strengthen connections and alignment across UBC Science.

Launched through a retreat with heads and directors in 2019, this year-long exercise was punctuated by the onset of the pandemic, which accelerated pre-existing trends and shaped our process and perspectives. Out of respect for our colleagues and partners, we delayed much of our engagement until the late spring and fall. This allowed us to create a draft strategic framework before embarking on these conversations, which were richer and more productive as a result.

Our upfront research and analysis included a data-based assessment of Faculty strengths and weaknesses, undergraduate student workshops, and a survey completed by almost 300 faculty, staff, graduate students, and other research personnel, as well as close to 1,300 alumni.

Video technology enabled individual interactions, and we conducted in-depth interviews with over 30 internal and external stakeholders, including leaders of peer Faculties at UBC. We developed and shaped the draft framework through periodic discussions across the first half of 2020 with the Dean's Office and Faculty leadership.

As the immediate pressures of COVID-19 began to dissipate, we advanced the dialogue through well-attended town hall discussions and a highly informative survey completed by almost 1,400 undergraduate students.

This represented a response rate of 21% of second-, third-, and fourth-year students. Faculty and staff working groups were formed in the fall of 2020 to test and refine emerging draft objectives. Close to 50 colleagues contributed considerable time, expertise, and experience to this task, with their insights and input invaluable in shaping the plan. The revised framework was then shared and strengthened through a second set of student, faculty, and staff town halls, as well

as through meetings with emeriti, alumni, and many of the same stakeholders interviewed at the outset. The Dean's Advisory Committee provided important feedback throughout the process. A final session in early 2021 with heads and directors confirming their commitment rounded out the engagement.

The global health crisis encouraged wide-ranging debate about opportunities and priorities. The requirement for science to help address the immediate and complex challenges threatening our world is profound, from climate change to public health. Many voices and perspectives will be needed to find solutions. The potential of online learning to expand access is exciting. The use of technology to support engagement and recruitment is an important opportunity. Moreover, there is a need to consider the relative merits of new and more flexible ways of working to complement and extend our campus-based operating model. One of the most striking lessons was the powerful need of most of us to reconnect, in person, with each other and as a community.



Opportunity and Aspiration

Well-positioned as we are for future endeavours, some clear imperatives emerged from our planning. In addition to sustained attention to excellence in research and education, we must balance our academic endeavours with meaningful attention to people and engagement.

We were reminded through multiple discussions and inputs that our people are at the core of everything we do. Students, faculty, and staff make UBC Science what it is. But that human element is often compromised by the pressures and logistics of our daily lives, especially through the last year. We must invest in our community, our culture, and our relationships. We must actively create connections that span disciplines and departments. We must strive to rediscover our sense of wellbeing, balance, and choice in what we do and continue to operationalize our commitments to equity and inclusion and diversity. We must particularly seek to understand and support the voice of racialized and gender minorities and other equity-seeking groups. Each of us has a responsibility to uphold the values of UBC in all our interactions, and to work together to cultivate a UBC Science community that nurtures and sustains us professionally and personally.

Conversations through this process also reinforced the importance of externalization provincially, nationally, and globally. We are accountable to society as well as to the advancement of knowledge, and we must engage in science that is mindful of the public good. Our core strengths of invention and fundamental discovery often involve indefinite time scales, but they can also benefit society in the short term. Nurturing the value of science to society is an imperative, and we neglect it at our peril. To the extent that we become advocates for positive change, other opportunities for impact will follow based on this trust and visibility. This also has implications for how and what we teach and, importantly, how we engage with partners across British Columbia and around the world. We must actively support our learners and researchers in their external interactions —influencing the world around us, and reciprocally allowing the world to shape our work in turn. And we must specifically work together to build relationships with Indigenous people and communities so that we can better understand how we can support their voices through our work and how their ways of knowing and being enrich our teaching and research.

In addition to working more closely with our peer Faculties across UBC, there are important institutional plans and commitments with which our efforts must connect. Beyond the university's strategic plan (Shaping UBC's Next Century), these include UBC's Indigenous Strategic Plan, Inclusion Action Plan, and Wellbeing Strategic Framework, as well as the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) and the Truth and Reconciliation Commission (TRC) Calls to Action.

UBC Science is a decentralized Faculty, with academic units and faculty members accountable for research and teaching. Most students, scholars, and staff affiliate first with a department or other unit. The Dean's Office plays a key role in supporting these endeavours. The UBC Science working environment is collegial and dynamic, with mutual respect for the distributed model. As we enhance our focus on people and engagement, the Faculty has a heightened —and complementary— role to play in facilitating internal connections, coordinating external interfaces, and enhancing communication.

Vision and Mission

We have renewed our vision and mission to reflect our aspirations, reinforcing the central importance of research and education and highlighting amplified attention to the UBC Science community, teamwork, and externalization.

VISION

Improving our world through science

MISSION

Working together to advance scientific knowledge through research, education, and engagement

We also affirmed our foundational connections with the university's strategic plan through the values and themes that underpin *Shaping UBC's Next Century*. The UBC values of excellence, integrity, respect, academic freedom, and accountability were strongly endorsed through input and dialogue. These tenets underpin our new social contract, and we will work to ensure that they guide our decision-making and action, and characterize all our interactions, both internal and external.

The institution-wide themes of inclusion, collaboration and innovation were in no way imposed on the process. Instead, they emerged independently as critical success factors for UBC Science. We are united in our commitment to inclusion. While our plan highlights the importance of external engagement, we also aspire to collaborate more closely within the Faculty and across the university. Furthermore, innovation, both in what we do and how we do it, is a foundational component of UBC Science. These three themes are represented through most elements of our plan.

UBC Science Social Contract



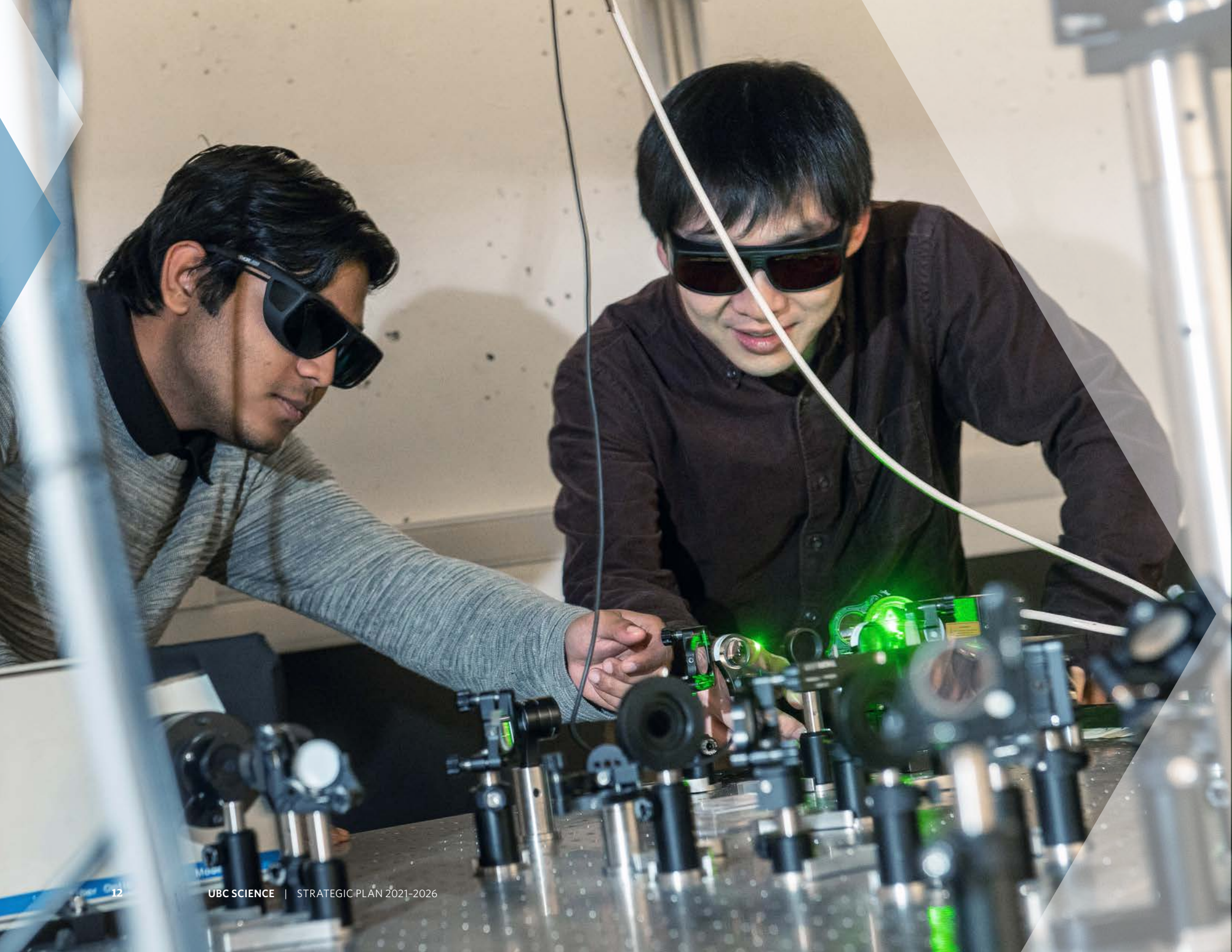
The concept of a pact emerged naturally through the planning dialogue, reflecting our collective sense of responsibility and optimism. These principles capture long-standing priorities to all of us in the Faculty, many of which are especially relevant at this inflection point. They contextualize the UBC values of excellence, integrity, respect, academic freedom, and accountability, as well as the university's commitment to building an engaged and inclusive community. They complement and reinforce the agency that is so vital to each of us in our service to science, and as citizens. They represent our responsibility to each other as members of UBC Science. They embody our responsibility to society, consistent with UBC's mandate as a public university. They signal what we believe matters for the future of our world.

We have common aims and interests.

1. Advancing scientific knowledge and its open and transparent dissemination
2. Working for the benefit of society
3. Teaching and mentoring the next generations of scientific leaders and informed citizens
4. Participating in public debate, decision-making and policy, and education on critical scientific issues
5. Being a community inclusive and respectful of all

We rely on each other.

1. The excellence and commitment of our people are foundational to what we achieve.
2. We must succeed both as individuals and as a community. Through collaboration and innovation, we bring a wide range of ideas and perspectives to the execution of our professional work.
3. We all share responsibility for the progression of our community and its aims. We recognize that we must each carry an equitable load, working to support our colleagues through our efforts, and expecting that they will, in turn, support us.
4. We seek to build meaningful, reciprocal partnerships with Indigenous peoples, especially those on whose territories we study and work throughout British Columbia.
5. We welcome and respect those who bring a breadth of approaches and contributions to the advancement of science and the wellbeing of our community.

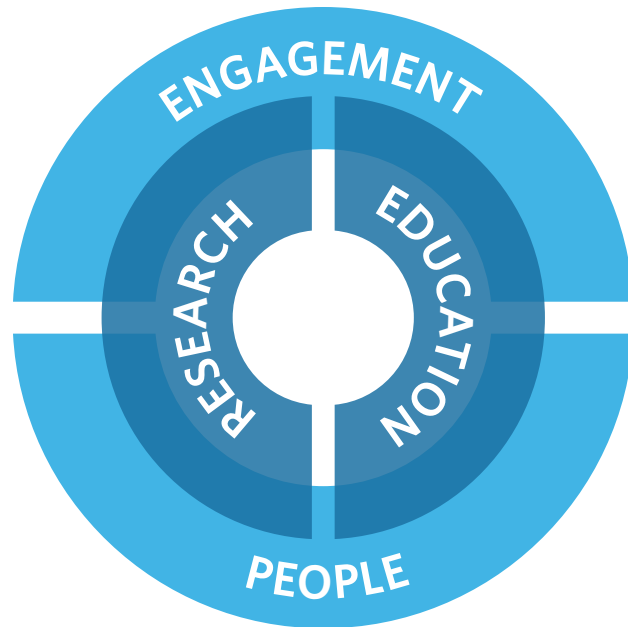


We have articulated the UBC Science plan around four core areas: people, research, education, and engagement. This framework helps ensure systematic attention to our community and relationship-building, in addition to continued academic development and renewal.

Core Areas and Objectives



We have articulated the UBC Science plan around four core areas: people, research, education, and engagement. Consistent with the university's plan, this framework helps ensure systematic attention to our community and relationship-building, in addition to continued academic development and renewal. These domains are interconnected and reinforcing, and the relationships and balance between them are important if UBC Science is to optimize its impact and cultivate an outstanding learning environment.



Our work will be underpinned by objectives that help us prioritize activity and allocate resources accordingly, and we will hold ourselves accountable to these goals.

People. We will work to further develop an inclusive and supportive community that embraces diversity, helping people build richer lives through meaningful connections within UBC Science and beyond.

Research. We will expand research excellence and impact across disciplines in the service of both society and fundamental science.

Education. We will promote and enable student success through leadership in pedagogy, inclusive education, and a holistic approach to student support.

Engagement. We will strengthen the external orientation and bilateral connections of UBC Science to enhance our public contributions and to enrich the learning of our scholars and students.

A photograph of two hikers standing on a rocky mountain ridge. The hiker on the left is wearing a green beanie, an orange vest, and black pants, looking towards the camera. The hiker on the right is wearing a brown hat, a red and black jacket, and grey pants, pointing towards the horizon. Both are carrying large backpacks. The background shows a vast, hazy landscape under a clear blue sky. A blue geometric overlay is on the right side of the image.

Our Strategies

In alignment with *Shaping UBC's Next Century*, our community has agreed upon and articulated strategies referencing the core areas and objectives. Each strategy is anchored in one area, but all have strong connections across the others, and we will ensure that these interdependencies are leveraged in implementation. Many of the strategies are related to broader efforts across the university, notably those focused on inclusion, interdisciplinary research, educational innovation, and Indigenous engagement. While most strategies build on activity that is underway, we are less advanced in some areas, where we will need to establish understanding, capacity, and momentum.

The following are the strategies that will guide UBC Science, creating an integrated framework for planning, action, and resource allocation. Consistent with our operating model, each will be advanced through a combination of Faculty initiatives and work that is driven by academic units or individual members of UBC Science. While these strategies reflect priorities that will likely prevail beyond the time frame of this plan, we commit collectively to meaningful progress in all areas over the next five years.

People

- Practices that create capacity for, and recognize, our core work: research, teaching, and engagement
- Attraction, development, and retention of promising and exceptional individuals
- Structures and approaches that foster community wellbeing and inclusion

Research

- Disciplinary expertise and interdisciplinary perspective
- Graduate student and trainee experience
- Support for research at all scales

Education

- Progression in the use of evidence-based approaches to teaching and learning
- Cultural competency, equity, diversity, and inclusion through curriculum and pedagogy
- Programming and mechanisms that reinforce a student-centred experience

Engagement

- Relationship-building to understand and incorporate Indigenous perspectives and practices
- Leadership in policy and public dialogue to further embed science in society
- Strategic outreach and partnerships



OUR STRATEGIES /

People

People are foundational to our success. Strategic recruitment will remain important, but our focus in this plan is on the growth and wellbeing of faculty and staff who constitute UBC Science today, as well as of the learners who have chosen and will choose the Faculty. While passionate about what they do, our people are stretched thin, and they do not consistently feel a strong sense of engagement or belonging. These sentiments pre-date the pandemic, but there is no doubt that they were exacerbated by the struggles and constraints of 2020. **Our objective in these strategies is to further develop an inclusive and supportive community that embraces diversity, helping people build richer lives through meaningful connections within UBC Science and beyond.**

Practices that create capacity for, and recognize, our core work: research, teaching, and engagement. It is imperative that we use our time differently and align incentives so we can engage most effectively in conducting and supporting research, teaching and engagement. We will better configure our administrative activities and governance processes. We will explore mechanisms that encourage a more explicit approach to prioritization, emphasizing work that advances our mission. We will support major research leadership roles and continue to promote educational leadership faculty to bolster teaching capacity and innovation. We will ensure that impact in both internal community-building and external service is recognized and valued. Together with colleagues across UBC, we will assess and adopt new ways of working, notably through improved use of technology.

Attraction, development, and retention of promising and exceptional individuals. We will more explicitly embed the principles of equity, diversity, and inclusion in our appointment and progression practices, with the aim of creating and sustaining a substantially more diverse Faculty. We will enhance our efforts to support members of the community at key career stages, establishing a Science-wide faculty mentorship program, expanding onboarding for new faculty and staff, and helping facilitate steady career progression. We will find new ways to support the ongoing development of our people and strengthen training to identify and invest in potential academic and administrative leaders. In addition to the benefits for individuals, these activities will have a tremendous positive impact on the culture and vibrancy of UBC Science, reinforcing our role as a place of learning and providing the consistency in experience that sustains students and trainees.

Structures and approaches that foster community wellbeing and inclusion. This strategy reflects our desire as human beings to feel supported and connected. Discussion throughout our planning process reinforced the need to strengthen relationships and equity within and across disciplines and roles. We must take an active and purposeful approach to addressing this challenge. Building on our foundational work in diversity, we will expand our understanding of the challenges facing women, racialized minorities, and other genders and equity-seeking groups, revising our practices where needed to support their voices. We will continue to improve the diversity of our leaders and refine our accounting for intersectional diversity. In conjunction with broader UBC efforts, we will expand wellbeing and social programming, and consider how physical space renewal can foster collegiality. We will resource key initiatives with cross-Faculty teams and create small groups (or “pods”) that bring together faculty, staff, trainees, and students in areas of shared professional or social interest. We will also work to centralize information to ensure transparency and access to opportunities for all members of the UBC Science community.



OUR STRATEGIES /

Research

As societal challenges become more complex and their effects more profound, our disciplinary research strength is more important than ever. Impact is predicated on invention and discovery, as we advance human knowledge. Departments remain responsible for the hiring priorities and other activities that ensure the vigour of our disciplinary foundations. But our collective capacity to bring our respective lenses to the study of these problems is also increasingly important, as are our connections with social science. Working together with our graduate students and trainees, and supported by outstanding facilities and technology, we aspire to understand and address the issues of our time through science. We will actively pursue research that addresses the needs of industry in British Columbia and helps equip the next generations of workers in the province.

Our objective in these strategies is to expand research excellence and impact across disciplines in the service of both society and fundamental science.

Disciplinary expertise and interdisciplinary perspectives.

Disciplinary strength is the bedrock of our research accomplishments, and we will continue to support departments in all they do to sustain these endeavours. At the same time, we value science that transcends disciplinary barriers. Whether carried out by individuals or teams, we will ensure that interdisciplinary research—within UBC Science and across UBC—complements departmental hiring, and that new resources are available for recruitment, through cluster hires and cross-appointments. We will extend seed funding for research collaborations, creating a bridge to external funding opportunities, and sponsor events to foster connections among researchers. We will work in coordination with UBC-wide efforts to reduce barriers to collaboration, including the promotion of more flexible and cross-department graduate student supervision and cross-appointments. We will also strengthen linkages with colleagues working in policy to help ensure that our research informs—and is informed by—public dialogue and decision-making.

Graduate student and trainee

experience. Our trainees are critical to the Faculty's research enterprise, and training the scientific leaders of tomorrow, be they undergraduate or graduate students, postdocs, or research associates, is central to our mission. Reversing gradual declines in recent years, we will increase the size of our graduate student body, as well as our capacity to include undergraduate students in our research teams. Improved access and diversity will be enabled by broadening and harmonizing admissions criteria and procedures. We will re-imagine the PhD experience, by expanding and enriching professional development opportunities, such as internships for graduate students, connections with alumni, and teaching opportunities for postdocs and research associates.

Robust support for research at all

scales. We must facilitate disciplinary and interdisciplinary research across the spectrum—from individual scholars to small collaborations to centres and institutes. We will develop relationships that will provide a broader base of support for research through external engagement, an important connection with our partnership and policy work. We will prioritize operational funding for current platforms, leverage shared facilities where appropriate, and continue to sponsor strategic research facilities and services at UBC. We will provide support for large-scale grant writing and management, investing also in exceptional instrumentation to sustain the growing scale and sophistication of our research. Where possible, we will renew key buildings and create new multi-purpose collaboration spaces, recognizing their importance in fostering the social and professional connections so vital to the advancement of science.



OUR STRATEGIES /

Education

Our excellence in teaching and pedagogy is a key reason that UBC Science attracts top students from around the world. Powered by our faculty and by the Science Centre for Teaching and Learning (Skylight), we have made Faculty and institution-wide improvements in teaching and learning. These have helped position UBC as a leader among North American research universities in the transformation of science education. In addition to sustained renewal in curriculum, pedagogy, and program structures, we must focus on holistic student development, with special attention to wellbeing, community, and experience. **Our objective in these strategies is to promote and enable student success through leadership in pedagogy, inclusive education, and a holistic approach to student support.**

Progression in the use of evidence-based approaches to teaching and learning.

This strategy is foundational to the sustained excellence of a UBC Science education. We will support and extend evidence-based pedagogical and curricular innovation. We will strengthen procedures for cross-pollination and mentorship of educational leadership activities across the Faculty. We will create additional co-op and other experiential learning opportunities that help undergraduate students connect with alumni, industry, and the community. In alignment with broader UBC efforts, we will grow our capacity for undergraduate student research. These experiences are an invaluable complement and enrichment to classroom-based study. Recognizing the pressures facing all our students, we will enhance undergraduate and graduate advising, development, and support services, including in mental health.

Cultural competency, equity, diversity, and inclusion through curriculum and pedagogy.

There is broad interest in the Faculty taking a purposeful and considered approach that reflects these tenets throughout our teaching and learning. We must together infuse the principles of equity, diversity, and inclusion into our content, pedagogy, and faculty culture across both undergraduate and graduate programs. We must also align our efforts with those across UBC to broaden the diversity of our student body, as well as their teachers. We will work to map the connections between student success and diversity, as data become available. Ongoing curriculum renewal will reflect Indigenous Ways of Knowing and cultural competencies, while faculty training will extend to inclusive teaching and student wellbeing. We will sponsor student-led groups for those underrepresented in science, while also enhancing advising, recruitment and admissions to support these student populations.

Programming and mechanisms that reinforce a student-centred experience.

We know that student success is predicated on wellbeing and personal growth, and we must create an environment in which all students can thrive and connect. Our work in this strategy aligns with efforts across UBC supporting student mental health, retention, and preparation. We will expand the availability of seats for undergraduate students, especially in required and popular courses. We will develop ways for students to explore opportunities across disciplines and improve their access to courses and specializations. We will expand first-year programming to help students form relationships and chart their pathways through UBC. Knowing that problem solving, communication, data science, and computation are integral to success in our fast-changing world, we will create expanded opportunities for students to develop transferable skills and recognize those competencies academically. We will assess the merits of providing new credentials that reflect the changing needs of students and industry, including professional master's degrees and "3+2" programs that combine undergraduate and graduate study at an accelerated pace.



OUR STRATEGIES /

Engagement

One of the greatest differences between this and previous UBC Science plans is the extent to which we recognize the importance of public service and external engagement. In part, this reflects the divides highlighted by the pandemic, but it more generally reflects our shared conviction that we can and must do more to connect our academic endeavours with the world around us. We have a significant opportunity to amplify the impact of existing external activities through greater coordination, as well as to shift our attention towards policy and strategic partnership. We must nurture relationships with Indigenous peoples to help us understand and together advance opportunities for collaboration. To ensure focus and academic alignment in our policy and partnership work, both of which represent strategic growth opportunities, we will establish a new Faculty leadership position. **Our objective in these strategies is to strengthen the external orientation and bilateral connections of UBC Science to enhance our public contributions and to enrich the learning of our scholars and students.**

Relationship-building to understand and incorporate Indigenous perspectives and practices.

The Indigenous Strategic Plan sets out goals and actions to advance UBC's vision of becoming a leading university globally in the implementation of Indigenous peoples' human rights. UBC Science commits to Indigenous engagement to help build understanding, promote Indigenous voices, and determine how best to work together. Guided by the framework of the Indigenous Strategic Plan, we will strive to listen and to learn, creating channels for dialogue with Indigenous communities. We will work to bolster recruitment, mentorship, and support of Indigenous scholars, staff, and students. We will seek to establish and sustain active research partnerships with Indigenous communities. And we will foster discussion and learning throughout UBC Science, forming a representative committee to guide this fundamental work.

Leadership in public dialogue and policy to further embed science in society.

We will strive to promote faculty and alumni participation at public events, educating citizens on scientific issues and learning about societal concerns. UBC Science attractions provide valuable opportunities for engagement: the Beaty Biodiversity Museum, Pacific Museum of Earth, and the UBC Botanical and Nitobe Memorial gardens. We will work to develop stronger connections between our researchers and government, enhancing our capacity to shape policy. This includes initiating and facilitating multi-stakeholder dialogue in key topics. We will provide training and support for interested faculty, staff, and students in public engagement, which is a core competency in today's world. We will explore opportunities to expand our channels for public education. Underlying this important work will be appropriate and coordinated resourcing in communications, government relations, and development. We will highlight and put mechanisms in place to sustain the synergies between this strategy and our research.

Strategic outreach and partnerships.

There are countless linkages between individual faculty members and departments and external organizations and initiatives, provincially and beyond. Our task is to stimulate, connect, and target these efforts, so they most effectively reflect our research and education priorities, enriching the experience of all those involved. We will centralize support and information to help coordinate relationship management across UBC Science. We will work actively with our alumni network to identify opportunities for partnership and to initiate and sustain these ventures. More broadly, we will improve coordination across our extensive outreach activities with children and schools ("K-12"), including those aspects that reinforce recruitment pipeline development for UBC Science.



We have a significant opportunity to amplify the impact of existing external activities through greater coordination, as well as to shift our attention towards policy and strategic partnership. We must nurture relationships with Indigenous peoples to help us understand and together advance opportunities for collaboration.





Accountability and Implementation

Re-shaped and extended by the pandemic, the planning process created time for learning, reflection, and engagement. Our collective commitment to the plan is stronger as a result. Consistent with the principles that have guided our work to date, we will take a data-based, systematic, and collaborative approach to implementation. The UBC Science plan also provides an important framework and reference point for academic unit planning.

We will adopt a deliberate and integrated approach to program management. Guided by our objectives and strategies, we will together identify actions, responsibilities, and milestones annually, and we will track and report our progress accordingly.

We will also establish a dashboard of indicators to promote and enable accountability. These measures will derive from our objectives and strategies, with most spanning more than one. Indicative areas of attention are outlined below, although specific metrics are yet to be confirmed. Some of these measures will be objective, and others subjective. And in some cases, new tracking methodologies may be required.

Indicative Strategic Measures

1. Student, faculty, and staff sense of belonging and wellbeing
2. Intersectional diversity
3. Indigenous student, faculty, and staff representation
4. Student, faculty, and staff retention
5. Research quality, funding, and trainee placements
6. Grant funding for collaborative research and centres
7. Evidence of curricular and pedagogical innovation
8. Student learning outcomes and reporting of broader competency development
9. Proportion of undergraduate students with research or other experiential learning
10. Number of undergraduate students, graduate students, and postdoctoral fellows trained
11. Job placement rates post graduation, by sector (industry, government, academia)
12. Number of undergraduate students pursuing graduate or professional degrees
13. Course waitlists and time to degree
14. Collaborations and agreements with industrial partners
15. Level of student, faculty, and staff service in external initiatives
16. Level of student, faculty, and staff engagement in bilateral relationships with Indigenous people
17. Extent of alumni and external partner engagement
18. Participation in outreach
19. Level and nature of public attention
20. Global rankings

Perhaps most importantly, we will continue to emphasize communication and engagement, building on the foundation established through the planning phase. Whether through regular updates, forums for debate around options and priorities, or broader Faculty discussion, we are committed to sustaining the spirit of collaboration that has characterized and enriched the development of this plan.

“While we recognize that there is a lot of work ahead of us, we are aligned in purpose and inspired by the opportunity. Working together—with our colleagues and partners—we will advance our vision of improving our world through science.”

science.ubc.ca/about/plan





UBC Science