


Transforming Tomorrow



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This plan serves as a guiding document for the Faculty's departments and schools as they develop their own strategic plans and initiatives. The priorities and strategies in the plan form a framework for decision-making and investment across the Faculty.

DEAN'S MESSAGE

When the Faculty of Applied Science embarked on our comprehensive strategic planning process in 2019, we knew we were living at a time of rapid change. With advances in technology, shifting global economies, technical-social disruptions and planetary environmental crises, our future was far from certain.

While we certainly did not anticipate anything as urgent and difficult as COVID-19 when we began our process, we are confident this plan will position our Faculty to remain strong and resilient as we join the response to the global pandemic. From the start, our planning process has been outward looking. We held engagement sessions to explore the trends and drivers shaping our institution and the world, and to imagine a set of possible futures. Our goal was to expand creative and critical thinking and mitigate against uncertainty by bringing our community of students, staff, faculty, alumni and partners together around a common vision.

Together we identified priority areas where our Faculty excels, and where we can be stronger. We defined strategies that will advance our work so we can respond to the needs before us to benefit our future society. I was privileged to be able to participate in many of these sessions, and learned from the expertise of our community at each one.

This process led us to a vision of a prosperous, healthy, inclusive and equitable world where we meet the needs of individuals, communities, cities and planet—and address crises like COVID-19 head-on. Our aim is to elevate ourselves so we can make urgent contributions to society across six priority areas: university of the future, future of work, inclusive leadership & respectful engagement, solutions for people, thriving cities & communities, and planetary health.

Our aim is to elevate ourselves so we can make urgent contributions to society across six priority areas.

Our commitments reflect a community of people biased toward action: to lead by example, to embrace ambiguity, to act with intention, to accelerate solutions, and to increase impact. These commitments coupled to our core values provide the framework needed to ask questions that lead to action-based strategies to effect change. It is no longer enough simply to study the problems; our Faculty must act now.

There has never been a more urgent time for our professions – as planners, architects, nurses and engineers – to come together to build upon our existing strengths and ambitions to ensure a thriving society, to make real impact locally and globally. This strategy provides a clear vision of who we are, what we must become, and what we must do to transform tomorrow.



JAMES OLSON,
DEAN, FACULTY OF APPLIED SCIENCE, UBC

WHO WE ARE

The Faculty of Applied Science is made up of the School of Architecture and Landscape Architecture, School of Community and Regional Planning, School of Nursing, six Engineering departments, School of Biomedical Engineering at the Vancouver Campus, and the School of Engineering at the Okanagan campus.

We comprise a unique constellation of disciplines. Our core purpose is to discover, design, and innovate, provide unwavering top-tier education, and champion a community of responsible professionals devoted to serving a thriving, sustainable and healthy society.

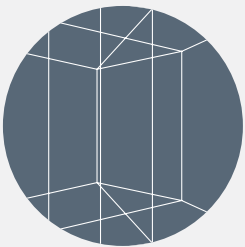
Our work and the professional disciplines we represent span the entire human-centred built environment. We represent innovation at all scales from nanoscale electronic devices that power communications to the design of entire cities.

Our core purpose is to discover, design, and innovate, provide unwavering top-tier education and champion a community of responsible professionals.

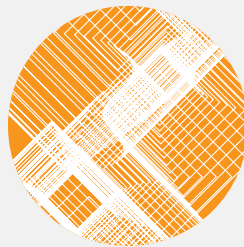


Our Faculty is committed to creating lasting change by discovering and applying knowledge. We uniquely embody responsible risk-taking and an innovative spirit, and our work reflects an authentic environmental ethos that arises from our commitment to, and respect for, our exceptional environment. We leverage our multidisciplinary strength and small-community approach to address society's most complex challenges. The location of our campuses in Vancouver and Kelowna allows us to leverage a diverse and inclusive international culture while respecting the rich Indigenous heritage in British Columbia.

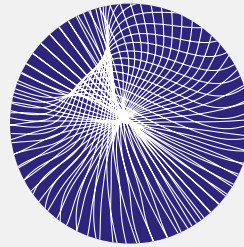
Our disciplines



SCHOOL OF ARCHITECTURE
& LANDSCAPE ARCHITECTURE
(SALA)



SCHOOL OF COMMUNITY
& REGIONAL PLANNING
(SCARP)



SCHOOL OF NURSING



ENGINEERING

THE PLAN

From the beginning we set out to develop a plan that leverages our Faculty's unique strengths and diversity of disciplines; embeds an external focus on the social, economic, and environmental demands of society; builds our community around a common vision; and elevates us to enable greater contribution to society.

We expanded beyond a traditional planning process. As noted in the Acknowledgments section (Page 30), we drew on the leadership of individuals across the UBC Applied Science community. They helped us design and undertake a comprehensive engagement process aimed at identifying not only who we are but who we need to be, and uniting our community around a common vision of what we want to achieve and how we can realize our vision.

This unique outward-focused process included five distinct phases:



Phase 1—Process development:

Senior members of the Dean’s External Advisory Committee worked with a small group of staff and faculty to develop the processes for engagement, analysis, implementation and communication. This Process Development Working Group also conducted a comprehensive environmental scan of socioeconomic data, peer institutional strategies, and student outcomes and ambitions.



Phase 2—Community engagement:

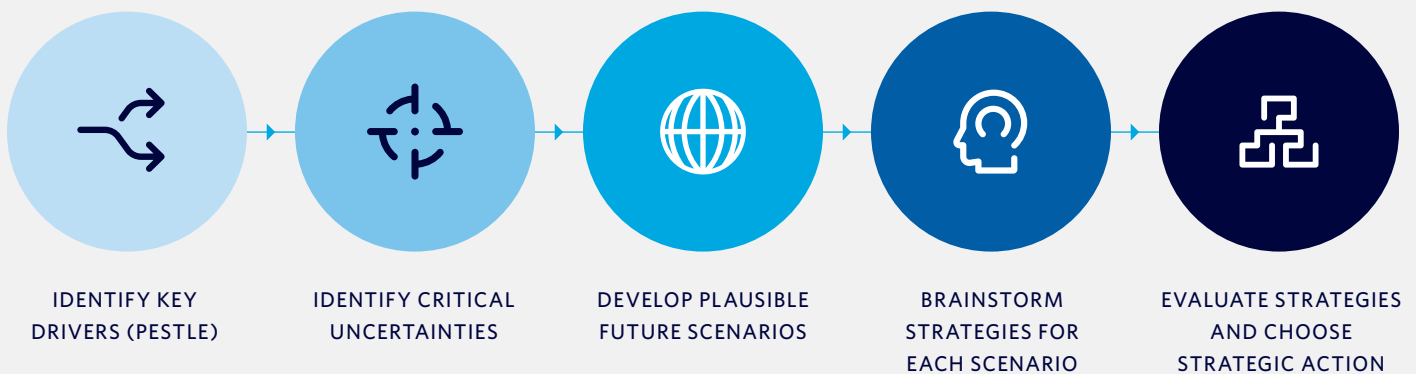
We invited participants from across the Faculty to come together to imagine the future using a scenario planning process. The 20 unique engagement workshops were facilitated by a Strategic Planning Steering Committee, which was designed to serve as a reflection of the diversity of our disciplines and roles. Members included graduate and undergraduate students, senior and pre-tenured faculty, department heads and school directors, and senior administrative staff from within the 11 units of our Faculty across both campuses.

Using scenario planning ensured an outward and future-focused perspective while maximizing the creativity and imagination of participants.

This community engagement helped us:

- Understand the external drivers of change which will affect our Faculty.
- Develop visions of potential futures of society and consider the role of the university in those worlds.
- Explore potential strategies which would enable the Faculty and university to be successful in the uncertain future.

The scenario planning process



THE PLAN

Phase 3—Key elements:

The Strategic Planning Steering Committee synthesized the data and concepts identified through the engagement sessions to develop the key components within the strategic plan, and tested those components with feedback from a Leadership Review Team, made up of the Dean, Associate Deans, Department Heads and School Directors and the Dean's Office Directors. The Steering Committee and Leadership Review Team worked together in a series of workshops to define the Faculty's vision, mission, values, commitments and priority areas.

Phase 4—Strategies:

Priority Area Leads (Associate Deans and Dean's Office Staff Leads) developed strategies within each priority area, and conducted a series of community consultations for each. Strategies were developed by asking what actions—identified by our commitments—do we take in each priority area to make an impact and realize success.

Phase 5—Future-proof:

The Dean and Staff Leads formed an Analysis Team that strength-tested the strategic plan against uncertain futures. They looked to the most uncertain and most impactful drivers identified through the 20 engagement sessions to inform the development of four potential futures. Each future tests the strategies in our plan and identifies gaps or other mitigating actions to ensure a resilient, adaptable strategic plan.

Engagement summary

—

24

KEY DRIVERS WHICH WILL SHAPE THE FUTURE STEMMED FROM 1000+ POLITICAL, ECONOMIC, SOCIAL, TECHNOLOGICAL, LEGAL AND ENVIRONMENTAL (PESTLE) DRIVERS

—

6

PRIORITY AREAS OF FOCUS FOR OUR FACULTY IDENTIFIED FROM 24 KEY DRIVERS

—

4

POTENTIAL WORLDS FOR THE FUTURE REFINED FROM 71 DISTINCT WORLDS IMAGINED

—

17

STRATEGIES FOR SUCCESS DISTILLED FROM 700+ STRATEGIC CONCEPTS CONSIDERED



DRIVER'S OF CHANGE

In Phase 2 of the planning process, we identified the drivers of change that we must respond to over the next decade. These drivers are categorized by their degree of certainty.

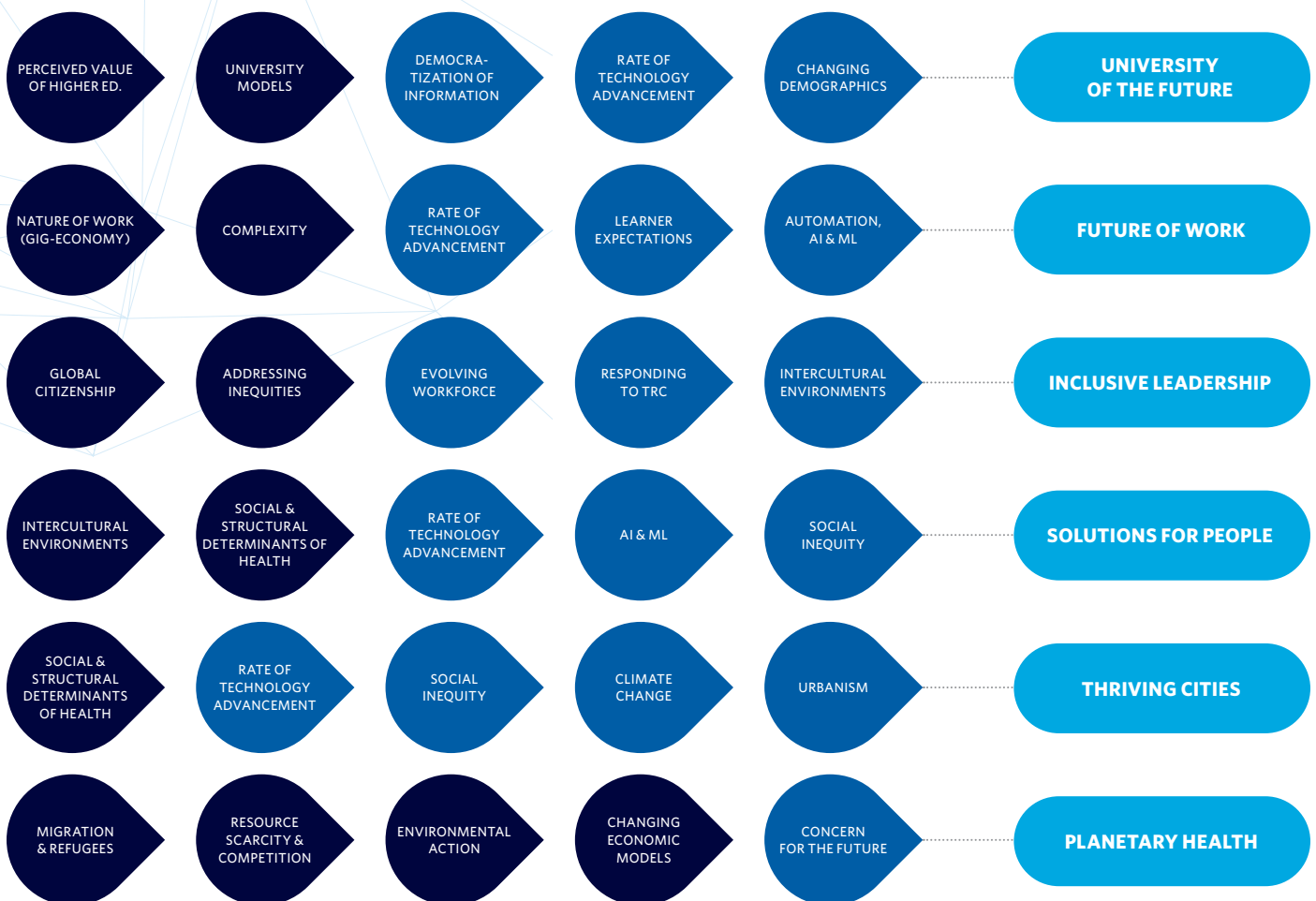
The identified drivers from our 20 engagement sessions were simplified and prioritized by the Steering Committee who ultimately used them to develop the six priority areas.

1. Trend drivers have medium-high impact and high certainty, and we know that we must start to take action immediately.
2. Uncertain drivers have high impact and low certainty with the potential to dramatically affect our core operations, and we need to build contingency plans for them now.

DRIVER'S OF A CHANGING WORLD

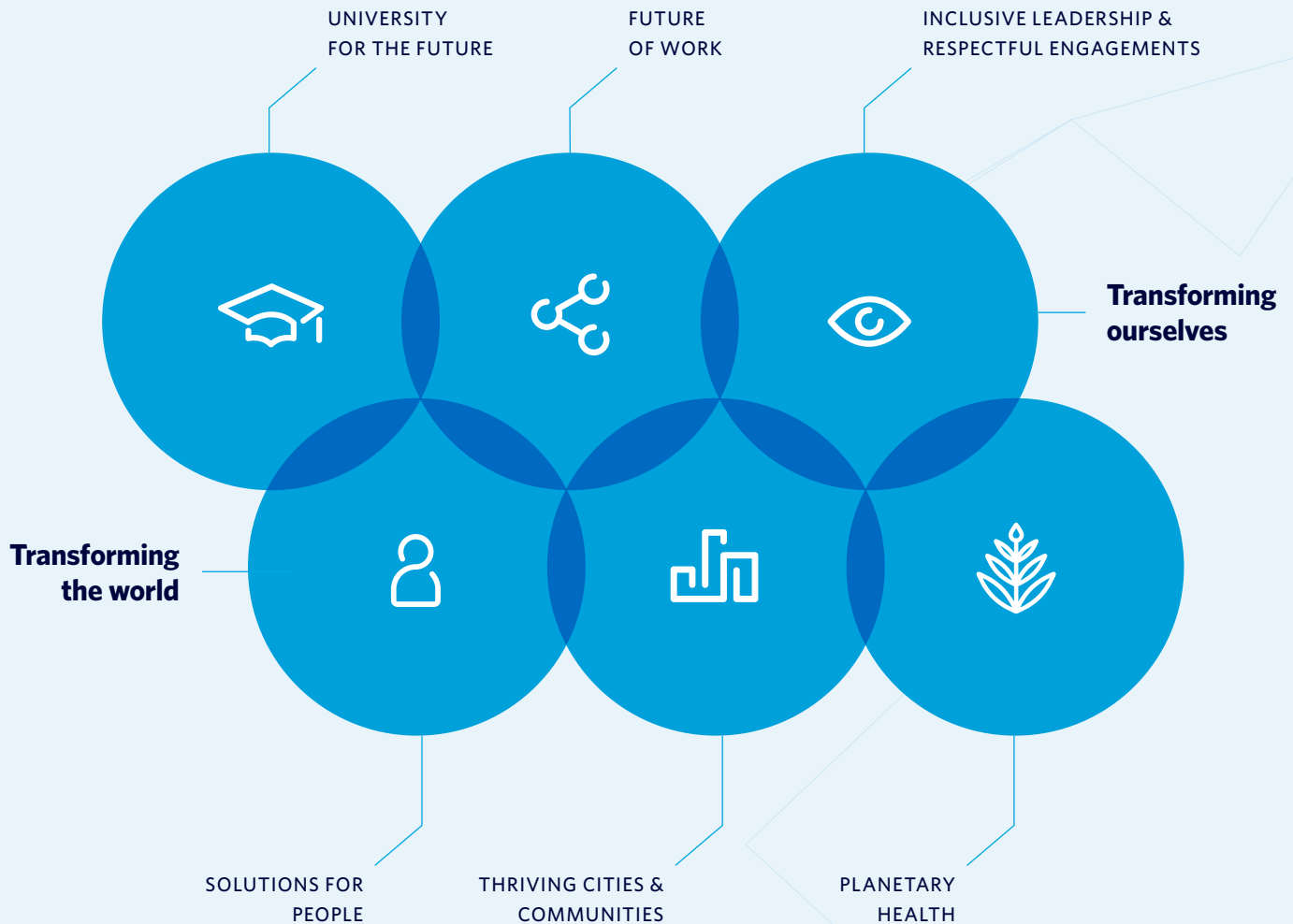
TRENDS & UNCERTAINTIES

PRIORITIES



OUR PRIORITIES

The six priority areas which emerged from the identified drivers of change directly align with our Faculty's vision and mission. The first three describe how we achieve our mission: how we design the university as the bedrock for continuous innovation, prepare society and our professions for an evolving workplace, and educate future societal professional leaders. The last three directly support our vision of thriving people, places and planet.



How will the Faculty of Applied Science address these diverse priorities?



University for the future

Demonstrating innovation throughout the institution from new pedagogical approaches, to administrative processes, to providing lifelong value to students, alumni, faculty and staff.



Future of work

Equipping students, staff and faculty with the skills to thrive in a rapidly changing professional landscape.



Inclusive leadership and respectful engagement

Fostering the future's inclusive leaders and cultivating a culture grounded in respect, understanding, humility, wellness, balance and joy.



Solutions for people

Developing the health, technology and equity solutions that serve our communities and the individuals within them.



Thriving cities and communities

Improving how we move, work and connect to create healthier, safer and more productive communities.



Planetary health

Spearheading efforts to accelerate global environmental action.

MISSION

We shape the leaders and professionals that shape the world.

WE DO THIS BY:
CREATING THE LEADERS FOR TOMORROW

IMPACTING OUR PROFESSIONS THROUGH OUR RESEARCH AND PRACTICE



VISION

Thriving people, places and planet.

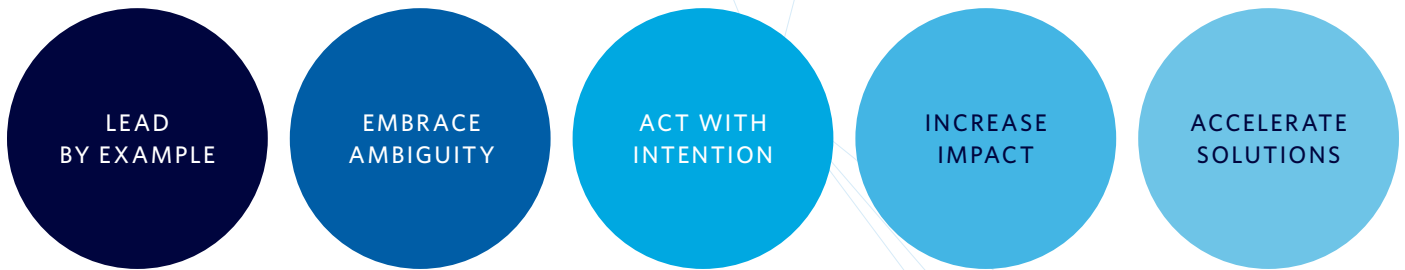
THRIVING REFLECTS:
SOCIAL EQUITY AND WELL-BEING
PHYSICAL AND MENTAL HEALTH

SUSTAINABLE AND DIVERSE ENVIRONMENT



OUR COMMITMENTS & VALUES

As professionals in service to society, we are committed to action that will affect urgent and meaningful transformation in each of our identified priority areas.



We are committed to **lead by example** in our actions as individuals and through our policies and processes as an institution. We will embody the qualities of a 21st Century University as a leading example of the professional education, research and practice to ensure our Faculty advances global actions.

We will **embrace ambiguity** in our own technologically evolving workplace and enable work readiness in rapidly evolving social and economic environments through a honed repertoire of technical, creative, critical thinking, leadership, digital collaboration and intercultural skills.

We will **act with intention** to develop the leaders of tomorrow that demonstrate intentional and consistent action to foster a culture grounded in inclusion and respectful engagement.

We will **increase impact** of our research, education and community engagement; to work closely with partners to ensure healthy, productive, safe, inclusive and sustainable lives, cities and communities both locally and globally.

We will develop and implement real-world environmental and economically sustainable innovations and **accelerate solutions** that support planetary health, future cities and healthy productive communities.

VALUES

Our core values have helped us to identify and prioritize the elements and strategies within our plan:

INTEGRITY

WE ARE TRUSTED PROFESSIONALS.

ADVENTURE

WE ARE BOLD, CONFIDENT & COURAGEOUS.

AGILITY

WE ARE RAPID, RESPONSIVE & RESILIENT.

CREATIVITY

WE ARE IMPACTFUL INNOVATORS.

TOGETHER

WE ARE DIVERSE, INTERDISCIPLINARY COLLABORATORS.

OUR STRATEGIES

Priorities and commitments form a framework to establish strategies for success. Strategies were determined by asking: “How do we meet our commitments in each priority?”

FOR EXAMPLE, WE ASK:

“How do we Lead by Example in Planetary Health?”
“How do we Act with Intention as the University for the Future?”

In the end, many of these strategies impact multiple priorities, but may differ in the context in which they are implemented.

The strategies developed through this framework are:

Digital collaboration

Leverage the globally connected and technological nature of work.

Lifelong value

Create lifelong value across the career continuum.

Leading-edge teaching

Demonstrate and promote leading-edge curricula and teaching practice.

Integrated disciplines

Amplify the synergies across our disciplines.

Innovative spirit

Create time and space for innovation.

Truth & reconciliation

Demonstrate an authentic commitment to Truth and Reconciliation and recognize the value of traditional ways of knowing.

Inclusive respectful leaders

Build the wide-ranging competencies required to be inclusive leaders and create spaces for respectful engagement.

Advance diversity

Ensure the composition and leadership structures of the Faculty reflects the diversity of the communities we serve.

Entrepreneurial thinking

Nurture the entrepreneurial mindset and venture creation to support innovative and transformational solutions.

Impactful research

Advance disciplinary knowledge and the translation of research and innovation for societal impact.

Complex challenges

Tackle complex local and global challenges with an interdisciplinary and systems-based approach.

Strategic partnership

Collaborate with purpose in strategic, long-term partnerships.

Promote agency

Promote advocacy and agency to effect change in partnership with local and global communities.

Community solutions

Strengthen the Faculty's testbed approach for developing campus, city and community solutions.

Environmental action

Support leadership in environmental sustainability, climate and planetary health.



University for the future

Our core mission to inspire learning, lead research and develop tomorrow's citizens will not change. What will change is how we achieve this mission.

The future requires critical thinkers who can examine a problem from all sides and draw on a well-rounded education in terms of ethics, design, technical and social elements.

We are creating professional leaders who can solve complex, wide-ranging challenges; drive economic development locally and nationally; positively impact society, and yield tremendous global impact.

Our Faculty defines and embodies the University for the Future throughout its core mission of research, education and community engagement. We are keeping pace with the evolution of disciplines and professions resulting from technology and globalization, as well as the changing expectations around access to knowledge and how it is delivered. Flexible learning options across multiple scales of credentials shape our programs and student experiences to ensure that British Columbia and Canada have the talent, the expertise and the ability to grow and create the jobs of the future.

We are developing and delivering *Leading-Edge Teaching (#1)*, including advanced curricula, digital technology and teaching methodology. We are ensuring students have *Digital Collaboration (#3)* and intercultural fluency skills to work across local and global teams. We inspire *Entrepreneurial Thinking (#11)* in our students, staff and faculty to build the competencies that drive innovative organizational change, social innovation and new ventures leading to economic prosperity and future jobs.



Grades alone don't tell you the full potential of a learner. If we want our students to reflect the population we serve, we may have to change the way we evaluate people.

EQUITY, DIVERSITY & INCLUSIVITY
AND INDIGENOUS ENGAGEMENT COMMITTEES



EXAMPLE 1

Taking the lab to the streets

Mechanical Engineering assistant professor and Canada Research Chair in Sustainability, Dr. Naomi Zimmerman, supports better environmental planning by quantifying the impact of connected vehicles, solar microgrids and forest management approaches on air and climate. Her interdisciplinary team conducts their research using advanced instrumentation in a mobile laboratory so they can run experiments anywhere a van can go.

Our students and researchers use a cross-discipline approach to address local and global *Complex Challenges (#13)* across society, health and the environment. We are developing new programs that *Integrate Disciplines (#2)* to bring together teams of students and researchers and support them in applying a systems approach to design thinking to find solutions to our world's greatest challenges. We are invested in providing the competencies and spaces to build and mentor *Inclusive Respectful Leaders (#9)* who understand the importance of *Truth & Reconciliation (#8)* and a balanced *Work-Life Culture (#5)*.

We create *Lifelong Value (#4)* for students, staff, faculty and alumni through continuous education and by providing expertise, mentorship opportunities and specialized infrastructure for a community that is generational.



Knowledge is not just about transferring facts from the teacher to the learner but also about the connection, relationship and process by which the information is shared.

FACULTY MEMBER, SCHOOL OF ENGINEERING, OKANAGAN

PRIORITIES IN DEPTH

Future of work

The nature of work is changing as new models such as gig and informal economies emerge, and there is a shift to a more data driven, digitally collaborative, global society. Many of today's jobs did not exist 10 years ago, and we do not know for certain what the workforce will look like 10 years from now.

We do know there will continue to be high demand for nurses, engineers, architects and planners, and we also know the technology we use, our job expectations, and how we work together will be drastically different.

We ensure graduates are able to work across industries and provide an interdisciplinary perspective to **Complex Challenges (#13)**. We enable our staff and faculty to adjust to the dynamic nature of the future of work, and prepare for it by defining new areas of research and innovation. We have set our sights on developing and adapting our own internal agile and streamlined workflows to build an outstanding **Work-Life Culture (#5)**.

Since the future will bring unknown shifts in work, we are equipping students with technical, creative, design-thinking, **Digital Collaboration (#3)** and intercultural skills to succeed in rapidly evolving social and economic environments. We provide them



Design thinking should become a core competency so our graduates have the ability to pivot, change disciplines and explore other careers which value this approach.

FACULTY MEMBER,
SCHOOL OF ARCHITECTURE & LANDSCAPE ARCHITECTURE

with outstanding **Experiential Learning (#6)** opportunities to hone their professional and social skills, and inspire **Entrepreneurial Thinking (#11)** so they have the leadership skills, confidence and resilience to succeed. As automation continues to increase, students will need to demonstrate **Inclusive Respectful Leadership (#9)** abilities such as communication, critical thinking, creativity and emotional intelligence. Within Canada, 2.4 million jobs will be created over the next four years that require this new mix of skills.

We are helping students and faculty keep up with the rapidly changing work environment through **Lifelong Value (#4)**, offering continued professional development, learning, mentorship, professional networks and a sense of community.



EXAMPLE 2



Empowering entrepreneurs from start to finish

The HATCH Accelerator program, started by APSC faculty members, helps promising ventures identify and secure their first major customers, pilots, and partnerships; perfect their business model; build their team and culture; recruit their board of directors; and fundraise and complete the due-diligence process.

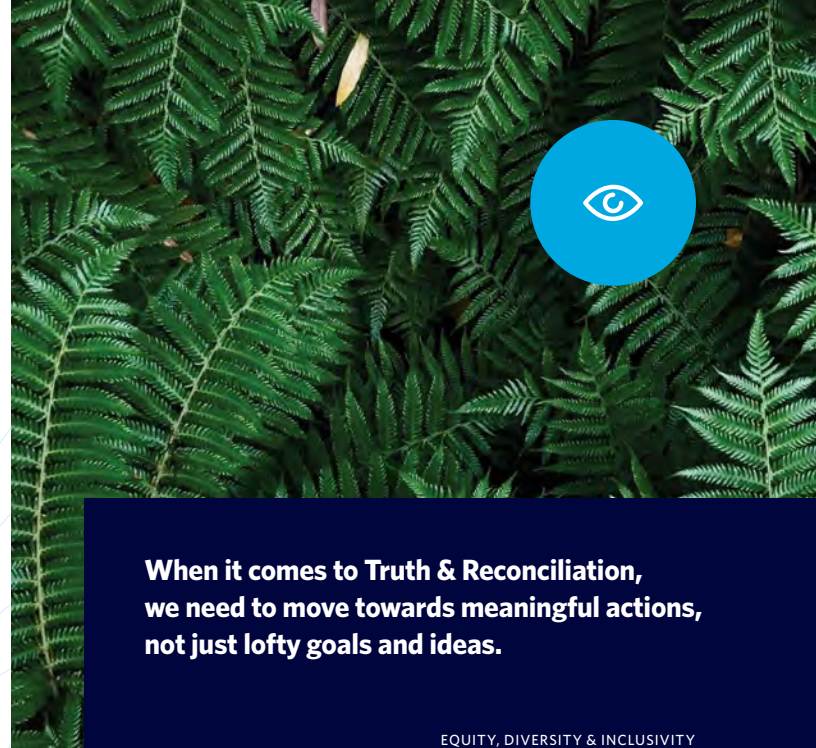
PRIORITIES IN DEPTH

Inclusive leadership and respectful engagement

We are committed to UBC's vision of "a community in which human rights are respected, and equity and inclusion are embedded in all areas of academic, work and campus life."

The University's two main campuses are located on the traditional, ancestral and unceded territories of the xwmə0-kwəy'əm (Musqueam) and Syilx (Okanagan) peoples. It is our responsibility to demonstrate an authentic commitment to advance *Truth & Reconciliation (#8)* and to recognize the intrinsic value of traditional knowledge in academia and beyond. The world needs leaders with strong human skills to lead the diverse and global teams, and to tackle the challenges before us. We are committed to building the competencies required to be *Inclusive Respectful Leaders (#9)* and cultivating a *Work-Life Culture (#5)* grounded in respect, understanding, humility, wellness, balance and joy. These commitments are of high priority every day, though they are especially important during times of great challenge.

We continue to *Advance Diversity (#10)* by ensuring the Faculty's composition and leadership structures reflect the diversity of the communities we serve. Our students, faculty, staff and leadership must reflect the changing demographics and increasing multiculturalism in our communities. To achieve this, we are investing in *Leading-Edge Teaching (#1)* through



When it comes to Truth & Reconciliation, we need to move towards meaningful actions, not just lofty goals and ideas.

EQUITY, DIVERSITY & INCLUSIVITY
AND INDIGENOUS ENGAGEMENT COMMITTEES

decolonizing and embedding equity, diversity and inclusivity principles throughout curriculum, and by developing *Strategic Partnerships (#14)* to help us reduce and eliminate barriers.

Our disciplines equip us with a greater understanding of the inequities in society and the expertise to address them. We *Promote Agency (#15)* to effect change with local and global communities through our advocacy. In just one example, experts in our Faculty's School of Nursing are studying how to best deliver services to highly isolated and vulnerable women in Vancouver's Downtown Eastside.

EXAMPLE 3



Training the next generation of community planners

Dr. Leonie Sandercock, School of Community and Regional Planning, co-created the Indigenous Community Planning program with the Musqueam Indian Band. The program empowers students with the theory, skills, knowledge and capacity needed to support Indigenous communities in achieving their own aspirations for land stewardship, cultural revitalization, strong governance, health and well-being.

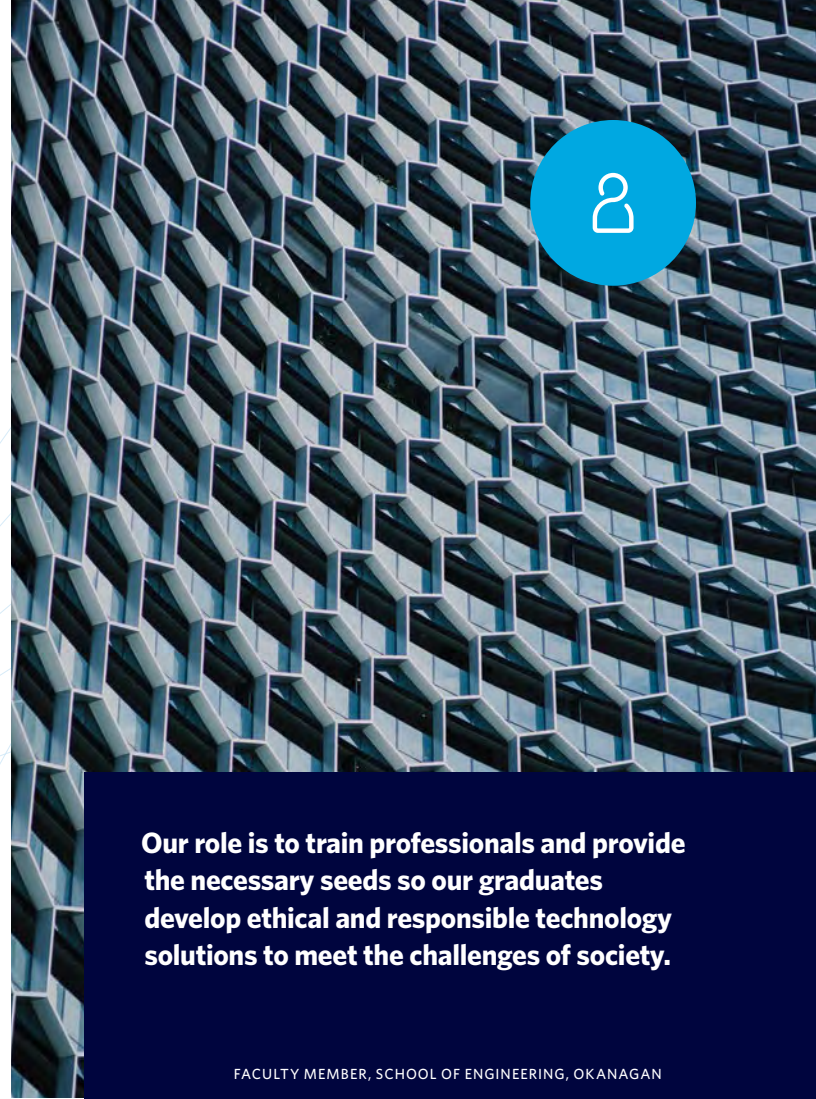


PRIORITIES IN DEPTH

Solutions for people

People are at the centre of everything we do. As trusted professionals: engineers, nurses, planners and architects, we provide the foundation for a safe, secure, healthy, high-quality life. As researchers and innovators, we are creating highly impactful solutions that aim to radically transform health and wellness, and shape a society and economy where people are more connected, empowered and effective.

We are facing increasingly *Complex Challenges* (#13) that rely on *Integrated Disciplines* (#2) and *Strategic Partnerships* (#14) to be able to effectively address them. Solutions are often found at the intersection of disciplines; requiring an integration of technologies and policy. An example of this is the School of Biomedical Engineering, a new interdisciplinary collaboration between the Faculties of Applied Science and Medicine who partner with industry, health authorities, research centres and stakeholder groups. It aims to provide a clear pathway for innovative health solutions, from the discovery of new biomedical technologies to their development and application to benefit human health.



Our role is to train professionals and provide the necessary seeds so our graduates develop ethical and responsible technology solutions to meet the challenges of society.

FACULTY MEMBER, SCHOOL OF ENGINEERING, OKANAGAN

We advance an *Innovative Spirit* (#7) in everything we do, including our faculty, buildings and spaces, and processes and incentives. We inspire *Entrepreneurial Thinking* (#11) to guide societal-driven *Impactful Research* (#12) into successful solutions. In this way, laboratory discoveries and innovations will benefit people and promote economic prosperity and high-quality job creation.



EXAMPLE 4



Safer by design

UBC Okanagan School of Engineering students and professor Ray Taheri worked together in response to the urgent need to reduce accidental deaths related to full-sized clothing donation bins. They worked together to design and prototype innovative solutions to improve safety; some students even went so far as to completely reimagine business models which would eliminate the risk.

PRIORITIES IN DEPTH

Thriving cities & communities

Cities are drivers of the global economy and face some of the world's greatest challenges across health, climate, social well-being and prosperity.

By 2100, the world's population is expected to reach 10 billion, and seventy per cent of people could live in urban settings. There will be increased demands on food and health systems, water, energy and infrastructure. Eighty per cent of the urban infrastructure needed by 2050 has yet to be built. Many communities and First Nations are managing the natural resources needed for economic prosperity, such as energy, food and manufacturing materials, while facing socio-economic challenges unique to their region.

These challenges present an opportunity to directly shape the future in our own communities and around the world—including how we live and work, how we move and connect, and how we work together to create thriving cities and communities.

Our Faculty is ideally positioned to help cities and communities become healthy, productive, safe, inclusive and sustainable. Our focus on cities and communities *Integrates Disciplines (#2)* by bringing together planners, architects and engineers to design the entirety of the built environment, from civil infrastructure to the transportation and energy networks that bind it together. We address the *Complex Challenges (#13)* that arise with diverse communities within changing urban and rural landscapes, requiring human-centred, systems approaches and *Entrepreneurial Thinking (#11)* to enact transformational change.

We must make sure that innovations and applications work for people, support our communities and solve problems—not just create new ones.

FACULTY MEMBER, SCHOOL OF ENGINEERING, OKANAGAN

UBC's campuses are essentially small cities where we can provide risk-tolerant demonstrations of advanced *Community Solutions (#16)* and *Environmental Action (#17)*. For example, we are the national testbed for connected vehicles that will promote safe, smart transportation in British Columbia and beyond, and we are building integrated energy platforms that will test renewable energy solutions at scale.

We *Promote Agency (#15)* in our students, staff and faculty to effect change within their own communities and beyond. Our Faculty has extensive experience using a people-first, community-based approach to partnerships and a challenge-focused approach to our research. We are developing *Strategic Partnerships (#14)* with communities and municipalities locally, nationally and globally to produce *Impactful Research (#12)* and ensure our city-scale solutions can be used by partner communities and will improve local capacity. Our commitment to *Truth & Reconciliation (#8)* is reflected in all of this.

EXAMPLE 5

Effecting change to protect vulnerable populations in Vancouver's Downtown Eastside

Through collaborative projects such as STRENGTH in Vancouver's Downtown Eastside, Dr. Vicky Bungay, professor and associate director, strategic initiatives, in the School of Nursing, is addressing inequities that negatively affect people's health and well-being, including the devastating effects of stigma, discrimination and violence.





Planetary health

Climate change is undeniably one of the largest impacts of human behaviour and may be humankind's greatest challenge. It will result in higher temperatures, sea-level rise, increased storm strength and occurrence, and drought that will alter food production, biodiversity, migration and human disease patterns.

Through all of our consultation sessions, nothing weighed more on our students, faculty and staff than the need for urgent and accelerated global environmental action. As a Faculty, we are passionate about finding solutions to the climate crisis and creating leaders in *Environmental Action (#17)* in areas of climate, sustainability and planetary health.

We are training the next generation of professionals who will be dealing with the reality of a changed climate. Our students need to understand how to design and create a built environment appropriate for the new climate. They must also be able to quantify the impact of human behaviour on planetary health to develop and deploy state-of-the-art decision-making, policies and technologies (*Leading-Edge Teaching #1*).

UBC ranks first in the world for university climate action and third for sustainable cities and communities. In 2018, it became the first university in Canada to develop a sustainable development policy and achieved a 38-per-cent reduction in greenhouse gas emissions despite a 32-per-cent growth in the student population. Our Faculty is building on this success, creating a city-scale testbed for leading-edge technologies and policies to address climate change (*Community Solutions #16*).



We can make UBC Applied Science a leader in sustainability both within UBC and Vancouver by implementing sustainable practices within our curricula, and supporting students, faculty and staff in making green changes.

FACULTY MEMBER, SCHOOL OF NURSING



EXAMPLE 6

Preserving our planet by building Canada's largest passive housing complex

The School of Architecture and Landscape Architecture is working with UBC Properties Trust and UBC Campus and Community Planning to design one of Canada's largest passive residential building developments, which will be built on the UBC campus. The six-storey, wood-frame building will have 111 rental units, and the project team will collect performance data to further develop best practices.

We *Integrate Disciplines (#2)* and support teams of educators and researchers with *Impactful Research (#12)* in health, technology, planning and design who are seeking comprehensive solutions for thriving people, places and planet. A green future will require sustainable mining, integrated energy systems, new policies driven by data, and radical changes in the built environment.

We support *Entrepreneurial Thinking (#11)* to develop the bold new technologies and services needed to both mitigate and respond to a changing climate, and *Promote Agency (#15)* for actions that will have tremendous social and economic impact.

While we are committed to this cause internally, we cannot do it alone. We are establishing *Strategic Partnerships (#14)* with leading-edge clean tech companies, resource industries, Indigenous communities, the transportation sector, municipalities and health providers to enable the transition to a low-carbon economy. These partnerships ensure our research supports human health, traditional ecological knowledge (*Truth & Reconciliation #8*), and prosperity while addressing environmental changes.





**Our graduates are instruments of change;
we want them to leave here with a mission
to be leaders in their communities.**

—
STAFF MEMBER, UBC APPLIED SCIENCE

FUTURE-PROOFING OUR STRATEGIC PLAN

It is important to test the resilience of our strategic plan against the uncertainty of the future.

To accomplish this, we built on the scenario planning exercise carried out in the more than 20 community engagement sessions facilitated by the Steering Committee.

These engagements identified the most impactful and uncertain drivers of change for the Faculty. The two most impactful and uncertain drivers in each session were used as axes to create a two-dimensional future space (see *Diagram 1* for axes identified in the engagement sessions).

Participants then explored and described four potential futures at the extremes of each driver, and developed strategies to ensure success in each world.

To test our strategic plan, we developed four potential futures (see *Diagram 2*) using axes based on insights gained through our engagements. Many engagements explored the potential regulatory, legal and policy oversight around key drivers like social equity and climate change as they are strongly influenced by government regulation. Therefore, we chose regulation and deregulation as an axis.

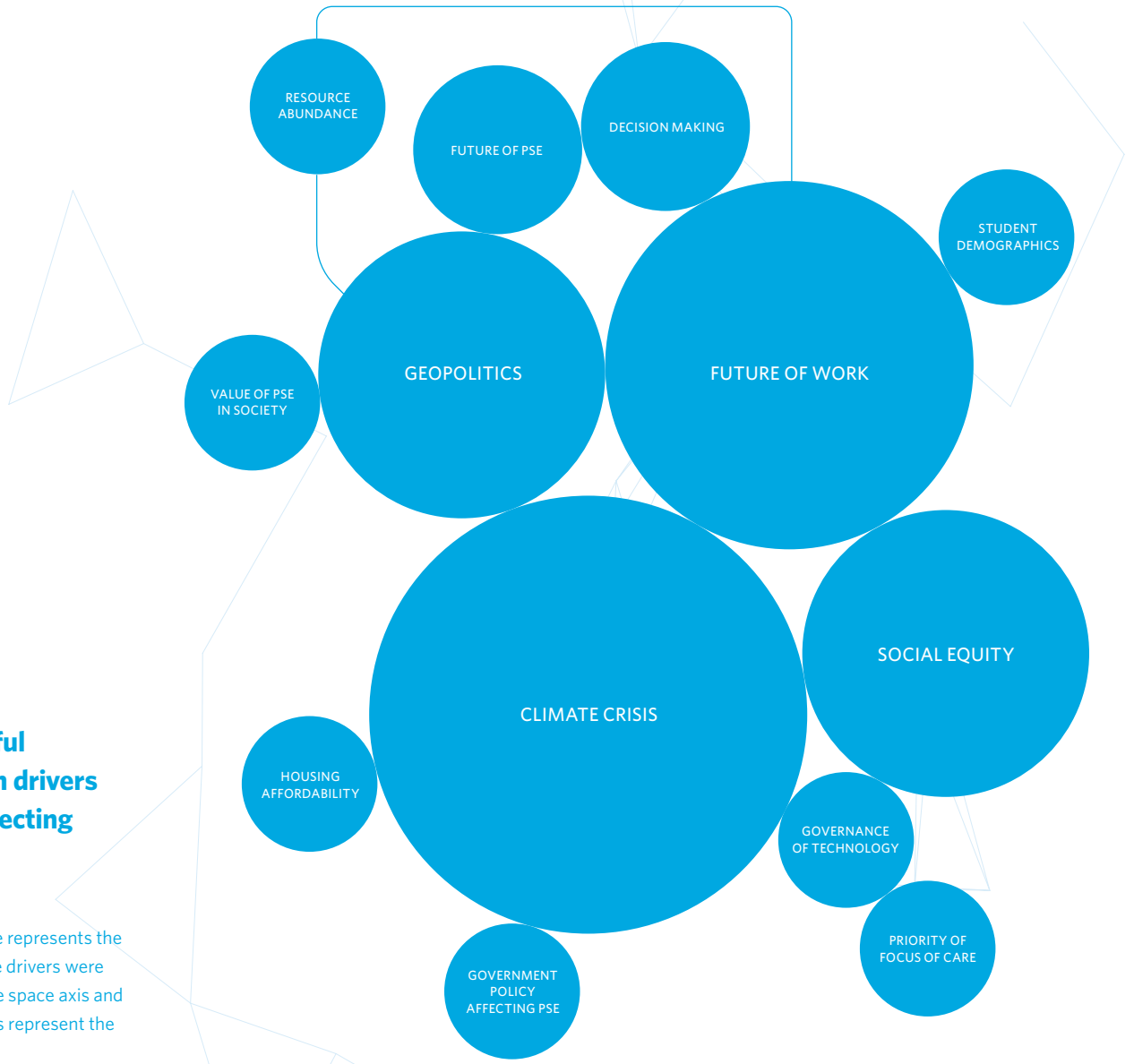


DIAGRAM 1
Most impactful and uncertain drivers of change affecting the Faculty

The size of the circle represents the number of times the drivers were identified as a future space axis and neighboring bubbles represent the accompanying axis.

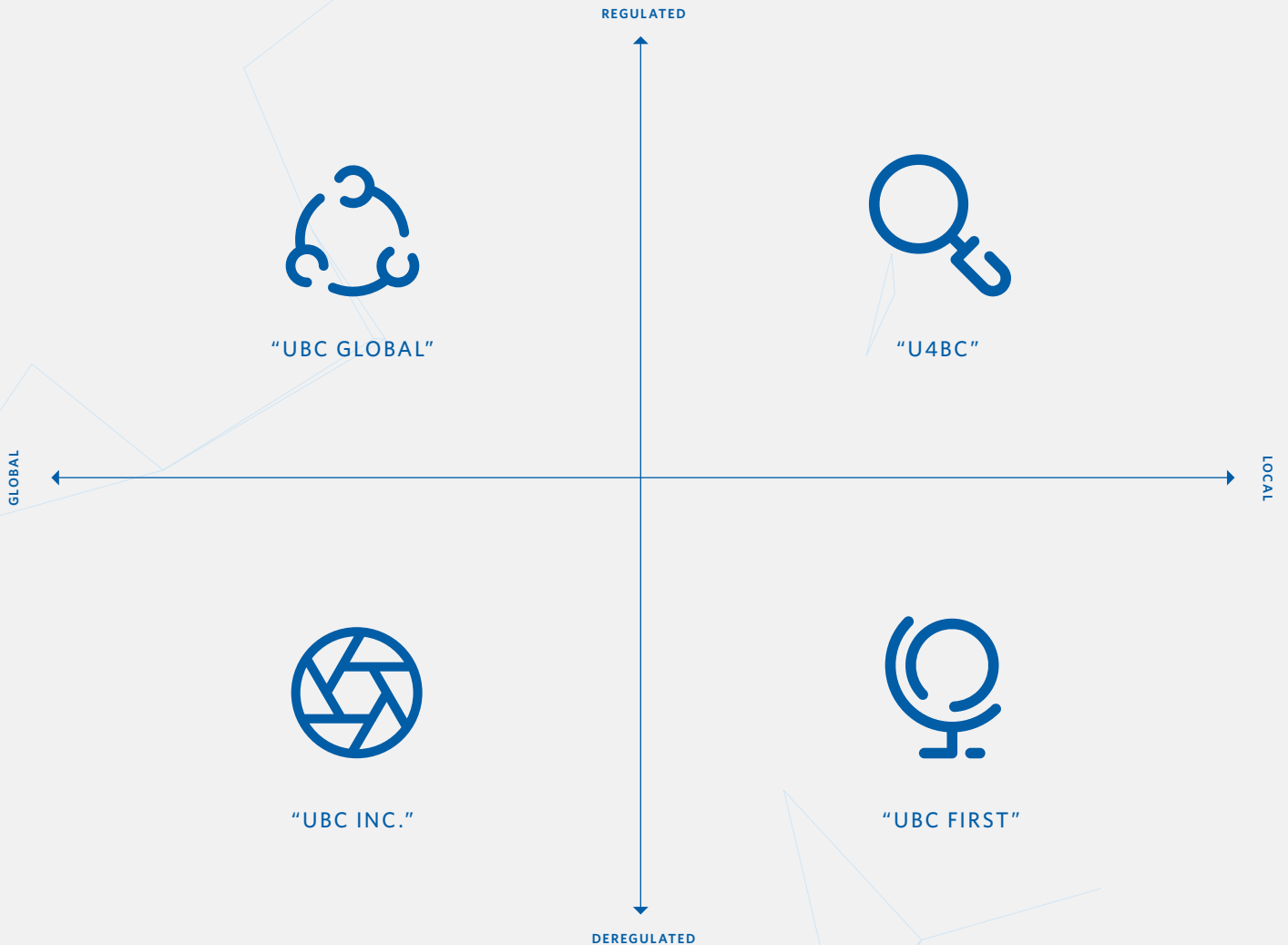
POTENTIAL FUTURE WORLDS

We also selected a local and global focus to capture the questions raised around whether society would continue to build on the current trends of globalization or whether it would turn inward and focus on regional problems and issues.

We described these four futures in relation to our Priorities (Future of Work, Thriving Cities & Communities, etc.) and explored how our Faculty will need to position itself for success. This process provided a broad and comprehensive review of our strategic plan in a framework that ensures resilience in the face of an uncertain future.

DIAGRAM 2

“Potential future worlds”



Regulation with a global focus

Key drivers: Government and industry partnerships prioritize training and education; international collaboration by governments and non-profits is common; large carbon tax; high rate of technology advancement; automation; artificial intelligence and machine learning are pervasive; increasingly democratized information.

University for the future: Government-controlled domestic tuition; large international student population; programming is driven by combination of student, government and industry demands.

Future of work: Large companies integrate with international governing bodies; enormous monopolies; global manufacturing to feed a singular global supply chain; artificial intelligence and machine learning are integrated in the workplace but deeply regulated to protect human rights; international immigration of only the most highly qualified people; many regulatory hurdles balanced by global access to funding and markets for entrepreneurs.

Inclusive leadership: Leadership for social equity advocacy to support vulnerable populations on a global scale; multi-disciplinary teams require strong collaboration skills, cultural fluency, Indigenous perspectives and ethical training; diverse global population represented in workplaces, education, teams and leadership; strong emphasis on developing a shared "human" identity; problem solving and critical thinking are essential.

Solutions for people: Priority is placed on solutions that enhance quality of life for the greatest number of people (digital health tech, universal design, mental health & wellness); health care is accessible for the greater population; rapid transformation of economy from resources towards technology and services; government based on need grants access to solutions.

Thriving cities and communities: Equitable societies and broad access to services; highly taxed but money is used for global equity initiatives; global super cities emerge; smaller and more intense agricultural land reserves feed the world; increased global collaboration on future city technologies.

Planetary health: Coordinated and collaborative global assistance to developing countries to support climate action; worldwide environmental policies established and mandated by international governing bodies (e.g. global carbon cap and trade); sustainable technology economy.

"The Faculty's responsibility, regardless of the trajectory of the world, is to continue to lead in a positive direction, to promote the best practices and ideals to ensure positive change in the world."

FACULTY MEMBER,
SCHOOL OF ARCHITECTURE & LANDSCAPE ARCHITECTURE



Our role/opportunities in this world:

"UBC GLOBAL"

- Invest in strong industry partnerships to effect community change through innovation and policy.
- Integrate more understanding of law, policy and regulations so our students know how to navigate and influence change where necessary.
- Expand current programming to emphasize digital technology and data-driven solutions, with emphasis on creative thinking, team leadership and digital collaboration.
- Develop professionals with strong technical skills and knowledge leadership, and a deep understanding of global collaboration, cultural safety and fluency, Indigenous perspectives and ways of knowing, ethical training, social equity advocacy, policy and sustainability.
- Lead demonstration of high-impact global technologies and policies which promote access and equity.
- Ensure students and faculty recognize the social and ethical implications of technology in society.
- Demonstrate viable solutions for equitable access to health and health services, technology, and education to ensure no one is left behind on a global scale.

Regulation with a local focus

Key drivers: Provincially funded training and education; large social safety net and government support; public health care; equalized social and structural determinants of health; localized government projects to equalize economic development.

University for the future: Universities largely government funded; provincial government drives programming based on local needs; equity in access; no domestic tuition; few international students; research is limited to areas dictated by government; difficult to attract/retain world-class faculty.

Future of work: Local needs create 'pockets' within industries; demarcated professions; regulated wages across industries; stifled ability for economic growth; little incentive for startups and innovation; artificial intelligence and machine learning are highly regulated to protect jobs and human rights.

Inclusive leadership: Leadership for social equity advocacy to support vulnerable populations with a local, community focus; multi-disciplinary teams require strong collaboration skills, cultural fluency, Indigenous perspectives and ethical training; diverse representation in workplaces, education, teams and leadership; strong emphasis on community engagement and culture-building; problem solving and critical thinking are essential.

Solutions for people: Government-led innovation; priority is placed on solutions which enhance quality of life for those in each community (digital health tech, universal design, mental health and wellness).

Thriving cities and communities: Regional collaboration to meet the needs of community; equitable access to health services; highly taxed but money stays locally; large social and subsidized housing.

Planetary health: Sustainability measures unique to each region are mandated by local governments; local climate action and numerous incentives for individual behaviour change.

"All our disciplines are equally important in being leaders in all worlds—interconnectivity is very critical, and the interplay between health, community and technology is important in addressing the biggest climate change challenges."

STAFF MEMBER, APSC



Our role/opportunities in this world:

"U4BC"

- Find creative solutions to B.C.'s immediate problems through collaboration of our Faculty's unique in interdisciplinary professions.
- Invest in long-term, local industry and community partnerships to support the growth in key areas such as biomedical engineering, clean energy, design, and health innovation, as identified and prioritized by unique community needs and government.
- Demonstrate viable solutions for equitable access to health and health services, technology and education to ensure no one is left behind in our communities.
- Leverage online and digital teaching to reduce our costs, without sacrificing the essential opportunities for students to engage with and learn from communities.
- Integrate more understanding of law, policy and regulations so our students know how to navigate and influence change where necessary.

Deregulation with a global focus

Key drivers: Limited government funding; increasing global citizenship; increasing urbanism; free movement of people and goods; environmental action; environment left vulnerable; increased inequity in social and structural determinants of health; increased rate of technology advancement.

University for the future: Largely private entities; little government funding; high competition among universities; industry-sponsored training and research is critical; tuition market-driven; country club model for in-person learning; wealthy international student population; extensive online delivery for broader audience; specialized programs.

Future of work: Business expansion and development; deep integration of technology in the workplace; increased global e-collaboration; large globally fluid corporations; growing gig economy; large start-up opportunities; highly competitive; specialized work opportunities for employees with niche skills.

Inclusive leadership: Responsibility and leadership for social equity advocacy to support vulnerable populations on a global scale; multi-disciplinary teams require strong collaboration skills, cultural fluency, Indigenous perspectives and ethical training; diverse global population represented in workplaces, education, teams and leadership; strong emphasis on developing a shared "human" identity; problem solving and critical thinking are essential.

Solutions for people: Disruptive tech and solutions are developed around the world; profitable solutions that have the widest spread of application are favoured; ideas and intellectual property move freely.

Thriving cities and communities: Hyper-urbanism; communities are more international and more diverse; large inequities among citizens; private health care; rural populations underserved (less opportunity for profit).

Planetary health: Social and corporate demands drive environmental policy (not governments), global 'Space Race' to develop profitable climate change technology.

"In a world which is becoming increasingly virtual, it is important to define the value of, preserve, and promote human-human interactions through our educational delivery and mentoring."

STUDENTS, NURSING



Our role/opportunities in this world:

"UBC INC."

- Demonstrate ourselves as an open and global university with high student mobility and access.
- Develop professionals with strong technical skills and knowledge leadership, and a deep understanding of global collaboration, cultural safety and fluency, Indigenous perspectives and ways of knowing, ethical training, social equity advocacy, policy and sustainability.
- Ensure faculty and students are key contributors to the open innovation ecosystem and work collaboratively with industry, government and community.
- Support the translation of research and technology to new scalable ventures and initiatives.
- Work to close the gaps in society as leaders in developing solutions for equitable access to key needs such as housing, health care and clean water.
- Position ourselves as a leader in developing globally accessible energy solutions and healthy future cities.
- Position ourselves as vectors of influence in relation to housing, health and sustainability.

UBC FIRST

Deregulation with a local focus

Key Drivers: Little government funding for research and education; increased local workforce; decreased rate of technology advancement; only local grassroots environmental/climate change initiatives; consumer driven marketplace; climate change impacts are high; social inequity is high.

University for the future: Largely privately funded; reduced government research funding; industry-sponsored training for their specialized needs; tuition is high to reflect actual costs; wealthy domestic student population; domestic students have greater challenges accessing higher education; tech and health-related entrepreneurship and business education are in high demand; research is funded by industry agendas.

Future of work: High-paying tech and design-sector jobs; strength across diverse industries; entrepreneurship endeavours are focused on local challenges; increased gig economy; investment in local manufacturing; automation fills gaps in workforce; technology is deeply integrated; low data privacy regulations/protections; bottom line at the expense of person-centred care.

Inclusive leadership: Responsibility and leadership for social equity advocacy to support vulnerable populations with a local, community focus; multi-disciplinary teams require strong collaboration skills, cultural fluency, Indigenous perspectives and ethical training; diverse representation in workplaces, education, teams and leadership; strong emphasis on community engagement and culture-building; problem solving and critical thinking are essential.

Solutions for people: Focus on solutions that have regional impact or are profitable in small and local markets; consumer-based solutions; increased drive towards lowest cost.

Thriving cities and communities: High quality of life in cities and communities; investment in local infrastructure and community development projects; private health care that is high cost and inequitable.

Planetary health: Little environmental regulation; limited coordinated efforts, action is individually-driven with a proliferation of community projects that support sustainability.

“Our Faculty’s role as advocates and leading by example becomes even more significant when we are in a world where there are notable inequities and societal challenges which impact everyone.”

FACULTY MEMBER, ENGINEERING



Our role/opportunities in this world:

“UBC FIRST”

- Focus on attracting the best and brightest domestic and regional students.
- Invest in long-term, local industry and community partnerships to support the growth in key areas such as biomedical engineering, clean energy, design, and health innovation, as identified and prioritized by unique community needs.
- Develop a comprehensive reskilling and upskilling offerings in collaboration with industry partners.
- Empower APSC’s staff, faculty and students to transfer innovation and influence from the university to government, industry and community.
- Establish our Faculty as an important mechanism for soft diplomacy towards effective global collaboration.
- Continue to develop high-quality, interdisciplinary professionals focused on addressing the pressing challenges in our communities.
- Respond to society’s need for self-sufficiency by investing in graduates from programs focused on manufacturing, clean technology, environmental engineering, nursing, community and regional planning, and architecture.

GOING FORWARD



This strategic plan presents a collective vision for our Faculty that looks outward to increase impact across scales of people, place and planet; and recognizes the need to transform our organization in order to elevate our ability to make that impact. While the planning process began before the COVID-19 pandemic, the outcome will ensure our Faculty is better equipped to respond to the crisis.

The plan serves as a guiding document for the Faculty's departments and schools as they develop their own strategic plans and initiatives. The priorities and strategies in the plan form a framework for decision-making and investment across the Faculty.

A Faculty-level implementation plan is already in development.

THAT PLAN WILL:

- Identify a series of projects and initiatives that map directly to our strategies, and
- Provide performance metrics tied to a progress evaluation process.

In addition, we are seeking the input from our community to help us put our plan into action. We have set aside significant resources to draw upon the insight of the community and support initiatives that come forward through a series of open-innovation style Call for Proposals. To achieve what we have set out in this plan will simply not be possible without the individual contributions of the Faculty's staff, faculty and students. We look forward to working together to transform tomorrow.

Visit our strategic plan website to learn more strategicplan.apsc.ubc.ca

ACKNOWLEDGEMENTS

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