

Engineering Transformative Solutions for Health

SBME'S STRATEGIC PLAN

2025 - 2030



THE UNIVERSITY OF BRITISH COLUMBIA

School of Biomedical Engineering

Faculties of Applied Science and Medicine

We respectfully acknowledge that the UBC Vancouver-Point Grey academic campus is located on the traditional, ancestral, unceded territory of the xʷməθkʷəy̓əm (Musqueam), and UBC operations in Vancouver more generally are also on the territories of the Skwxwú7mesh (Squamish) and səl'ilwətaʔ (Tsleil-Waututh).



Table of Contents

Executive Summary	1
Letter from the Director: Igniting Innovation and Transforming Health	4
Strategic Context: Aligning SBME for Global Leadership	6
Core Strategic Statements	8
Vision & Mission	8
Strategic Focus	8
SBME's Theory of Change	9
Strategic Priorities	13
Priority 1: Delivering Dynamic, Research-Informed Educational Programming	14
Priority 2: Propelling Biomedical Research Excellence	15
Priority 3: Building Bridges Across Our Health Ecosystem	18
Priority 4: Accelerating Biomedical Translation	20
Priority 5: Advancing SBME's Impact and Leadership	21
Key Capabilities	22
Capability 1: A Culture of Collective Capacity	23
Capability 2: Strong Governance, Distributed Leadership	24
Capability 3: Sustainable, Diversified Funding	25
Capability 4: A Welcome and Inclusive Environment Through Equity, Belonging and Reconciliation	26
Capability 5: Innovation with Purpose	28
Appendix 1: Strategic Planning Process	28
Discovery Phase	29
Strategy Phase	30
Appendix 2 : Agile Implementation	31
Appendix 3: Document Version Control	31

Executive Summary

Since the School of Biomedical Engineering (SBME) was founded in 2017, we have grown rapidly, attracting exceptional faculty, top notch students and substantial funding. We have sustained an incredible degree of momentum and we are committed to maintaining it.

As such, we recently engaged in a thorough strategic planning process that sets out clear priorities for the School's next five years. These are our key areas of focus that shape our strategy and serve as the basis of our decision-making. They outline what we must accomplish in order to move closer towards SBME's Vision:

Transformed health and healthcare for all, achieved through innovative research and education at the convergence of engineering, medicine and biology.

From a foundation that prioritizes cutting-edge research, future-oriented educational programming, and strong partnerships, this plan also emphasizes strategic ecosystem engagement, building bridges with BC communities and throughout The University of British Columbia (UBC), strengthening clinical integration, a greater emphasis on research translation and innovation, financial sustainability and building our internal culture of shared success and belonging.

Strategic Priorities

The plan sets out the strategic priorities that define our focus for the next five years:

- 1 Delivering Dynamic, Research-Informed Educational Programming:** We will equip students and trainees with a comprehensive foundation in biomedical engineering (BME), social responsibility and hands-on experience across a range of disciplines, so they are poised to address current and emerging health challenges.
- 2 Propelling Biomedical Research Excellence:** We will advance knowledge and develop transformative technologies that shape the future of biomedical engineering and its application to health, positioning SBME as a global leader in fundamental and translational health science.
- 3 Building Bridges Across Health Ecosystems:** Through collaborations within UBC, including the Faculty of Applied Science (APSC) and the Faculty of Medicine (FoM), partnerships across the life sciences ecosystem and engaging the communities we serve, we will increase the relevance and impact of our research and educational programs.
- 4 Accelerating Biomedical Translation:** We will significantly increase the translation of our research discoveries into real-world health solutions by strengthening translational infrastructure, expanding access to clinical and commercialization expertise and resources, and increasing the generation and application of intellectual property.
- 5 Advancing SBME's Visibility, Impact and Leadership:** We will elevate SBME's national and global influence by strategically amplifying our groundbreaking discoveries, shaping policy and attracting top minds and resources.

Key Capabilities

Key Capabilities answer, 'what must we be good at, or develop, to achieve our strategic priorities?' Therefore, to realize the above priorities, we will focus on advancing the following foundational capabilities:

- 1 A Culture of Collective Capacity:** SBME thrives because of the diversity of its people. By linking students, staff, and faculty across roles and disciplines, we will build a community where individual strengths drive shared progress in biomedical engineering research, education and innovation.
- 2 Strong Governance, Distributed Leadership:** We will establish a robust, transparent and inclusive governance structure that fosters a strong, cohesive community with a shared sense of responsibility and ownership for SBME's broader goals and its impact.
- 3 Sustainable, Diversified Funding:** We will establish SBME as a financially resilient entity by diversifying and expanding our funding sources.
- 4 A Welcoming and Inclusive Environment Through Equity, Belonging and Reconciliation:** We will foster a welcoming and inclusive academic environment that embraces diversity, promotes equity and belonging, and advances Indigenous Reconciliation.
- 5 Innovation with Purpose:** We will embrace a culture that values curiosity, takes calculated risks and empowers our community to challenge convention. Through thoughtful experimentation and agile execution, we will develop systems that enable rapid learning and deliver scalable impact across research, education, health systems, translation and public service. This includes both commercial and non-commercial innovations that advance care, equity and system performance.

With these strategic priorities and key capabilities in focus, we will be well-poised to transform health and healthcare for all.

Acknowledgements

The development of this plan was facilitated by Junxion Strategy, and informed by invaluable contributions from SBME's leadership team, staff, advisory committee members, faculty and students, who participated at various stages through the strategic planning process. An overview of the process we followed to develop the Strategic Plan can be found in Appendix 1.

Letter from the Director: Towards Engineering Health

Since its inception more than seven years ago, the School of Biomedical Engineering at the University of British Columbia has rapidly evolved into a widely recognized emerging leader in biomedical engineering research, education and innovation. We are beginning to carve out a unique, innovative identity—boldly tackling complex biology, developing engineering solutions across scales and keeping human health impact at the core of our mission.

With world-class science and engineering emerging from our 39 core faculty members, and with the opening of Canada’s first purpose-built biomedical engineering facility, the Gordon B. Shrum Building, we have taken a significant step toward catalyzing Canadian innovation and leadership at the intersection of biology, medicine and engineering.

We have much to celebrate. The launch of our accredited undergraduate Biomedical Engineering program in 2020 marked a significant milestone. This innovative curriculum—uniquely integrating biology, engineering and medicine is a novel approach to biomedical education in a post-secondary institute.

We are building a pipeline of highly skilled talent poised to drive impact across BC’s and Canada’s growing biotech and medtech sectors, as well as in entrepreneurial ventures and world-leading research institutions. This year alone, we have 420 undergraduate students and 179 graduate students and postdoctoral fellows.

Our alumni are stepping into leadership roles across industry and academia, while SBME-affiliated startups and intellectual property are bringing our research to life—translating cutting-edge discoveries into next-generation therapies, medical devices and diagnostic tools.

SBME has firmly established itself as a valued partner in the health innovation ecosystem. For example, in 2024 our faculty secured \$25.5 million in research funding and \$10.2 million in industry contracts, fueling groundbreaking work in areas such as regenerative medicine, immunoengineering, artificial intelligence (AI)-driven healthcare solutions, biosensors and advanced medical technologies.

We’ve partnered with many companies and healthcare organizations, accelerating the translation of discovery into real-world clinical applications. Through strategic initiatives like our venture incubator, SBME Innovates, and our professional development program, SBME Propels, we are actively building a robust pipeline from scientific discovery to clinical impact—ensuring our trainees are equipped with the tools they need to ensure research reaches the patients and communities who need it most.

Perhaps most importantly, SBME has cultivated a culture where diverse ideas, solutions and approaches are collectively mobilized for education, innovation and care—fueled by collaboration and a shared commitment to health impact.

There’s nothing more inspiring than asking an SBME student, “What brought you here?” and hearing the passion in their response. A recurring theme emerges: a desire to make a meaningful difference in people’s lives—often inspired by a deeply personal experience.

These stories are a powerful reminder that SBME is not just an academic institution, but a community driven by shared purpose and a commitment to impact.

Our efforts to foster a diverse, interdisciplinary environment have positioned SBME as a hub for mentorship, translational research and biomedical innovation, with influence extending far beyond our walls and into the broader biomedical ecosystem.

Yet, this is just the beginning. Our long-term success will depend on how boldly and strategically we build on the momentum we’ve created. To achieve sustained, real-world health impact, we must continue to be innovative, forward-thinking and intentional in our next steps.

Here, we present a roadmap for the future—a path to consolidate our growth, fulfill our mission and deepen our impact. We invite you to join us as we work together to engineer transformative health solutions for all.

Dr. Peter Zandstra,
Director, School of Biomedical Engineering



In 2025, SBME is home to:

420
undergraduate students and

179
graduate students and postdoctoral fellows.

In 2024, our faculty secured

\$25.5
million
in research funding and

\$10.2
million
in industry contracts, fueling groundbreaking work in areas such as regenerative medicine, immunoengineering, AI-driven healthcare solutions, biosensors and advanced medical technologies.

Strategic Context: Aligning SBME for Global Leadership

Through broad consultation with faculty, students, industry and healthcare partners, the process of developing our plan surfaced key themes that planted the initial seeds for our priorities and capabilities. These themes were deeply considered as we built a plan that will position SBME to lead in biomedical innovation, education and impact.

British Columbia's life sciences sector is one of the fastest growing in Canada, with Vancouver emerging as a strong biotech hub. SBME is well positioned to help shape this evolving ecosystem. By leveraging our research strengths, networks, emerging talent and partnerships, we should serve as a catalyst for health innovation and impact. Our priority is to expand and deepen collaborations across industry, healthcare providers and government to support BC's life sciences efforts—and position the SBME as a leader nationally and globally.



SBME's rapid growth has been enabled by foundational support from UBC and the Government of British Columbia—and propelled by strategic faculty recruitment, interdisciplinary research clusters, a human biology-anchored curriculum and a commitment to translation. But sustaining our emerging excellence demands focused investment in our core strengths—particularly in fundamental and translational research and education—while navigating a constrained funding landscape.

We must move toward 2030 with discipline and purpose, balancing new initiatives with the deepening of established strengths. In a changing and increasingly resource-constrained environment, being strategic and setting clear priorities will be more important than ever. Our continued success will depend on our ability to respond to shifting local and global priorities, while reinforcing the distinctive capabilities that set us apart.

Excellence in research alone is not enough; real-world impact must be explicit and measurable. SBME's work in areas such as immunoengineering, biomechanics and injury prevention, regenerative medicine, biosensors and next-generation medical biodevices is already contributing to scientific and clinical advancements. However, we must do more to bridge the gap between discovery and impact—ensuring that our research translates into tangible health outcomes.



The question we must answer is:

What does it mean for SBME to make an impact on local and national communities, and how do we measure it?

Building strong networks and external engagement is essential to our success, yet traditional advisory models may not be the most effective approach. Instead of broad-based advisory committees, we must evolve toward a more targeted and agile engagement strategy, drawing on insights from key industry, clinical, academic and policy leaders in a more structured and measurable manner.

Students remain at the heart of SBME's mission. Expanding mentorship, strengthening industry and clinical exposure, and embedding workplace-readiness into our curriculum are emerging priorities. We need to leverage our growing alumni base and industry connections to support SBME students in their aspirations for leadership roles, both locally and globally.

While SBME is inherently diverse; we are already benefiting from the broad array of disciplines, backgrounds, and people that make us up. We must now take stronger steps to ensure that our culture fosters true belonging and opportunity for all. A data-driven approach to Equity, Diversity and Inclusion (EDI) will allow us to measure progress, enhance retention and establish SBME as a leader in building an equitable academic environment.

As SBME enters its next phase, we must pair bold ambition with disciplined execution—implementing rigorous evaluation frameworks to measure our impact and benchmarking against global leaders to refine our strategy. Our progress has been driven by mobilizing action across disciplines and breaking down silos. To sustain this momentum, we will focus on advancing research excellence, accelerating translation, strengthening clinical integration, expanding partnerships and attracting students to our dynamic, skills-enabling curriculum. This strategic plan is our roadmap to delivering lasting impact and realizing our vision.

Core Strategic Statements

While the strategy is made up of a suite of objectives to be achieved and capabilities to be developed, they are in service to SBME’s overarching vision, mission, and five-year strategic focus, as written below.

Vision & Mission

Transformed health and healthcare for all, achieved through innovative research and education at the convergence of engineering, medicine and biology.

Strategic Focus

By 2030, we will position SBME as a globally recognized leader in biomedical engineering by delivering dynamic, research-informed educational programming, propelling research excellence, building bridges across health ecosystems, accelerating research translation and advancing our visibility, impact and leadership.

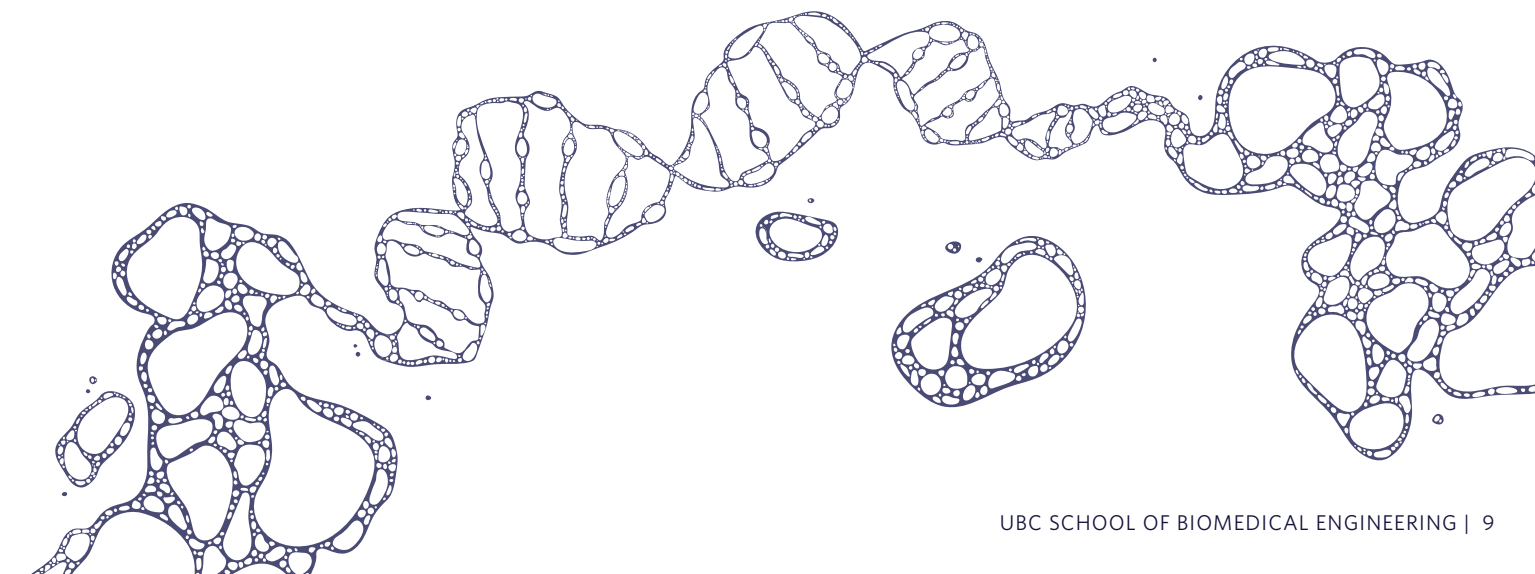
SBME’s Theory of Change

During our Strategic Planning workshops, we developed a Theory of Change, which articulates the short, medium and long-term outcomes we believe are necessary to achieve in order to reach our Vision.

A visual representation of our Theory of Change can be found on the following page, and can be summarized as follows:

SBME is committed to transforming health and healthcare through boundary-pushing research and education at the intersection of engineering, medicine and biology. To achieve this, we will focus on dynamic research-informed educational programming, generate exceptional research in collaboration with our partners, accelerate translation and commercialization and expand our national and global influence. These represent the essence of our strategic priorities for the next five years.

Achieving these priorities will attract the next generation of leaders in biomedical engineering, strengthen our life sciences ecosystem and establish SBME as a premier hub for biomedical engineering innovation. With reliable funding and strong industry, clinical and community partnerships, we will bridge discoveries to applications—driving our research towards meaningful societal impact.

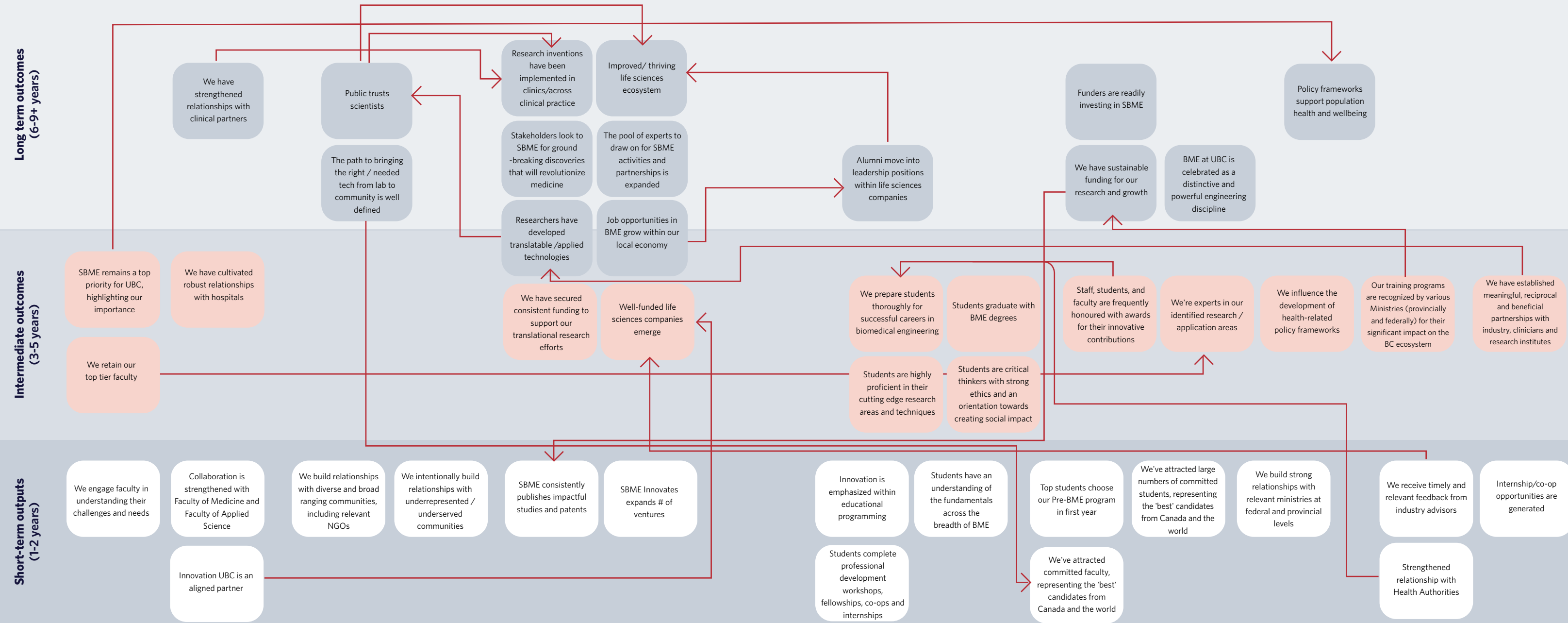




SBME's Theory of Change

VISION

Transformed health and healthcare for all through unconstrained research and education at the convergence of engineering, medicine and biology.



Internal Engagement

In order to bring about its vision, SBME must continue to be a priority for UBC, retain top-tier faculty and strengthen relationships with clinical partners. SBME therefore focuses on actively engaging faculty members to identify and address their challenges and needs, with Innovation UBC serving as a strategic partner to facilitate internal engagement, and strengthens collaboration with FoM and APSC. This approach underscores SBME's dedication to creating a conducive environment for groundbreaking biomedical engineering advancements that ultimately benefit public health and the broader community, recognizing its critical role in advancing healthcare through interdisciplinary research and education.

Community Engagement

Public trust in science is crucial to the development of a thriving life sciences ecosystem, and for facilitating the adoption of technologies. By building relationships with diverse and broad-ranging communities, including Indigenous and underrepresented/underserved communities, SBME and its partners can make informed decisions about the technological advancements necessary to meet the needs of the communities it serves.

Research & Innovation

SBME's research outputs attract funding for their translational research, which, combined with strengthened partnerships, facilitates the clinical implementation of inventions and the development of applied technologies. As a result, the School is recognized for groundbreaking discoveries and impactful studies and patents. By expanding SBME Innovates and its partnerships with industry, we see the emergence of well-funded life sciences companies and an expanded pool of experts and job opportunities in BME, highlighting SBME's significant impact on the local economy. All of this, in turn, contributes to sustainable funding sources for SBME to continue its groundbreaking work.

Educational Programming

By emphasizing breadth, depth and innovation in its educational programming, SBME graduates students with BME degrees who are proficient in cutting-edge research areas and techniques, as well as critical-thinkers with strong ethics and an orientation towards impact. The educational and talent development programming therefore prepares students for successful careers, with alumni often moving into leadership positions in life sciences companies, which in turn fuels a thriving life sciences ecosystem.

Marketing & Recruitment

The SBME at UBC is recognized for its distinctive and powerful engineering discipline, attracting top students and committed faculty from Canada and around the world. Staff, students and faculty are frequently honoured for their innovative contributions in their research and application areas. The program therefore generates sustainable funding, refuelling its attraction of top students and faculty from diverse backgrounds.

Government Relations

We build strong relationships with federal and provincial governments, which leads to greater recognition of the impact of SBME's programs and, in turn, increases government funding. Our relationships enable us to influence the development of policy frameworks that support population health and wellbeing, which complements our direct efforts in pursuit of our overall Vision.

Partnerships

We establish meaningful and beneficial partnerships with industry, generating internship and co-op opportunities for our students and feedback to inform our research and translational efforts. Additionally, partnerships with the Faculty of Medicine and Health Authorities allow students access to clinics, improving clinical integration into our programs and better preparing students for careers in BME.

Strategic Plan Priorities and Capabilities

PRIORITIES



Delivering Dynamic, Research-Informed Educational Programming



Advancing SBME's Impact and Leadership



Propelling Biomedical Research Excellence




Building Bridges Across Our Health Ecosystem




Accelerating Biomedical Translation


KEY CAPABILITIES




A Culture of Collective Capacity




Innovation with Purpose



Strong Governance, Distributed Leadership



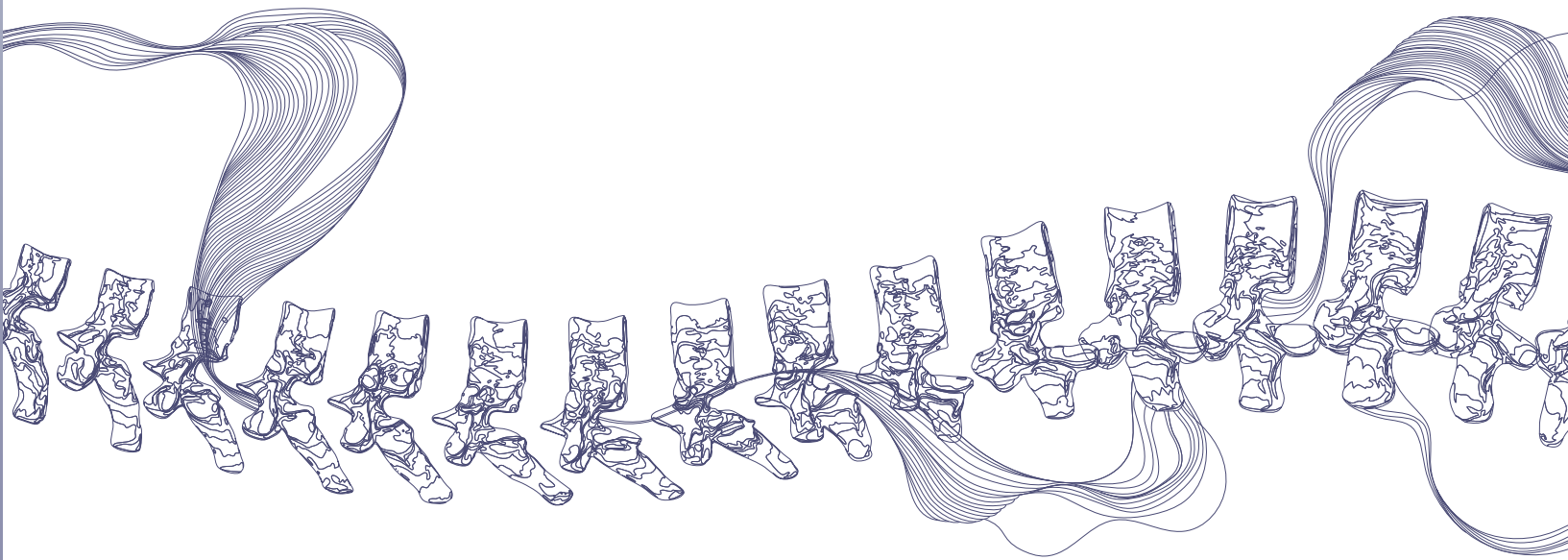
Sustainable, Diversified Funding



A Welcome and Inclusive Environment Through Equity, Belonging and Reconciliation

SBME Propels: Translating Innovation. Elevating Careers. Leading the Future.

SBME Propels is a professional development series delivered by the School that we enables several priorities and capabilities in our Strategic Plan. The program offers faculty, staff, trainees and students opportunities to build fluency in partnerships, translation, leadership, EDI and pedagogy. The series equips students and researchers with the additional skills they need for success, building the bridges from the classroom and the lab to the community, and connecting the school's mission to societal impacts.





Strategic Priorities

Strategic priorities are the key areas of focus that will guide our decision-making; they provide us with the necessary focus to propel us toward our Vision. They answer the question, 'what must we accomplish to move towards our Vision?'

Each strategic priority is presented with an over-arching objective and a series of key results we will work towards over the next five years as the means to achieving each objective.

We'll embrace an agile approach to implementation, reviewing the plan to determine our quarterly priorities, so that we remain responsive to the environment, opportunity windows, and new learnings and developments.

Priority 1: Delivering Dynamic, Research-Informed Educational Programming

Objective: *We will equip students and trainees with a comprehensive foundation in biomedical engineering, social responsibility and hands-on experience across a range of disciplines, so they are poised to address current and emerging health challenges.*

Key Results

- 1. Shape Relevant, Cutting-edge Programming by Engaging Industry Partners**
 To ensure our graduates are equipped with impactful, crosscutting skills, we will engage industry partners in refining our curricula, engaging them in teaching opportunities and internships.
- 2. Bolster Experiential Learning Opportunities**
 To provide our students with diverse, practical skills we will bolster their experiential learning opportunities through customized co-ops, internships and community-service opportunities, enhanced access to core facilities, collaborations with other institutions and by expanding our mentorship programs.
- 3. Strengthen Clinical Integration**
 We will focus on strengthening SBME’s clinical integration by increasing clinician-sponsored projects, improving access to clinical settings and creating cross-training opportunities with clinical professional programs to enhance the clinical preparedness and real-world relevance of our students’ work.

Priority 2: Propelling Biomedical Research Excellence

Objective: *We will advance knowledge and develop transformative technologies that shape the future of biomedical engineering and its application to health, positioning SBME as a global leader in fundamental and translational health science.*

The pursuit of knowledge and the development of impactful technologies are interconnected goals at the core of SBME’s research mission. Breakthroughs in knowledge drive technological innovation, and emerging technologies, in turn, fuel new discoveries. SBME will accelerate this dynamic cycle by synergistically integrating bioengineering, imaging, computer science and human-interfacing device development.

Key Results

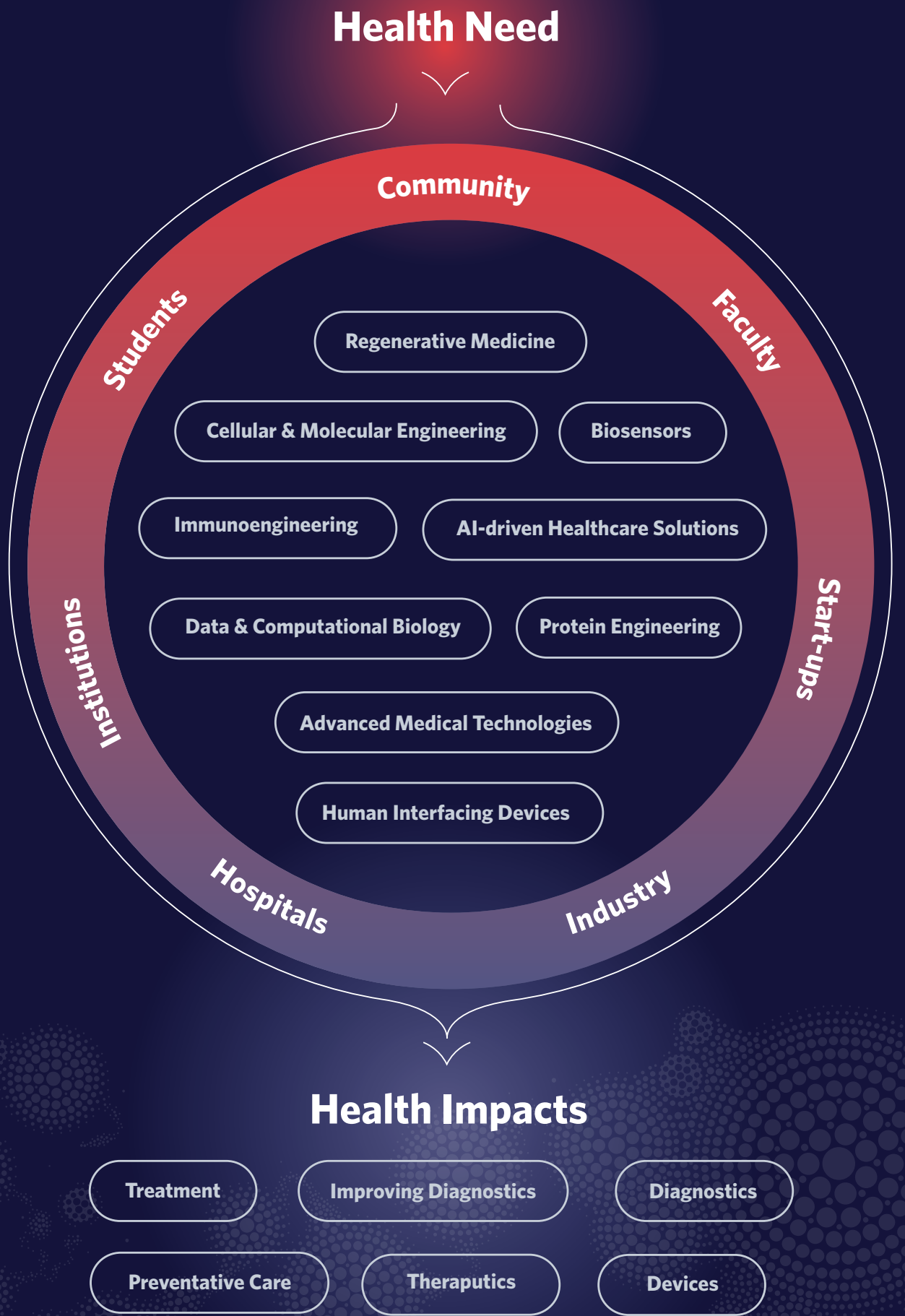
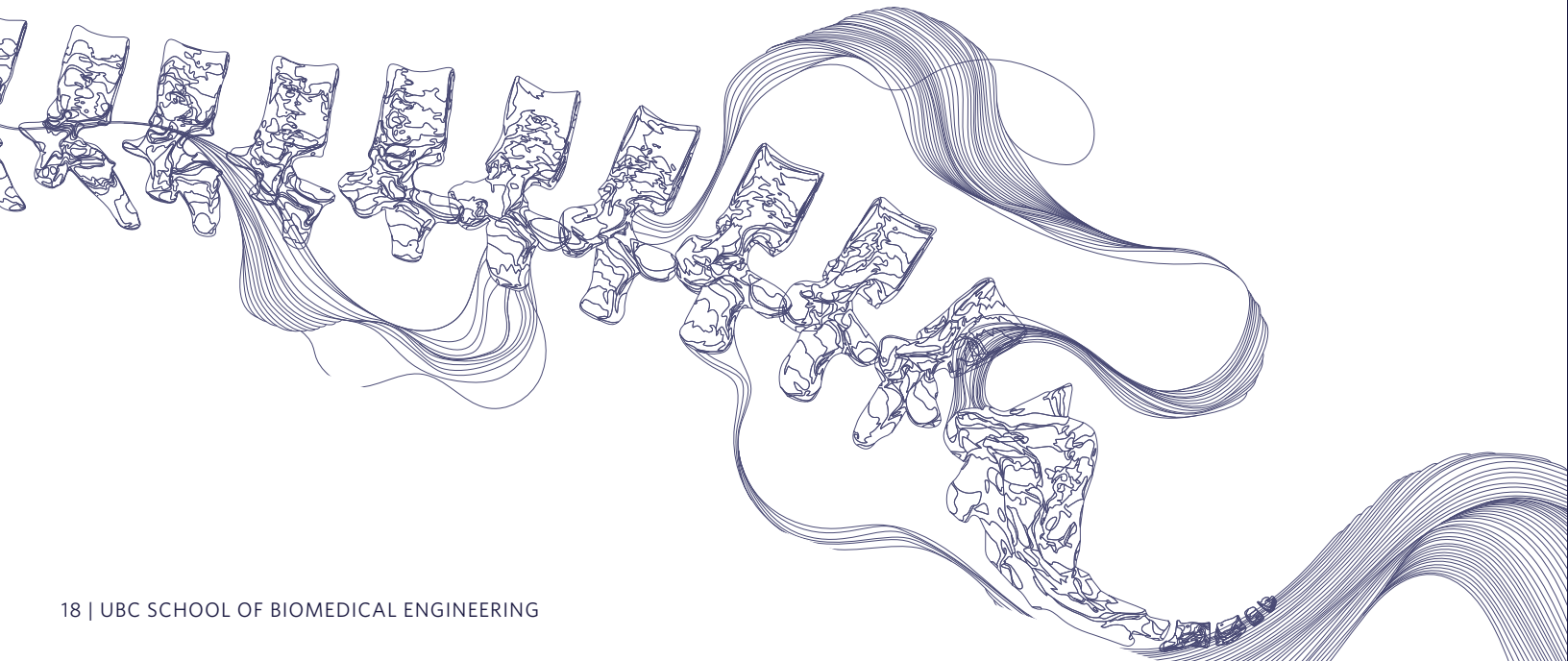
- 1. Establish Synergistic Research Strategies**
 We will refine our research strategies by leveraging our core research strengths in biomedical engineering, and by fostering internal collaborations across SBME labs and clusters to strengthen capabilities and maximize impact.
- 2. Strengthen Research Programs**
 We will enhance research excellence and impact by expanding support structures, including core facility programs and internal funding initiatives.
- 3. Strengthen Synergistic Partnerships**
 We will lead strategic national and international partnerships to drive collaborative research, amplify impact and accelerate societal benefits.
- 4. Expand Accessible Research Output**
 We will enhance the openness and accessibility of our research by establishing a policy and guiding principles that ensure a substantial proportion of our publications and preprints are made available through open access, disseminated broadly, and presented in formats that are accessible and understandable to the public.
- 5. Prioritize EDI in Research**
 We will champion EDI efforts in research by educating our community about its importance and by providing researchers with the resources they need to incorporate EDI into their research.



SBME Research & Translation is Transforming Health Impacts

At SBME, our approach to research and translation is rooted in a fundamental understanding of biology as an engineered system. We operate across scales from the molecular and cellular realms to the macro level of human physiology. With advances in regenerative medicine, imaging, AI, cellular engineering and more, we no longer have to engineer around biology, but with it.

SBME researchers are advancing knowledge in disease detection, drug delivery, injury prevention, and are improving health-care outcomes with faster and more precise technologies and diagnostic systems. Biomedical engineers are building a future where cures to degenerative diseases are possible, where devices seamlessly integrate with our bodies to assist and support critical functions, and where data-enabled algorithms help us detect and prevent disease and injury before they occur. Cell and tissue engineering has the potential to change how we think about disease and aging and move towards a system of regenerative medicine, using stem cells and biomaterials to repair, replace or regenerate damaged tissues and organs. We design human interfacing devices and engineer strategies for people with chronic disease, traumatic injury, and mobility limitations to help them integrate more fully with their environment. And finally, our imaging and computational biology researchers utilize modern computation tools such as artificial intelligence and machine learning, computer simulations or big data analytics to describe biological phenomenon.



Priority 3: Building Bridges Across Our Health Ecosystem

Objective: *Through collaborations within UBC, including APSC and FoM, partnerships across the life sciences ecosystem, and engaging the communities we serve, we will increase the relevance and impact of our research and educational programs.*

Cultivating strong relationships within UBC and the broader community—particularly underrepresented groups— is essential to achieving SBME’s vision. By bringing together diverse perspectives and expertise, SBME and its partners can make informed decisions about the technological advancements necessary to meet the needs of the communities we serve. Additionally, SBME aims to cultivate meaningful, reciprocal and beneficial partnerships with industry, clinicians, health authorities, governments and research institutes. These collaborations will enhance our reputation as a centre of expertise, broaden student exposure to diverse career paths and ensure the relevance and impact of our research and educational programs.

Key Results

1. Strengthen Relationships

Within and across UBC, we will strengthen our relationships and collaborations with the Faculty of Medicine, Faculty of Applied Science, and other faculties to generate shared opportunities and accelerate shared success.

2. Improve Translational Integration with Clinical Partners

We will deepen relationships with hospitals to strengthen clinical integration within SBME and develop pipelines for clinical translation.

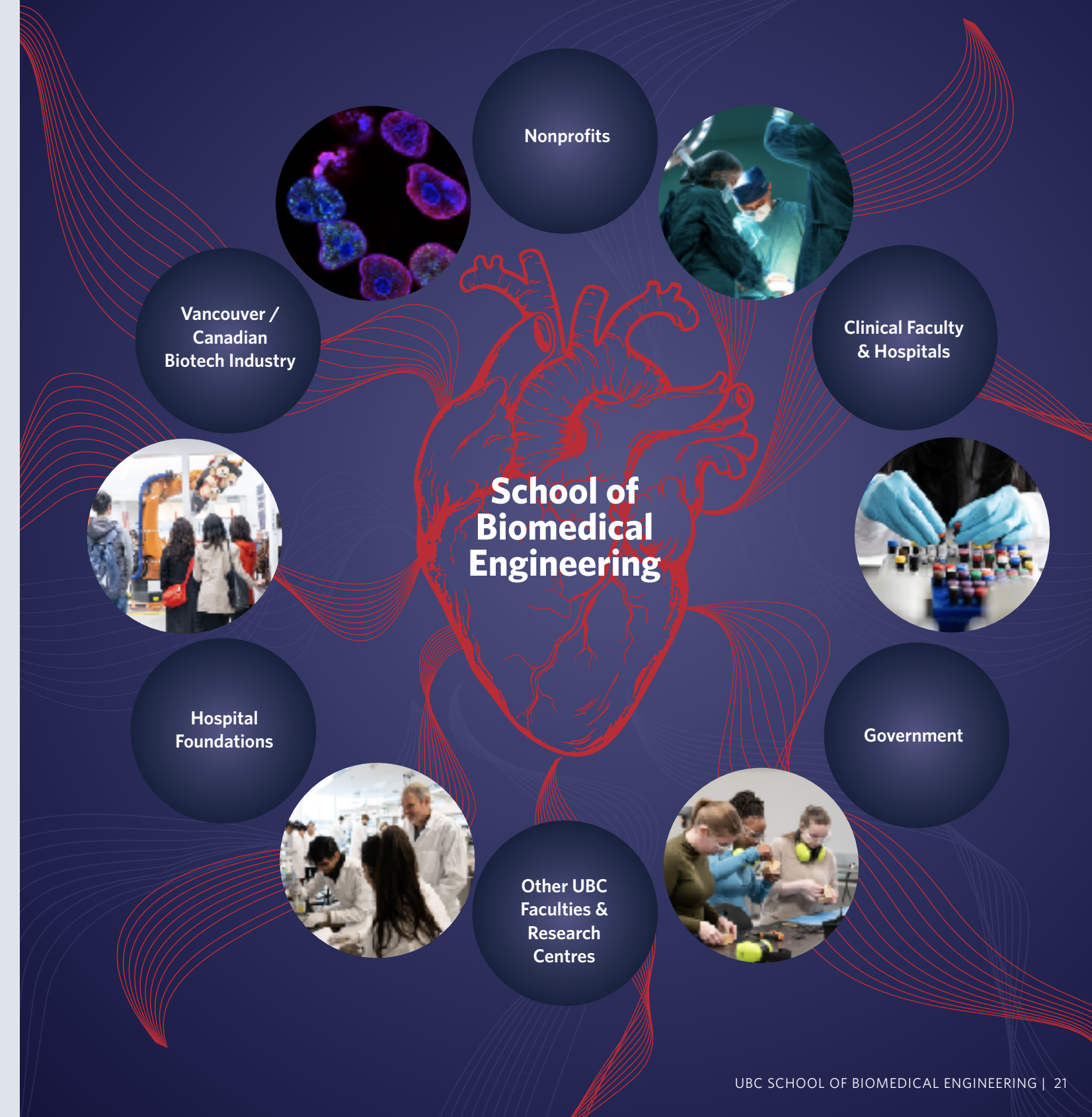
3. Extend Our Engagement with BC Communities

We will build relationships with diverse and broad-ranging communities, including Indigenous and underrepresented/underserved communities, to better meet the needs of the communities we serve.

4. Enhance Strategic Advisory Engagement

We will enhance how we gather and apply input from our advisory boards and committees to ensure external perspectives are meaningfully integrated into SBME’s academic, translational and societal missions.

The Heart of Innovation: Driving Health Solutions from Lab to Patient



Priority 4: Accelerating Biomedical Translation

Objective: *We will significantly increase the translation of our research discoveries into real-world health solutions by strengthening translational infrastructure, expanding access to clinical and commercialization expertise and resources and increasing the generation and application of intellectual property.*

Translating cutting-edge biomedical research into tangible benefits for patients and society requires more than just scientific excellence—it demands robust support systems, strategic resource sharing and a focus on protecting and leveraging intellectual property. SBME will build on its strengths by connecting researchers and early-stage ventures with technical expertise, clinical capabilities, commercialization infrastructure and mentorship networks. By securing sustainable funding and fostering collaborations, we will provide the foundation needed for successful translation and commercialization. Our efforts will also focus on increasing clinically-relevant testing, patent filings and ensuring our intellectual property leads to industry and/or clinical partnerships, so that SBME innovations can drive meaningful improvements in health care.

Key Results

1. Establish and Enhance SBME Innovates' Impact Through Strategic Support and Sustainability

We will strengthen SBME Innovates' role as one of UBC's leading biotechnology incubators by leveraging our technical expertise, infrastructure and mentorship networks to support early-stage ventures, while securing long-term sustainability through a hybrid funding model that includes grants, industry sponsorships and research partnerships.

2. Strengthen Clinical Translation and Intellectual Property Pathways

We aim to accelerate clinical translation by supporting both intellectual property development and the advancement of innovations rooted in technical know-how, engineering design and platform expertise.



Priority 5: Advancing SBME's Impact and Leadership

Objective: *We will elevate SBME's national and global influence by strategically amplifying our groundbreaking discoveries, shaping policy and attracting top minds and resources.*

Through targeted science communication, internal message alignment, policy engagement, and partnerships, we will ensure that SBME's work leads to real-world breakthroughs while drawing the best people and resources to support us in our mission.

Key Results

1. Recruit and Develop Research Talent

We will recruit faculty members to address critical gaps, develop strong support systems for retention, and implement mechanisms to attract top graduate students, postdoctoral fellows and researchers, establishing SBME as a hub for biomedical engineering.

2. Amplify Our Stories and Increase Influence

We will amplify our stories and grow SBME's influence by investing in science communication, public engagement, and strategic storytelling that supports our goals in recruitment, culture, academic excellence and research translation.

3. Showcase SBME and Strengthen Our Global Reputation Through Signature Events

To showcase our new building, build SBME's reputation and contribute to science and translation locally and internationally, we will host transformational events that engage global audiences, elevate our academic community and foster cross-sector collaboration.



Key Capabilities

To deliver on our strategic priorities, SBME will invest in developing five Key Capabilities. These are generally defined as new or high priority operational strengths that will support our ability to achieve our Strategic Priorities. Key Capabilities answer, ‘What must we be good at, or develop, to achieve our strategic priorities?’

Capability 1: A Culture of Collective Capacity

Objective: *SBME thrives because of the diversity of its people. By linking students, staff and faculty across roles and disciplines, we will build a community where individual strengths drive shared progress in biomedical engineering research, education and innovation.*

Through targeted science communication, internal message alignment, policy engagement and partnerships, we will ensure that SBME’s work leads to real-world breakthroughs while drawing the best people and resources to support us in our mission.

Key Results

- 1. Foster Understanding & Collaboration**
We will foster understanding and collaboration within our community by implementing joint lab meetings, increasing participation in seminars and social events, promoting cross-themed research discussions, and launching a peer mentorship program to enhance connections and inspire collaborations across SBME.
- 2. Amplify Internal and External Recognition**
We will develop initiatives to honour our community’s contributions and increase our nominations for prestigious awards at institutional, national and international levels.
- 3. Strengthen SBME Identity and Culture**
We will strengthen SBME’s identity and culture supporting faculty and staff members to thrive through opportunities for leadership development and creation of strategies to engage with our students from their academic journey to becoming alumni.



Capability 2: Strong Governance, Distributed Leadership

Objective: *We will establish a robust, transparent and inclusive governance structure that fosters a strong, cohesive community with a shared sense of responsibility and ownership for SBME's broader goals and its impact.*

Effective governance is crucial for creating a cohesive and motivated community. By implementing clear processes, fostering open communication and distributing leadership responsibilities, we aim to build a governance model that supports our strategic objectives while nurturing a positive and productive work environment.

Key Results

1. Optimize Administrative Support and Resource Allocation

We will optimize our administrative support and resource allocation by conducting a comprehensive needs assessment, implementing a resource optimization plan, streamlining workflows, aligning budgets, and automating processes to enhance efficiency, reduce operational costs, and align activities with prioritized strategic objectives.

2. Develop an Evaluation Framework to Measure Progress

We will track progress on our key results and overarching goals and regularly update our strategic plan at faculty retreats to ensure accountability and alignment with our objectives.

3. Foster Distributed Leadership

We will foster distributed leadership by implementing a model that empowers faculty, staff and students to lead strategic initiatives, and by providing leadership development opportunities.

Capability 3: Sustainable, Diversified Funding

Objective: *We will establish SBME as a financially resilient entity by diversifying and expanding our funding sources.*

SBME recognizes the need to adapt to changing financial landscapes within UBC and the broader academic environment. As we transition from our initial launch phase, we aim to develop a robust and diverse funding strategy that ensures our continued growth and impact in biomedical engineering research and education.

Key Results

1. Integrate Government Relations into SBME's Partnerships Strategy

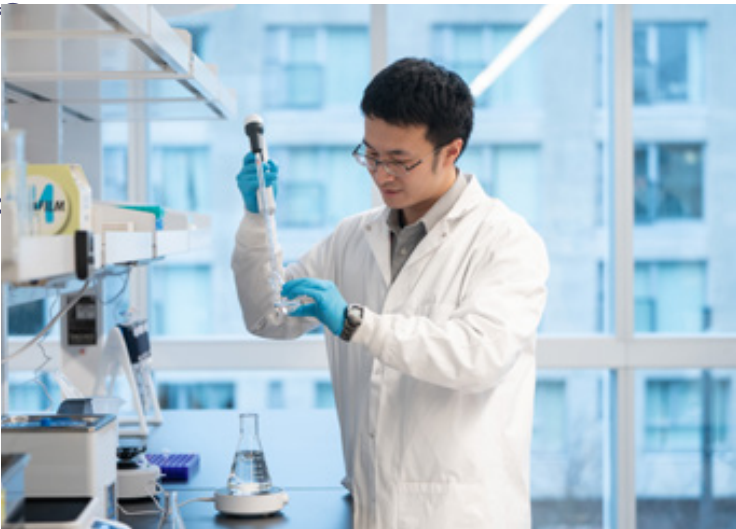
We will embed targeted government engagement within SBME's broader partnerships strategy, leveraging existing relationships and institutional infrastructure to secure strategic funding commitments and inform policy development. This approach will ensure alignment with UBC's government relations activities and optimize SBME's ability to navigate and respond to evolving government priorities.

2. Strengthen SBME's Financial Sustainability within UBC

We will strengthen our financial sustainability by increasing co-funded research, establishing an endowment fund, launching joint-fundraising campaigns and developing creative approaches to diversifying our revenue streams.

3. Increase Success Rates on Research Funding

We will focus on increasing our research funding success by strategic grant support, monitoring mentorship programs for junior faculty and researchers, providing targeted support through workshops and peer-review panels, and expanding large-scale team grants to secure substantial funding commitments.



Capability 4: A Welcome and Inclusive Environment Through Equity, Belonging and Reconciliation

Objective: *We will foster a welcoming and inclusive academic environment that embraces diversity, promotes equity and belonging, and advances Indigenous reconciliation.*

SBME recognizes that creating an inclusive culture is crucial to its overall success and a moral imperative. By fostering a sense of belonging, we will increase productivity, attract diverse talent and contribute meaningfully to the broader goals of reconciliation and equity at UBC and beyond.

Key Results

1. Advance Equity, Diversity and Inclusion Through Informed Strategy

We will advance Equity, Diversity and Inclusion (EDI) in SBME by completing a comprehensive assessment that informs a comprehensive strategy, aligned with UBC's broader EDI goals and ensuring ongoing progress and accountability.

2. Work Towards Indigenous Reconciliation

We will authentically work towards Indigenous reconciliation by strengthening Indigenous representation on our Indigenous Engagement Committee, developing and implementing a comprehensive reconciliation action plan, and increasing Indigenous student enrolment and content integration in our programs. This plan will demonstrate SBME's active commitment to reconciliation by supporting change, building reciprocal relationships and ensuring accountability to Indigenous peoples and communities, in direct support of the UBC Indigenous Strategic Plan's core themes.

Capability 5: Innovation with Purpose

Objective: *We will embrace a culture that values imagination, calculated risk, and empowers our community to challenge convention. Through thoughtful experimentation, agile execution and purposeful learning, we will develop systems that enable rapid learning, celebrate creativity and deliver scalable impact across research, education, translation and service.*

While innovation is a cross-cutting capability that is operationalized across all strategic priorities, the following Key Results are specifically intended to build the cultural and operational dimensions required to foster a culture of innovation at SBME.

Key Results

1. Increase Industry-Partnered Research and Innovation

We will strengthen our industry partnerships to accelerate research innovation and commercialization, fostering a collaborative ecosystem that enhances knowledge translation and drives impactful biomedical solutions.

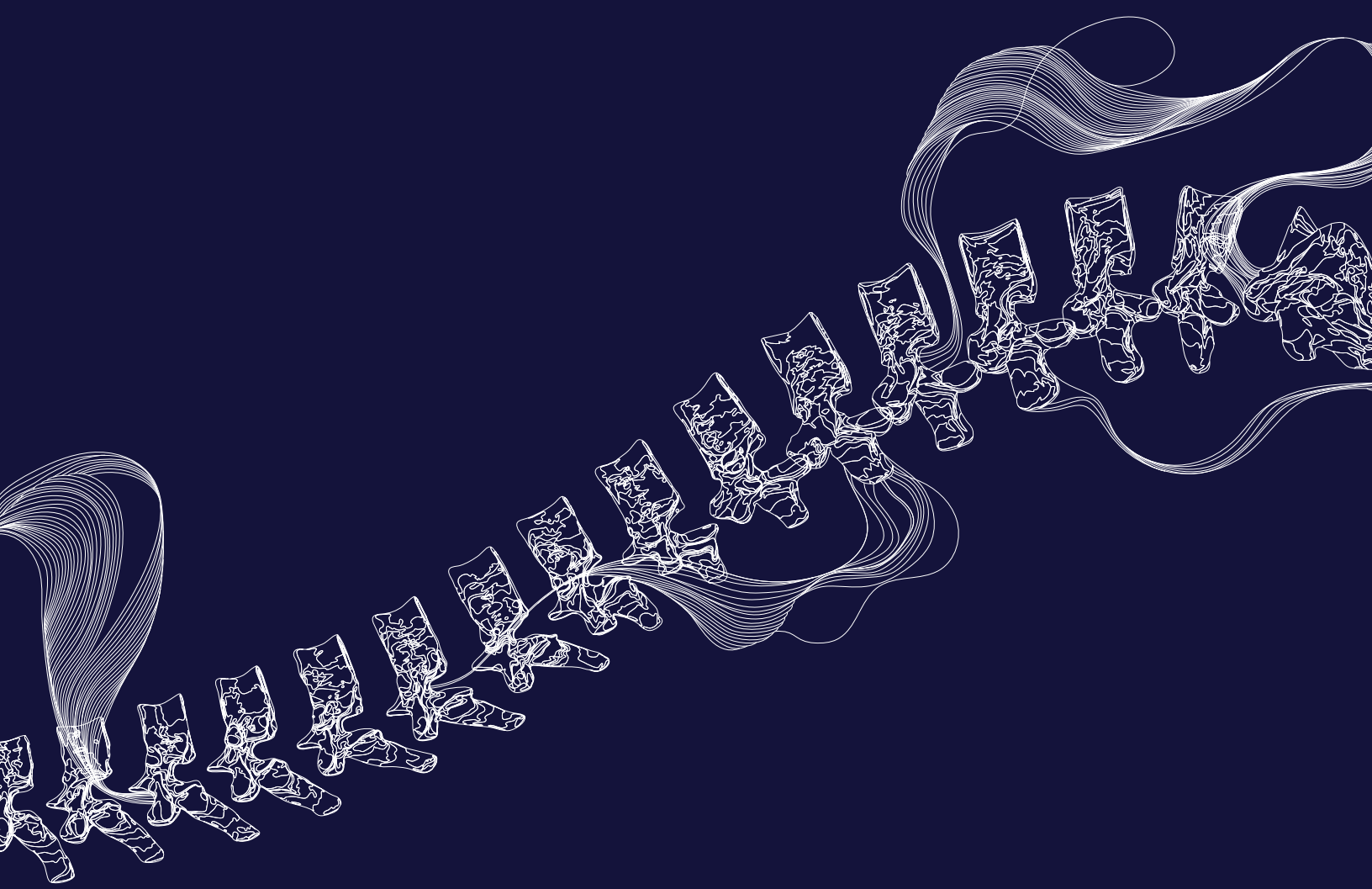
2. Catalyze a Scalable Innovation Ecosystem

We will establish and sustain a robust innovation pipeline that empowers the SBME community to translate bold ideas into scalable ventures and health system solutions.

3. Build SBME's Innovation Culture and Competency

We will foster a vibrant culture of innovation and strengthen organizational capability by integrating innovation-focused learning and leadership opportunities, celebrating creativity and experimentation through community events, and developing a framework to measure and communicate our innovation impact across research, education and translation.

Appendices



Appendix 1: Strategic Planning Process

SBME engaged Junxion Strategy to guide and facilitate the strategic planning process. The process was designed to seek a range of perspectives on our work and opportunities that lie ahead.

Discovery Phase

The process began with a Discovery phase to gather and compile information about the factors contributing to SBME’s success, challenges and current context.

Environmental Scan

The environmental scan included a high-level PESTLE analysis – examining the political, economic, social, technological, legal and environmental factors to consider during the strategic planning process. This furthered our understanding of the opportunities and threats faced in the current and forthcoming context. This also included a review and assessment of SBME’s benchmarks – institutions excelling in biomedical engineering research, innovation, translation and educational programming.

Interviews

We conducted in-depth interviews with sixteen representatives of SBME’s leadership team, advisory committees, staff, faculty and UBC partners. These interviews provided us with in-depth insights into SBME’s context, strengths and opportunities to pursue.

Focus Groups

We conducted focus groups with SBME’s Leadership Team in August 2024, another with faculty in November 2024, and one with the Industry Advisory Committee in December 2024. These focus groups discussed aspirations for the next five years, including what success might look like.

Survey

We conducted a survey of SBME’s faculty, staff and students to gather their perspectives on SBME’s strengths and opportunities, as well as other topics that had emerged during other Discovery activities. We received 244 responses to a survey emailed to roughly 1000 stakeholders.

Initial Insights

Upon completion of Discovery, Junxion presented a synthesis of the findings, organized into six prominent themes and discussed in a facilitated dialogue:

- | | |
|---------------------------------------|---|
| 1. Fertile Land | 4. Cultivating a World-Class Organization |
| 2. Nurturing the Seeds You've Planted | 5. Committees, Committees, Everywhere... |
| 3. The Power and Potential of Purpose | 6. Building a Home for Our Students |

Strategy Phase

Junxion Strategy facilitated two full-day, in-person workshops with SBME's leadership team, as well as additional student body, staff and faculty representatives. The first workshop served to gather broad, divergent thinking, building from the Initial Insights that emerged through the Discovery phase of this project and participants' new thinking.

During this workshop, we identified the short, medium and long-term outcomes we desire to achieve, as necessary pre-conditions for achieving our Vision, as represented by the Theory of Change.

These conversations laid the groundwork for the second strategic planning workshop, where we identified the objectives to focus on over the next few years in order to achieve the outcomes laid out in our Theory of Change. This workshop enabled focused dialogues to converge the range of ideas we had explored into a more viable list of priorities and the capabilities necessary to achieve them.

Appendix 2: Agile Implementation

To ensure this strategic plan is thoroughly implemented and maintains its relevance over time, SBME will update its progress on the plan regularly. Patrick Lencioni's 'Siloes, Politics and Turf Wars' outlines a suitable approach to agile implementation. Generally, the process includes:



Appendix 3: Document Version Control

Version 1

The first version was developed by Junxion Strategy, on completion of the strategic planning workshops Junxion facilitated with SBME in February 2025. It was presented to representatives of SBME on February 25, 2025.

Version 2

The second version was refined by Junxion Strategy, after receiving feedback from the Leadership Team. It was shared with a wider group of SBME representatives the week of March 17, 2025.

Version 3

The third version was refined by Junxion Strategy, after receiving additional feedback from the Leadership Team, the Industry Advisory Committee, and faculty. It is the final version and ready for publication.

Appendix 4: Biomedical Illustrations

The graphic images through this Strategic Plan are part of an art installation in the newly opened Gordon B Shrum Building. The images were created by Dr. Jen Ma, PhD.; Jen is a science communicator and an artist with a background in Stem Cell Bioengineering.

The mural spans four storeys and celebrates the dynamic relationship between biology, engineering and human health and is inspired by the research and vision of the School of Biomedical Engineering (SBME).

A continuous stream flows across each level, representing SBME's integrated engineering approaches and their seamless connection to the human body. On every floor, the stream takes on a new texture—symbolizing distinct research themes and reveals objects that emerge at different scales of biology, from molecular to systemic.

When you view this artwork in person, it appears larger-than-life; these abstract forms inspire a sense of wonder and possibility. Their deliberate design evokes the precision and purpose of SBME's work, while their openness allows for individual interpretation and imagination.

Minimalist in palette yet rich in meaning, the images brings together complexity and calm, science and art. It stands as both a reflection of SBME's present and a bold expression of its future: a place where discovery flows endlessly, and innovation knows no bounds.





THE UNIVERSITY OF BRITISH COLUMBIA

School of Biomedical Engineering

Faculties of Applied Science and Medicine