Genome BritishColumbia

Genomics positively impacts life, every day.

# STRATEGIC PLAN 2026–2029

Genome BritishColumbia

# Strategic Plan 2026–2029

## “Genomics positively impacts life, every day.”

## Territorial Acknowledgment

While Genome British Columbia (Genome BC) works in all parts of the province, it acknowledges that its office is located on the traditional, ancestral and unceded territories of the Coast Salish peoples, including the **xʷməθkwəy̓əm** (Musqueam), **Səl̓ílwətaʔ/Selilwitulh** (Tsleil-Waututh) and **Skwxwú7mesh** (Squamish) Nations who have been stewards of the land since time immemorial.

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## Proprietary Information



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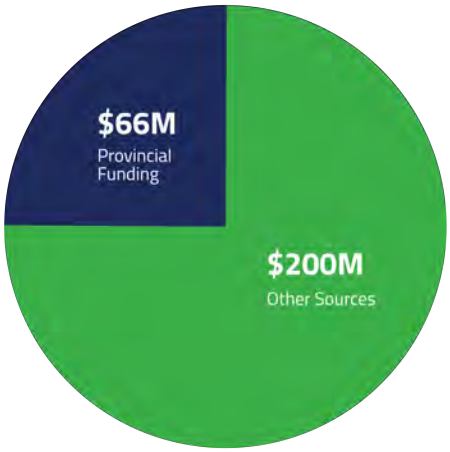
# Executive Summary

Genomics is no longer a promise on the horizon. It is a transformative force that is reshaping human health, food systems and the natural world and strengthening the resilience of our economy. For the past 25 years Genome British Columbia has helped build one of the strongest life-science and innovation ecosystems in Canada and positioned British Columbia as a global leader in genomics. This ecosystem connects discovery with action and brings together researchers, clinicians, entrepreneurs, Indigenous partners and industry leaders who share a commitment to improving life in British Columbia.

The 2026 to 2029 Strategic Plan sets the course for the next stage of this work. It builds on a long record of scientific excellence and partnership while responding to a world where genomic technologies are advancing quickly and expectations for equity, sustainability and trust are rising. The plan is anchored in a bold vision that genomics positively impacts life, every day.

Over the next three years Genome BC will invest at least $266M to support research and innovation across the province. This includes $66M in provincial funding that will be used to attract $200M from federal, industry and philanthropic partners. This blended model strengthens BC's ability to identify, grow and retain scientific and entrepreneurial talent and continues a long pattern of securing national investment at scale.




*Genome BC continues to attract significant external investment, leveraging partner contributions at roughly a 1:3 ratio. This approach ensures each provincial dollar delivers greater value and broader benefit for people across British Columbia.*

Genome BC's work is organized around four mutually reinforcing mandates: Research, Innovation, Entrepreneurship and Commercialization and Societal Engagement. These mandates are supported by commitments to equity, Indigenous partnership, data stewardship and organizational culture. They also reflect Genome BC's role in helping emerging companies develop genomics tools, scale their ideas and contribute to BC's bio-based economy.

Across all programs Genome BC will pursue three ambitions: embed genomics into health care; strengthen BC's bio-based economy; catalyze innovation through partnerships.

Genomics is moving into routine clinical care. Data volumes are expanding quickly and require secure and ethical governance. Indigenous data sovereignty and inclusive research practices are essential for trust and scientific accuracy. Advances in synthetic biology and gene editing are opening new possibilities in medicine, agriculture and biomanufacturing. Genomics is also becoming a driver of economic growth across health, forestry, agriculture, energy and environmental sectors.

Genome BC works across these diverse ecosystems to identify leaders and nurture cutting-edge discovery and implementation opportunities that improve human, animal, agricultural and environmental health and resiliency. As genomics adoption expands, so does the opportunity to generate Canadian intellectual property that fuels globally competitive industries and creates high-quality jobs for British Columbians.

BC is well positioned to lead as genomics becomes part of everyday systems. The next decade will see routine genome and environmental sequencing, integrated multi-omics for predictive health and ecosystem management and expanded population cohorts that reflect the diversity of people and environments in the province. These developments will support new biomanufacturing capacity, sustainable resource use and circular bioeconomy solutions.

Genome BC will continue to generate evidence that supports adoption in health care and other sectors. It will expand equitable access to genomic medicine and uphold Indigenous leadership and data sovereignty. It will help integrate genomics into clinical and preventive care through linked data, pharmacogenomics and digital health strategies. It will strengthen food security and climate resilience by supporting genomics-enabled agriculture, aquaculture, forestry and ecosystem monitoring. It will advance low-carbon and circular bioeconomy solutions including biomining, bioremediation and engineered biology. It will also support commercialization and entrepreneurship and build public trust through education and engagement.

Through programs like Geneskool®, Genome BC contributes to science literacy and builds awareness of how genomics will shape the future. This growing suite of education programs helps cultivate the next generation of leaders who will carry BC's genomics and life sciences ecosystem forward.

This plan is an invitation to work together. Genomics is shaping the present and with the right partnerships it can shape a more equitable, resilient and innovative future for British Columbia.

## What is Genomics?

### Genomics vs. Genetics:

- Genetics examines individual genes and how single traits are inherited.
- Genomics looks at all genetic material collectively to understand complex biological systems.

### Why genomics matters:

- Precision medicine
- Public health surveillance
- Agriculture and food security
- Environmental conservation

### Branches of genomics:

Structural, Functional, Comparative, Pharmacogenomics, Metagenomics

# About Genome BC

In British Columbia, the story of genomics is not just about scientific discovery: it's about the leap forward that happens when collaboration meets innovation and when science is applied to strengthen our health systems, environment and economy. For 25 years, Genome British Columbia (Genome BC), with the support of the British Columbia government, has driven evidence-based solutions that benefit BC both socially and economically from large scale challenges such as precision health care, food security and resilient ecosystem solutions to support small to medium enterprises (SMEs) and early-stage companies who need funding or mentorship.

Genome BC is founded in partnerships and collaborations. We catalyze through our investments and our outreach and team building strength. We bring together researchers, entrepreneurs, health leaders and policy makers to transform genomics from a promising science into a driving force for tangible impacts.

- From our earliest days, Genome BC has played a central role in establishing the province as a leader in genomics research and built a globally significant genomics research ecosystem in BC. We co-invested in foundational projects that mapped the human genome and identified critical markers for disease, agriculture and biodiversity.[1] These efforts built the knowledge base and institutional trust that now allows us to move with agility, connecting ideas to investment and discovery to application.

Today, in addition to continuing important discovery-based research, the organization's programs advance products, services and companies with an emphasis on innovation and entrepreneurial support. As well, education, genomics and society, communications and public outreach enhance Genome BC's portfolio of activities and continue to drive its credibility, visibility and relevance.

## Partnerships

Our strength lies in the diversity of our collaborations. Genome BC sits at the intersection between multiple stakeholders. Our role adapts according to need. We are a convener, a broker, a funder, an asset, an educator, a partner and a consultant. These relationships and nimbleness are the key to our competitive advantage. To do this well, we need the will and alignment of government, industry, academia and Indigenous peoples.

**Government**

- To the Government of BC, we are a strategic partner that leverages the first investor dollar to drive funding partnerships, attracts co-funding, retains top talent and enables us to support BC based startups – the economic drivers of tomorrow.
- We identify risks and look to provide solutions through targeted programming that assists in the delivery of public and economic benefits for BC and its citizens.
- Genome BC's independence allows us to de-risk initiatives for government so that we can demonstrate effectiveness and the ability to scale up.

**Industry**

- For industry, Genome BC provides valuable services through funding, consultancy and as a catalyst for greater collaboration and much needed technology advancement.

[1] Genome BC Annual Report: From Research to Results: 25 years of Genomics in British Columbia, August 2025

- To continue the drive for greater efficiency, safety, cost effectiveness and advanced technology, it is imperative industry co-invests in research so that together we can provide enhanced tools and technologies to benefit BC and its economic drivers.
- Genome BC's independence allows us to create broad consortiums to solve industry-wide challenges, so our investments and impacts are felt beyond the specific needs of any individual corporation.

**Academia**

- Genome BC's partnerships with B.C.'s research universities and medical health centres remain central to our success. These collaborations drive scientific excellence, train the next generation of innovators and ensure that genomics discoveries continue to advance knowledge while creating pathways for adoption and impact.
- Genome BC will continue to support translational research programs that move discoveries from lab to field, clinic, or industry; shared infrastructure for data management, biobanking and multi-omics analytics; cross-sector research that prepares students, post-docs and early career scientists for roles in implementation, policy and entrepreneurship; and academic research priorities with provincial and national genomics strategies to amplify collective impact.
- Genome BC's independence allows us to diversify our investments across the best researchers and research institutions throughout the province. This freedom ensures an equitable playing field and that the best projects can be selected, irrespective of the size of the institutions.

**Indigenous Peoples**

- Genome BC's Indigenous Peoples Engagement Framework sets out a path toward more equitable, respectful and reciprocal relationships with Indigenous communities. Backed by a $5M action plan, this work is grounded in decolonization, as a process of structural change.
- Genome BC will work with Indigenous partners to look at how research is done, who benefits and who holds power. We have revised internal policies to uphold Indigenous rights to data sovereignty, integrated cultural protocols across its work and appointed an Elder-in-Residence to guide ceremony, staff training and engagement.
- The organization will continue to support Indigenous leadership in genomics through dedicated programs and new roles.
- Genome BC will continue to engage directly with Indigenous leaders and communities across BC and beyond, guided by the understanding that trust and shared stewardship are essential to advancing science that serves everyone.

## Vision

Genomics positively impacts life, every day.

## Mission

We catalyze life sciences to drive innovation, improve lives and deliver equitable and sustainable solutions for people, society and the planet.

## Our Values

Organizational culture is a combination of shared values, beliefs and assumptions about how people should behave, how decisions are made and how an organization carries out its mandate - in essence, it acts as a “moral compass” for the organization.

Genome BC undertook an inclusive and comprehensive process to identify values that would reflect our beliefs and aspirations as an organization and inform our long-term strategy. They are not merely words; they are to be demonstrated and lived by us all.

**BOLDNESS** and agility motivate our actions.

**CURIOSITY** and creativity inspire us to imagine what is possible.

**EMPATHY** calls us to meet people where they are**.**

**EXCELLENCE** through teamwork and collaboration.

**INTEGRITY** and accountability are at the core of our decisions and interactions.

# Genomics — Current and Future Opportunities

## The Current and Future Outlook for Genomics

Over the last 25 years, genomics has evolved as an indispensable pillar of science, medicine and society. The dramatic reduction in sequencing costs, coupled with breakthroughs in molecular technologies and data science, has transformed genomics from a research tool into a driver of practical applications across health, agriculture, environment and industry. Today, whole-genome analysis is routine in many laboratories. Genomic data inform precision oncology and rare disease diagnosis and tools such as CRISPR are reshaping our ability to edit and engineer life. Yet we are still only at the beginning of this journey. Globally, genomics is entering a new phase characterized by four defining trends:

## Integration into Mainstream Healthcare System

Genomics is transitioning from “boutique” to “baseline.” From genetic testing for rare diseases, hereditary cancer syndromes and select research programs, the routine use of genomic information in clinical care is now expanding into population screening, pharmacogenomics, infectious disease management and preventive health. Canada and BC are poised to adopt genomic learning health systems that continuously connect research and care, enabling faster translation of discovery into improved outcomes.

The next decade will demand a sharper focus on implementation, embedding genomics into clinical pathways, public health systems and everyday medical practice. Achieving this will require not only partnerships between researchers, clinicians, policymakers and data stewards, but also the active engagement of social scientists and health economists to evaluate impact, understand adoption barriers and build the evidence base for faster and equitable integration. BC is uniquely positioned to demonstrate how a coordinated provincial genomics ecosystem can connect discovery with care delivery, ensuring patients and citizens directly benefit from genomic innovation.

## Explosion of Data and Data Science

Genomics has become a profoundly data-driven science. The scale and complexity of data are increasing at unprecedented rates, creating urgent needs for secure, interoperable infrastructure and advanced analytics. Cross-cutting data science—including AI, biobanks and new governance frameworks is essential to transform raw data into actionable insights.

Effective implementation will require sustained investment in computational infrastructure, data sharing standards and ethical governance frameworks that uphold privacy, security and equity of access while enabling innovation.

## Equity, Diversity and Global Collaboration

Genomics cannot fulfil its promise unless benefits are shared equitably. This requires the systematic inclusion of Indigenous peoples, underrepresented populations and diverse communities in both research participation and governance.

Canada's strength lies in its growing population-based genomic cohorts—large, long-term research initiatives that link genomic data with health, environmental and lifestyle information across diverse populations. When designed responsibly and with inclusion, these cohorts provide an evidence base for precision health that truly reflects population diversity. The richness of these datasets not only improves health outcomes within Canada but also contributes valuable insights to global efforts to understand the genomic foundations of disease and health.

Locally and nationally, Genome BC and its partners have an opportunity to lead in embedding equity and Indigenous data sovereignty into all genomic programs. To realize the full promise of genomics, research and policy must be designed through diverse perspectives and shared governance. Genome BC is embedding Indigenous knowledge, community input, fixed and social science expertise into its research programs and decision-making frameworks. These inclusive approaches ensure that the benefits of genomics are shared equitably and that science earns the trust of the people it serves.

## From Reading to Writing Genomes

Genomics is moving beyond sequencing to the active design and engineering of biology. Synthetic biology, genome editing and cell- and gene-based therapies are transforming what is possible in medicine, agriculture and sustainable manufacturing. In British Columbia, these advances are converging in a growing ecosystem that connects academic discovery, clinical translation and industrial innovation, from immuno-engineering and next-generation therapeutic development to sustainable biomanufacturing platforms that produce vaccines, biologics and engineered materials.

Beyond health, forestry and natural resource sectors are beginning to harness genomic insights and engineered microbes to create new bioproducts, biofuels and circular economy solutions, supporting sustainable land use and low-carbon industrial practices.

This new era of writing biology holds promise for curative therapies, cleaner technologies and a resilient bioeconomy. Yet with this power comes responsibility: ethical, economic, environmental, legal and social implications ($GE^3LS$) research, which, alongside robust regulatory frameworks and public dialogue, must evolve in parallel to ensure that the design and application of engineered biology remain ethical, equitable and trusted.

## Genomics as a Catalyst for Innovation and Growth

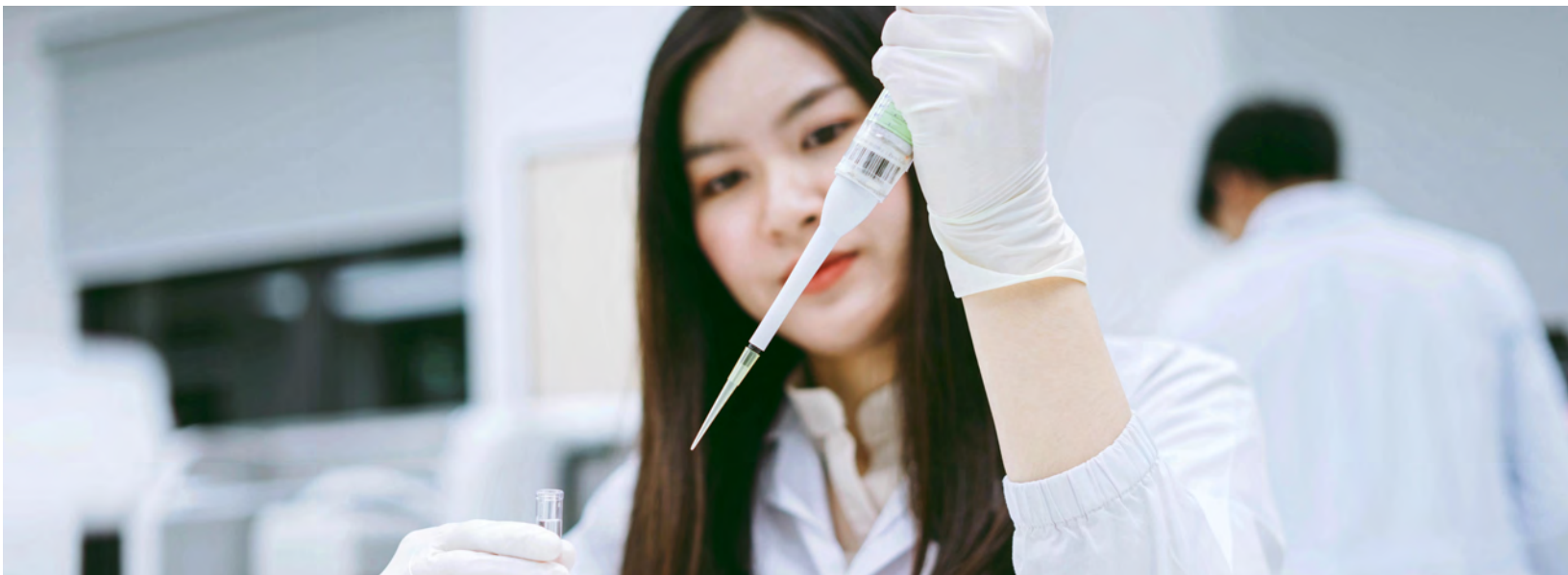
The same technologies that are transforming medicine are also reshaping manufacturing, agriculture, energy and environmental stewardship. In British Columbia, we have a thriving life sciences and biotechnology ecosystem which links world class research institutions, companies, investors, patients and government partners.

Genome BC plays a foundational role in this innovation pipeline, translating genomic discoveries into products, services and ventures that create jobs and strengthen BC's position in the national and global bioeconomy. Our programs de-risk investment in early innovation, connect researchers and entrepreneurs and accelerate the movement of ideas from the laboratory to market.

Across sectors, genomics is enabling new economic value chains:

- In health and biomanufacturing, genomics underpins the design and production of vaccines, biologics and cell- and gene-based therapies, supporting domestic capacity and global competitiveness.
- In agrifood and natural resources, genomic tools improve yield, food security, sustainability and traceability in agri-food systems and forestry, while driving innovation in biomaterials and low-carbon industries.
- In environmental and energy innovation, genomic insights and engineered microbes are unlocking circular bioeconomy solutions such as bioremediation, biofuels and carbon-capture biotechnologies, aligning economic growth and sustainability through circular processes that reduce waste and emissions.

By nurturing partnerships between academia, industry and government, Genome BC is helping to ensure that innovation derived from genomics translates into both societal and economic resilience. The growth of BC's genomics enabled industries will not only enhance and diversify the province's economy but also position Canada as a leader in the responsible and sustainable application of biotechnology worldwide.



## Technology Horizons: Genomics 2026-2036

Future genomic advancements will be informed by the major genomics and data-technology shifts expected over the next decade and Genome BC must be positioned to lead and enable impact.

In the next decade, genomics will advance toward being an integral part of medicine, society and the life sciences ecosystem. Across British Columbia and Canada, we will build the foundations for broader adoption, equity and impact through the following areas of progress:

- Genomic sequencing-based testing: Whole genome and environmental sequencing will move closer to routine use, in healthcare for oncology, rare diseases and pathogen surveillance and beyond health in biodiversity monitoring, precision breeding and ecosystem management, all supported by scalable infrastructure, data integration and workforce training.
- Integrating multi-omics for predictive health: Pilot programs combining genomic, epigenetic, metagenomic and transcriptomic data with clinical, environmental and industrial information will inform more precise and preventive models across human health food production, forestry and bioresource management.
- Redefining population diversity in genomics: Research programs will modernize how diversity is defined and analysed integrating biology, social context and environment. This will strengthen the validity of genomic findings across populations and ecosystems and improve understanding of disease risk, ecosystem change and adaptation to climate pressures.
- Expanding diverse population cohorts: Canada and BC will continue to build, link and scale large, diverse and sovereign population and biobank based cohorts, human, agricultural and environmental that connect genomic and phenotypic data, laying the groundwork for next generation precision health, food security and sustainability science. This will support discovery, validation and translation in Canada rather than relying on non-representative external data sets (US, UK, European).

Genome BC will play a leading role in shaping the evidence, infrastructure and policy frameworks required for the equitable, responsible and widespread implementation of genomics. For British Columbia, genomics represents not only a scientific frontier and an economic and societal opportunity. Genome BC's approach integrates research, innovation, commercialization, education, economics and genomics and society to deliver impact across health, food security, climate resilience and clean energy.

Together these technology shifts will accelerate translation from discovery to impact, improving prevention, diagnosis and treatment, strengthening biodiversity and food system resilience and growing BC's bioeconomy through clear impact pathways and actions.

Going forward, Genome BC must continue to invest in genomics as a holistic engine for discovery, translation and innovation, ensuring that data, equity and responsible application remain at the center. By aligning provincial strengths with global momentum, Genome BC can position the province as a leader in harnessing genomics for health, sustainability and economic resilience.

# Our Plan: 2026–2029

## Research Mandate

### Health Genomics

#### Advancing from Discovery to Prevention

British Columbia's health system is at a pivotal moment. The demand for more personalized, preventive and equitable care continues to grow alongside pressures of rising costs, an aging population and rapid technological change.

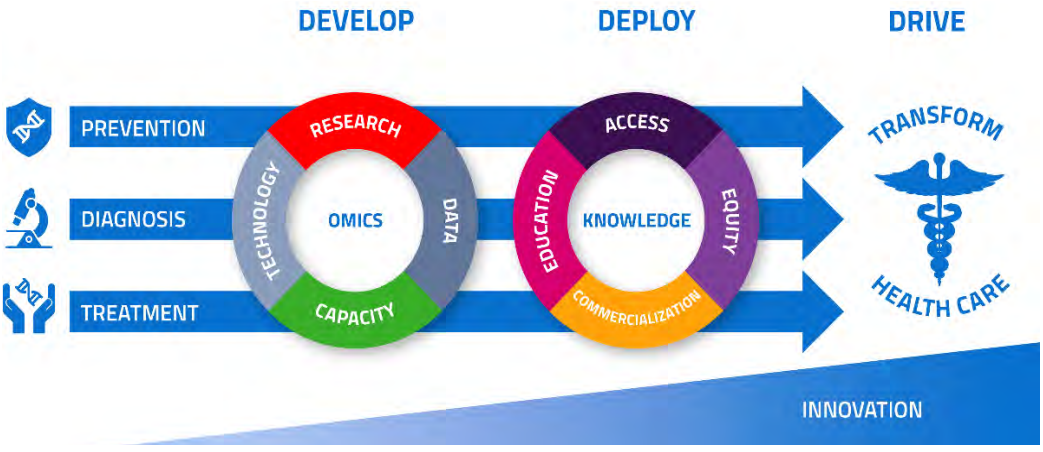
Genomics provides powerful tools to understand disease risk, improve diagnosis and tailor treatment, transforming health care from reactive to predictive and preventive. By integrating genomic insights into clinical and public health systems, BC can improve patient outcomes, accelerate innovation and strengthen the province's leadership in precision health.

Genome BC's health genomics strategy for 2026–2029 positions genomics as a bridge between innovation and health-system adoption. Building on decades of leadership in cancer, rare and infectious disease genomics, Genome BC will focus on embedding genomics into precision, preventive and population health, ensuring that the benefits of discovery reach every patient, clinician and community in British Columbia.

#### A System in Transition

Genomics is transforming healthcare from a model centred on diagnosis and treatment to one focused on prediction, prevention and early intervention. The declining cost of sequencing, the integration of multi-omics and clinical data and advances in AI-enabled analytics make it possible to anticipate disease risk, tailor interventions and monitor population health in real time.

In this evolving landscape, Genome BC acts as the connector between innovation and implementation, aligning research investments, provincial data and omics infrastructure, as well as evidence frameworks to support health-system readiness. Our strategy moves genomics from specialized research programs into routine, equitable care.




*Applying the power of genomics to transform health care*

**Strategic Driver 1: Generate Evidence for Genomic Adoption**
Genome BC will advance the integration of genomics into healthcare by strengthening the evidence base needed to inform policy, clinical practice and funding decisions. Through partnerships grounded in implementation science, health economics and data analysis, Genome BC will help demonstrate measurable value to patients, providers and the broader system.

Flagship initiatives such as the Personalized OncoGenomics (POG) program and the Marathon of Hope Cancer Centres Network (MOHCCN) exemplify this approach – showing how genomic profiling and multi-omic data can guide clinical decision-making and establish scalable frameworks for precision oncology.

Building on these successes, Genome BC will co-invest with health-system partners to extend this translational model into rare and infectious diseases, pharmacogenomics and population-level screening. By aligning research with system needs and policy priorities, Genome BC will help shape evidence-based standards and implementation frameworks that support the responsible and equitable adoption of genomics across BC's healthcare ecosystem.

**Strategic Driver 2: Expand Equitable Access to Genomic Medicine**
Through engagement, initiatives and programs, Genome BC will work with patients, families and underrepresented groups to support culturally safe, accessible approaches to genomic research and care. Upholding Indigenous data sovereignty remans central, with co-developed models that reflect Indigenous priorities, leadership and values.

Genomic studies — such as efforts to address the lack of reference genomes for Indigenous and underrepresented populations — are enhancing diagnostic equity and fostering trust in clinical genomics. Genome BC will expand this work through inclusive, transparent and mutually beneficial research and innovation programs, ensuring genomic advances strengthen both science and relationships with the people and environments it serves.

**Strategic Driver 3: Integrate Genomics into Clinical and Preventive Care**
Genome BC will help bridge research and healthcare by supporting the integration of genomics into clinical and preventive care pathways. In collaboration with provincial partners, Genome BC will advance initiatives that link genomics and clinical data, expand pharmacogenomics research to support safer, more effective drug use and embed genomic information within provincial data infrastructure and digital health strategies.

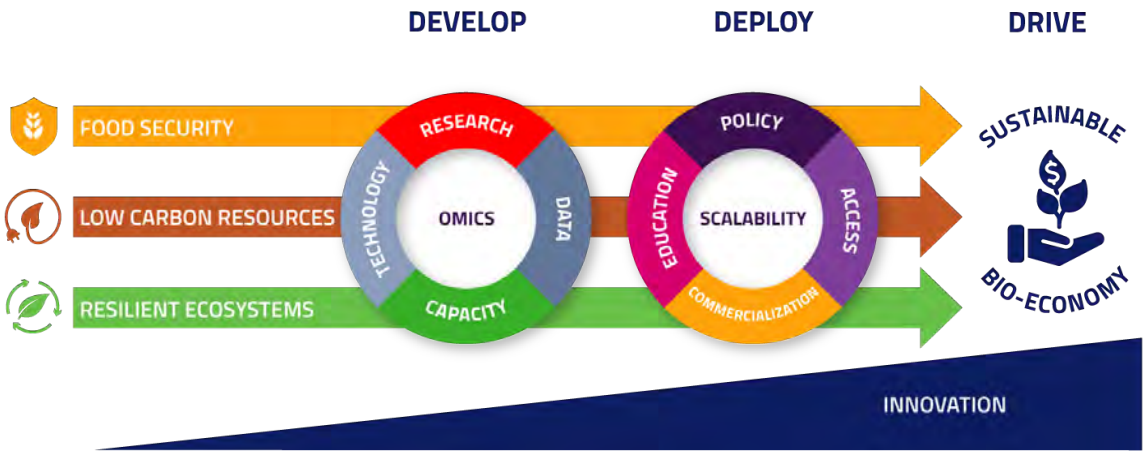
These initiatives will help shift BC's healthcare system from reactive to predictive and preventive - where genomic insights enable early detection, risk assessment and personalized treatment, improving outcomes and enhancing system sustainability.

## Advancing a Sustainable and Competitive Agrifood and Natural Resource Based Economic Sector in BC

British Columbia's prosperity depends on the health of its land, water and biological resources. From forests and fisheries to farms and critical minerals, these sectors face growing pressure from climate change, resource depletion and global market volatility.

Genomics offers powerful tools to understand, monitor and manage these systems, enabling BC to strengthen food security, biodiversity and low-carbon innovation while fostering a more sustainable and competitive bio-based economy.

Genome BC's strategy for 2026–2029 focuses on translating genomic science into practical applications for environmental stewardship, food system resilience and sustainable resource use. Working with industry, government, academia and Indigenous partners, we will continue to co-invest in programs and initiatives that integrate genomics into policy, regulation and innovation pipelines across the agrifood and natural resource sectors.




*A sustainable resource-based economy for BC*

**Strategic Driver 1: Strengthen Food Security and Resilient Food Systems**
Genome BC will drive research and innovation to enhance the productivity, resilience and sustainability of BC's food systems. By applying genomics across agriculture, aquaculture and food production, Genome BC will help develop climate resilient crops and livestock, improve pest and pathogen detection and strengthen food safety and supply chain integrity.

Genomic tools will also support sustainable aquaculture and fisheries by improving disease resistance and environmental performance. In parallel, genomics will inform soil, microbiome and water-quality management to promote long-term ecosystem health.

By linking genomic data to production practices and regulatory decision-making, Genome BC will help keep BC's agrifood sector globally competitive - while advancing local and Indigenous food sovereignty.

**Strategic Driver 2: Advance Low-Carbon and Circular Resource Innovation**
Genome BC will continue to drive bio-innovation across forestry, energy and mining to reduce environmental impact and increase value, unlocking greater value from BC's natural capital. Genomics will support climate-adaptive forest management, enhance pest and pathogen surveillance and guide reforestation efforts.

In the mining and energy sectors, Genome BC will help advance biomining and bioremediation technologies for cleaner extraction, waste reduction and legacy site restoration. Microbial and enzymatic processes will also enable the conversion of organic and industrial waste into high value bioproducts, fuels and chemicals.

Together, these efforts will help transition BC toward a low carbon, circular bioeconomy, aligning innovation and growth with environmental sustainability.

**Strategic Driver 3: Protect Biodiversity and Ecosystem Health**
Genome BC takes a holistic, multidisciplinary approach to strengthening biodiversity and ecosystem resilience aligned with global frameworks such as the Kunming–Montreal Global Biodiversity Framework and evolving international practices for equitable benefit sharing. The organization will continue investing in genomic applications for biodiversity monitoring, ecosystem stewardship and conservation policy.

Using environmental DNA (eDNA), metagenomics and high-quality reference genomes, these initiatives will enable more accurate species tracking, ecosystem change assessment and informed decision-making in land, water and resource management. Integrating genomics with environmental, climate and geospatial data will support predictive ecosystem management, helping BC anticipate and mitigate risks to biodiversity, natural resources and community well-being.

Genome BC will ensure these programs are co-developed with Indigenous partners and guided by interdisciplinary expertise - including social scientists, environmental economists and policy specialists so genomic solutions are culturally grounded, socially responsible and ready for adoption. By embedding equity, inclusion, transparency and collaboration into its research investments, Genome BC will help safeguard BC's ecological heritage while promoting innovation in sustainable resource use.

## Cross-cutting enablers

**Build capacity and readiness:** Genome BC will continue to invest in the scientific, data and technological infrastructure needed for large-scale genomic implementation, including multi-omic platforms across the province with advanced capabilities in sequencing, bioinformatics, proteomics, metabolomics and computational biology. These shared resources form the backbone of BC's genomics ecosystem, enabling the discovery, validation and translation of research into clinical and industrial applications.

Genome BC will also evaluate and support emerging platforms in partnership with key stakeholders to ensure provincial infrastructure stays at the forefront of innovation. This approach will enable BC to integrate new tools and technologies, such as next generation sequencing, spatial and single-cell omics and AI-enabled analytics into research, clinical and industry settings.

Combined with cutting-edge infrastructure and high-value skill sets, these efforts will position BC as a leader in genomic innovation and system readiness across sectors, driving discovery, sustainability and economic growth province-wide.

**Enable cross-sector health solutions:** Genome BC's investments will continue to strengthen genomic One Health capacity in BC by building an integrated network of expertise and data across public health, veterinary medicine and environmental monitoring. This approach connects human, animal and environmental genomics to address challenges such as antimicrobial resistance, zoonotic disease and climate-related health risks.

The COVID-19 pandemic demonstrated the power of genomics to detect, track and respond to emerging infectious threats in real time. Genome BC will build on these lessons by supporting programs that enhance surveillance, rapid diagnostics and risk-prediction models for emerging and re-emerging diseases, including zoonotic and vector-borne pathogens.

Through coordinated partnerships and data-driven innovation, Genome BC will help ensure BC is ready to detect, prevent and respond to biological risks across human, animal and environmental systems.

**Embed equity and inclusion:** Through engagement and programs, Genome BC works with patients, families and underrepresented groups to support culturally safe, accessible approaches to genomic research and care**.** Upholding Indigenous data sovereignty remains central, with co-developed models that reflect Indigenous priorities and leadership.

Initiatives advancing equitable access to genomic medicine and benefit-sharing frameworks in biodiversity genomics are helping redefine how genomic outcomes align with community values. In health, efforts to address the lack of reference genomes for Indigenous and underrepresented populations are improving diagnostic equity and building trust in clinical genomics. National collaborations in biodiversity and environmental genomics are integrating Indigenous knowledge and ensuring genomic data are managed in ways that return value and capacity to participating communities.

Genome BC will continue to expand this approach through its public research and innovation leadership programs, fostering projects that promote inclusion, transparency and mutual benefit—ensuring genomic innovation in BC strengthens both science and relationships with the people and environments it serves.

**Drive economic and societal value:** Genome BC will foster innovation and partnerships that translate genomics research into tangible economic and societal benefits across health, agrifood and natural resource sectors. By co-investing with government, academia and industry, Genome BC will accelerate the development and commercialization of genomics enabled solutions from precision and digital health innovations to sustainable biotechnologies, biomaterials and bioenergy that support a low-carbon, circular economy.

These efforts will strengthen BC's life sciences and biomanufacturing ecosystem while supporting small and medium sized enterprises, rural regions and Indigenous communities in adopting genomics informed practices that improve productivity, equity and environmental performance.

As a connector between science, policy and industry, Genome BC will ensure that genomic innovation drives competitiveness and job creation, while fostering social resilience, responsible stewardship and long-term prosperity for British Columbians.

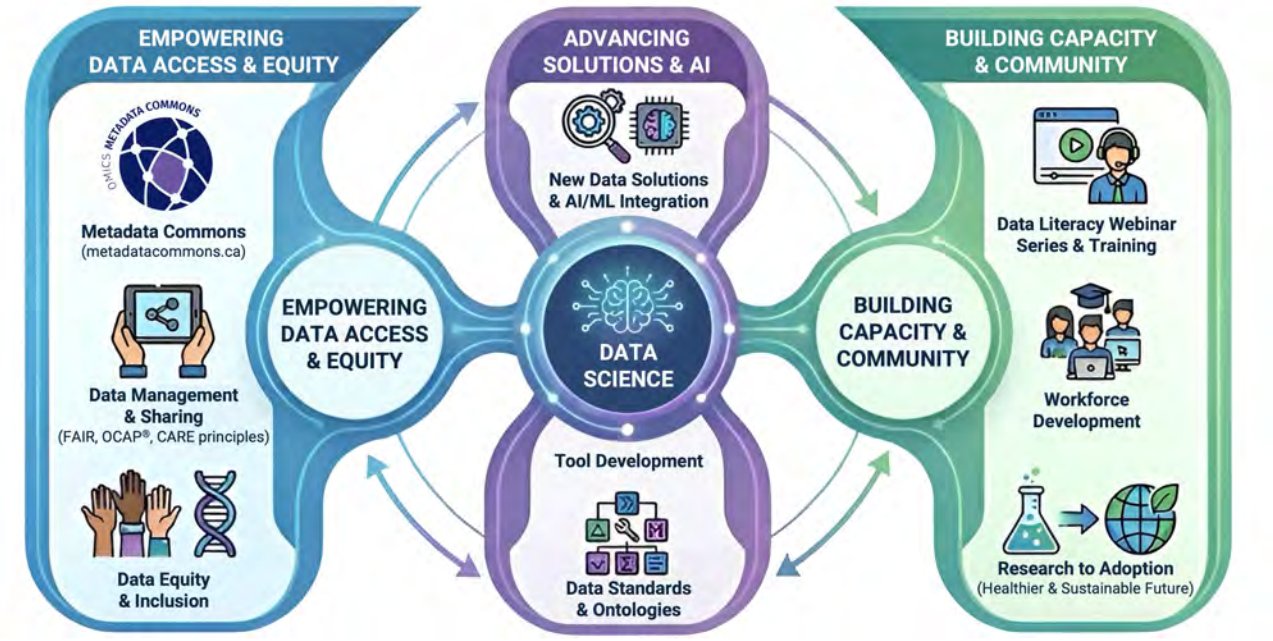
## Data

### Data Science and AI: Building the Foundation for Genomic Insight

Genomic data are among the most valuable public assets of the 21st century. The responsible use of genomic data is essential to advancing discovery, precision health and sustainable innovation across British Columbia and beyond. Genome BC's Data Science Strategy positions data as a cross-cutting enabler, supporting the integration of genomics into health, agriculture, environment and industry through secure, interoperable and ethically governed data ecosystems.

Genome BC's approach is guided by the principle that publicly funded data are public assets that should be shared responsibly to maximize value for society. In alignment with global standards such as the FAIR (Findable, Accessible, Interoperable, Reusable) principles and Indigenous data frameworks including OCAP® (Ownership, Control, Access and Possession) and CARE (Collective Benefit, Authority to Control, Responsibility and Ethics), Genome BC is embedding responsible data governance, privacy and sovereignty across its programs. This ensures that genomic data are managed not only for innovation, but also for equity, inclusion and long-term public trust.

### Data for a Healthier and Sustainable Future




Ultimately, this platform transforms fragmented information into collective intelligence, empowering British Columbia to lead the way in solving complex challenges through data-driven innovation. The Metadata Commons enables the discovery, linkage and responsible reuse of genomic and related datasets, promoting transparency, interoperability and secondary data use. By providing standardized and AI-ready data environments, the Metadata Commons lays the groundwork for advanced analytics and evidence-based policy.

Building on this foundation, Genome BC is catalyzing the use of artificial intelligence to interpret complex multi-omic, clinical and environmental datasets. These tools enable faster, more precise insights into health, biodiversity and sustainability challenges, accelerating discovery and informing decision-making across sectors. By combining responsible data stewardship with computational innovation, Genome BC is helping to create a trusted, future-ready ecosystem where genomics and data science work hand in hand to drive discovery, application and societal benefit.

At the provincial, national and global levels, Genome BC continues to serve as a connector, bringing together researchers, policymakers and industry to advance a coherent framework for genomic data integration and responsible AI. Through partnerships with Genome Canada, provincial ministries and international initiatives such as the Global Alliance for Genomics and Health (GA4GH), the Global Biodiversity Framework and global efforts on access and benefit-sharing of digital sequence information, Genome BC is helping position British Columbia as a leader in ethical, data-driven genomics that delivers value to people, the economy and the planet.

# Programs, Tools and Capabilities

## Genome BC Programs

Genome BC's programs span the entire innovation continuum, from discovery to application and translation, reflecting our belief that innovation cannot thrive without a strong foundation in discovery science. Our funding portfolio supports both the generation of new knowledge and the application of that knowledge to today's challenges in health, environment and industry.

We invest in foundational, applied and translational research to ensure that genomics discoveries are developed into practical solutions that deliver measurable impact for British Columbians. Our innovation initiatives originated under Genome BC's Innovation Mandate and are now fully embedded in our core programming. They include programs that advance disruptive technologies and products from concept to commercialization, fuelling new applications of genomics in healthcare, food security, biodiversity and clean energy and drive sustainable growth in BC's innovation ecosystem.

Research and innovation are also delivered through strong partnership programs with both the public sector and industry, designed to build capacity and accelerate the adoption of genomics across sectors. Through these collaborations, Genome BC supports both the implementation of genomics within the public sector and the commercialization of innovations across the health, agrifood and natural resource sectors. These collaborations help translate research into practical solutions, from precision health and disease surveillance to sustainable production and bio-based manufacturing, creating new value chains and accelerating adoption across BC's economy.

A unique example of this is Genome BC's Genomic Education for Health Care Professionals (GEHP) initiative which was developed to help provide practical tools and targeted education to support informed decision making in clinical health settings. Led by Genome BC and developed with input from health authorities, educators and clinical teams, GEHP focuses on non-genetics providers working in primary care, acute care and specialty settings. Genome BC will continue to partner with key stakeholders to enhance the clinical uptake of genomics supporting referrals, confident clinical decisions and helping genomics move into practice across the province. Looking ahead GEHP will transition to Genomics Education for Professionals (GEP) and expand to support the uptake of Environmental DNA (eDNA) as a credible tool for BC's environmental challenges.

Recognizing that today's challenges require multi-dimensional perspectives, Genome BC has expanded its program design to integrate data science, social sciences, policy research and Indigenous knowledge. The Research and Policy Innovation Lab (PRIL) exemplifies this approach, bringing together scientists, economists and community partners to co-develop solutions that are technically robust, socially responsible and ready for adoption.

Finally, our funding programs emphasize agility and responsiveness, allowing Genome BC to act quickly on emerging priorities and opportunities in partnership with provincial ministries, industry and Genome Canada. Across all program areas, our goal is to catalyze genomics innovation that advances discovery, drives adoption and delivers societal, economic and environmental benefits across British Columbia.

## Genome Canada Programs

Since its founding, Genome BC has been a key regional partner in Canada's national genomic enterprise, co-funding many initiatives with Genome Canada and helping British Columbia punch above its weight in federal genomic investments. The national landscape is evolving. Genome Canada is now advancing a suite of large-

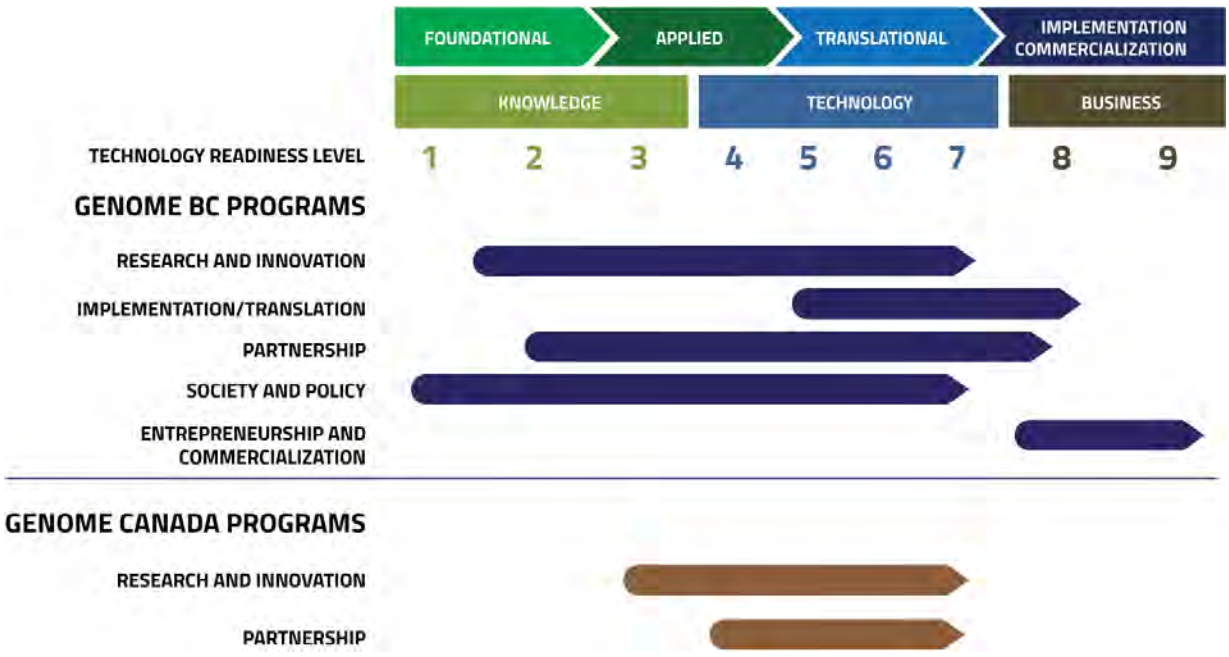
scale, challenge-driven programs designed to accelerate the translation and commercialization of genomics, strengthen regional capacity and deliver measurable societal impact.

A central mechanism for this is the Genomic Applications Partnership Program (GAPP), which supports industry-facing, application-driven projects that translate discovery into practice. Recent GAPP rounds have funded projects ranging from real-time wastewater surveillance to genomic monitoring for climate resilience, illustrating how genomics is moving from research to deployment across health, environment and industry. Under the Canadian Genomics Strategy (CGS), Genome Canada has committed over $96 million to expand such translational and commercialization pathways nationally, aligning closely with Genome BC's innovation mandate and strengthening BC's access to federal co-investment opportunities.

The Canadian Precision Health Initiative (CPHI), launched in 2025, represents a transformative step toward Canada's genomics-enabled future. By sequencing over 100,000 human genomes, CPHI is building the nation's first large-scale precision health cohort and the data infrastructure required to support predictive, preventive and personalized medicine. This initiative complements Genome BC's provincial strategy by advancing the integration of genomics into healthcare delivery, accelerating the generation of real-world evidence for clinical adoption and enabling equitable participation of diverse populations across Canada.

Together, these national initiatives create an unprecedented opportunity to connect provincial strengths in data science, clinical genomics and innovation to a cohesive Canadian framework. Genome BC will continue to prepare and support BC research teams in competing successfully for federal funding, leveraging our provincial co-investment programs and infrastructure to align regional priorities with national strategy.

## Program Continuum



# Entrepreneurship and Commercialization Mandate

## Commercialization

The Industry Innovation Program ($I^2$ Fund), launched in 2016, supports companies developing innovative life science technologies at the seed stage or later in their commercial journey. This includes genomics and other technologies addressing challenges in human health, environmental stewardship, food system resilience and sustainable resource use. The fund also supports digital health solutions that advance precision medicine in clinical practice.

Self-sustaining by design, the $I^2$ Fund provides non-dilutive, interest-free debt capital to bridge the gap between early-stage seed funding and Series A venture financing, a niche often overlooked by private equity. Loans include a success fee (e.g. limited royalty on revenues) and are matched by other public or private funding sources.

In addition to capital, Genome BC offers investee companies access to expert advice, networks and connections across BC's life sciences ecosystem. Genome BC will continue to explore alternative commercialization funding models to optimally support its innovation mandate.

## Entrepreneurship

In response to a need for enhanced support, Genome BC launched the Entrepreneurship Partnership Program (EPP) to help build a strong life sciences ecosystem. The program supports existing incubators focused on mentoring BC's life sciences entrepreneurs, advancing start-up companies by leveraging established programs.

EPP also provides Genome BC with valuable insights and access to the entrepreneurial community, strengthening the pipeline of opportunities for the $I^2$ Fund. Genome BC will continue to assess and refine its entrepreneurship programs in alignment with the Government of BC's technology strategy and its broader innovation mandate.

# Communication and Societal Engagement Mandate

## Genomics and Society

To accelerate impact and meet research and innovation mandates, Genome BC will continue to deepen its understanding of public acceptance of genomics technologies. Responsible research and innovation require early integration of societal perspectives—ethical, economic, environmental, legal and social ($GE^3LS$)—with active involvement from end users, rightsholders and stakeholders.

Genome BC embeds $GE^3LS$ research across its programs to explore societal implications and regulatory pathways. In addition, it has introduced a standalone program for social science and humanities researchers to delve deeper into priority areas of genomics research.  Social science and humanities methods are essential for uncovering the factors that influence public trust and technology adoption.

As genomics tools approach real world application, Genome BC's Genomics and Society (G&S) initiatives address critical questions about responsible use. These efforts demand interdisciplinary collaboration—linking economic modelling with social and environmental impact research—to inform policy and practice.

PRIL supports this approach by shaping how research, policy and practice connect; fostering cross sector partnerships, accelerating responses to environmental challenges and guiding evidence based policy development.

With climate change and biodiversity loss intensifying, Genome BC will continue to lead in building science-informed, inclusive regulatory systems. The convergence of research, innovation, and public policy is essential to ensure the responsible and accepted adoption of genomics.

## Education and Communication

Scientific literacy is essential for societal advancement. As science and technology reshape daily life, from consumer choices to career pathways, people increasingly need a working understanding of STEM principles and their applications. These skills, combined with other disciplines, foster critical thinking, problem-solving and informed decision-making. With the rise of consumer genomics, public understanding must keep pace, empowering individuals to interpret results and make sound choices.

Genome BC contributes to science literacy through a suite of communications and education programs that build awareness and understanding of genomics and its impacts. Geneskool® demonstrates this approach, offering experiential learning that connects youth to BC's life sciences ecosystem and cultivates the knowledge, skills and attitudes that support a healthy society and sustainable economy.

Geneskool supports teachers with hands-on activities and workshops aligned to BC's grade 9–12 curricula. Strategic partnerships with post-secondary institutions and outreach organizations strengthen community connections, while volunteers inspire long-term interest by modelling diverse STEM career pathways.

To build on Geneskool's success, Genome BC is repackaging its core resources for regional expansion across BC and future global licensing. Public outreach remains central, with two-way dialogue enriching understanding through engagement with media, industry, educators, students and the public.

Genome BC will continue to leverage its network of researchers, policymakers, industry partners and entrepreneurs to advance scientific literacy across the province. As science evolves faster than policy—and sometimes faster than public understanding—societal engagement is paramount. Genomics is increasingly woven into everyday life, from healthcare to environmental sustainability. The public must not only understand the science but feel invited into the conversation.

Genome BC has long built bridges between genomics and society, ensuring advances are accessible, relevant and trusted. We will continue to elevate the visibility and credibility of genomics, demonstrating its value across key economic sectors and optimizing Genome BC's leadership in life sciences within BC and Canada. Our strategies will support the public, partners and industry in navigating an ever-changing ecosystem.

Through platforms such as the *Nice Genes!* podcast, Don Rix Distinguished Keynote, Genomics Forum and a range of workshops, webinars and networking events, Genome BC will meet people where they are, sharing research impacts, educating and expanding genomics awareness across BC, Canada and beyond.

We will also support policymakers and regulators through implementation science and knowledge mobilization in priority areas. Guided by Genome BC's Indigenous Peoples Engagement Framework and Action Plan, we will empower Indigenous innovation through partnerships that deliver solutions to pressing challenges—identified and led by Indigenous peoples. Success will be measured by expanded Indigenous participation in Genome BC's programs and activities.

# Equity, Diversity and Inclusion

Genome BC is committed to advancing equity, diversity and inclusion (EDI) across all aspects of our work. We stand firmly against racism and all forms of discrimination, particularly within science and genomics and recognize that meaningful change requires sustained effort, reflection and action.

Inequity remains a significant societal and systemic challenge. As a science-driven organization, we believe that fostering a diverse and inclusive environment is essential to innovation. We are proactively addressing inequality within the research ecosystem and ensuring that the benefits of genomics are accessible to all British Columbians.

Genome BC's approach is twofold:

1. **Internally**, we build EDI literacy and address bias to foster a respectful, inclusive workplace.
2. **Externally**, we strive to improve programs that advance equity in BC's research and innovation ecosystem.

We are committed to continuous learning and to using our platform to help build a more equitable, accessible and innovative future for genomics.

## Culture and Organizational Fitness

At Genome BC, culture is grounded in our values and shaped by the people who bring them to life. It's dynamic, evolving with intention, care and shared responsibility. While the executive team champions this work, cross-functional Culture and Equity, Diversity and Inclusion (EDI) Committees help co-create initiatives that reflect the diverse voices across our organization.

A strong, inclusive culture is essential to attracting, engaging and retaining top talent. In BC's competitive environment, it's a true differentiator fuelling innovation, collaboration and long-term success. When culture is nurtured and lived, it becomes a strategic advantage.

To support this, we regularly conduct employee surveys to understand staff experiences and identify opportunities for growth. These insights inform targeted initiatives, led by leadership and supported by the Culture and EDI Committees. We also revisit our Vision, Mission and Values every few years, engaging staff to ensure alignment and relevance.

Social connection is another vital element. Informal gatherings and shared experiences help staff unwind, build trust and strengthen relationships—fostered by the Culture Committee as part of our commitment to engagement and well-being.

We also prioritize continuous learning. Staff and Board members participate in ongoing training on topics such as unconscious bias, anti-racism, allyship, gender and sexual diversity inclusion, mental health resiliency, Indigenous reconciliation, trust-building and effective teamwork. These sessions deepen our collective understanding and reinforce the values we stand for.

Looking ahead, Genome BC will continue to invest in a culture of learning, inclusion and connection—ensuring our people and our organization are equipped to thrive.

## People

As a people centric organization, Genome BC values its team as essential partners in shaping culture, advancing the mandate and bringing strategy to life. Human resources is a shared responsibility across executive and management teams, led by the VP Communications and Societal Engagement, as well as the CFO and VP of Entrepreneurship & Commercialization.

Recognizing that best-in-class HR practices are key to recruiting, retaining and empowering a high-performing team, Genome BC is committed to competitive compensation, robust benefits and an effective performance management system. Recruitment and onboarding are supported by all staff, reflecting the organization's commitment to collaboration and shared success.

Professional development, coaching and mentorship contribute to individual growth and organizational strength. To maintain agility and address emerging priorities, Genome BC regularly assesses organizational fitness and engages external HR expertise to uphold best practices.

## Governance

Genome BC benefits from the oversight of an experienced, independent volunteer Board of Directors. Together with staff, the Board upholds high ethical standards and ensures compliance with applicable laws and regulations. Decisions are guided by integrity and reflect care for all stakeholders—members, investors, partners, researchers, employees and communities.

To support its mission and maintain high standards, Genome BC has established a Corporate Governance Charter. This document outlines key expectations for directors, officers and managers in their roles and decision-making. It complements Genome BC's by-laws, policies and procedures but does not replace or override them.

# Financial Plan: 2026-2029

Genome BC's 2026-2029 Strategic Plan projects that the organization will leverage total Government of BC funding support of $66M to generate $200M in co-funding for a total investment portfolio of $266M over the three-year period (April 1, 2026 to March 31, 2029).

| | PLAN | | | | | GBC Funds | Other Funds |
|---|---|---|---|---|---|---|---|
| CDN$ | Plan FY 2026/27 | Plan FY 2027/28 | Plan FY 2028/29 | Plan Total | Leverage | | |
| **RESEARCH** | | | | | | | |
| Genome Canada large scale programs | 12,000,000 | 13,000,000 | 13,000,000 | 38,000,000 | 1/4 | 9,500,000 | 28,500,000 |
| Genome Canada GAPP | 12,000,000 | 14,000,000 | 14,000,000 | 40,000,000 | 1/6 | 6,666,667 | 33,333,333 |
| Genome BC Genesolve | 6,000,000 | 6,000,000 | 6,000,000 | 18,000,000 | 1/2 | 9,000,000 | 9,000,000 |
| Data Science Programs | 2,000,000 | 2,000,000 | 2,000,000 | 6,000,000 | 1/2 | 3,000,000 | 3,000,000 |
| Other partnership/research programs | 8,000,000 | 8,000,000 | 9,000,000 | 25,000,000 | 2/9 | 5,533,333 | 19,466,668 |
| | | | | 127,000,000 | | 33,699,999 | 93,300,001 |
| **INNOVATION** | | | | | | | |
| Genomics Innovation Fund | 4,000,000 | 4,000,000 | 4,000,000 | 12,000,000 | 1/2 | 6,000,000 | 6,000,000 |
| Other Innovation Programs | 3,000,000 | 3,000,000 | 4,000,000 | 10,000,000 | 1/2 | 5,000,000 | 5,000,000 |
| Entrepreneurship Partnership Program | 2,000,000 | 2,000,000 | 2,000,000 | 6,000,000 | 1/3 | 2,000,000 | 4,000,000 |
| | | | | 28,000,000 | | 13,000,000 | 15,000,000 |
| **STRATEGIC/INTERNATIONAL** | | | | | | | |
| Strategic and International initiatives | 5,000,000 | 5,000,000 | 5,000,000 | 15,000,000 | 1/2 | 7,500,000 | 7,500,000 |
| | | | | | | - | - |
| | | | | 15,000,000 | | 7,500,000 | 7,500,000 |
| **COMM/ED/G&S** | | | | | | | |
| Communications | 2,100,000 | 2,150,000 | 2,200,000 | 6,450,000 | 2/5 | 2,580,000 | 3,870,000 |
| Education | 560,000 | 580,000 | 600,000 | 1,740,000 | 2/5 | 696,000 | 1,044,000 |
| G&S | 1,100,000 | 1,100,000 | 1,200,000 | 3,400,000 | 2/5 | 1,360,000 | 2,040,000 |
| Indigenous programs (IPAP) | - | 2,000,000 | 2,000,000 | 4,000,000 | 3/4 | 3,000,000 | 1,000,000 |
| | | | | 15,590,000 | | 7,636,000 | 7,954,000 |
| **CORPORATE MANAGEMENT:** | | | | | | | |
| Corporate management | 3,400,000 | 3,470,000 | 3,540,000 | 10,410,000 | 2/5 | 4,164,000 | 6,246,000 |
| | | | | 10,410,000 | | 4,164,000 | 6,246,000 |
| **Total Research Investment (excluding I2 Fund impact)** | 61,160,000 | 66,300,000 | 68,540,000 | 196,000,000 | | 66,000,000 | 130,000,000 |
| Industry Innovation Program | 23,000,000 | 23,000,000 | 24,000,000 | 70,000,000 | | - | 70,000,000 |
| | 84,160,000 | 89,300,000 | 92,540,000 | 266,000,000 | | 66,000,000 | 200,000,000 |

*Genome BC's request from the Government of BC would be $21M in 2026/27, $22M in 2027/28 and $23M in 2028/29*
*Corporate management includes estimated capital expenditures of $120,000 per year*

| FINANCIAL PLAN 2026-2029 | TARGETS |
|---|---|
| Provincial Investment | $66 Million |
| Co-Investment Generation | $200 Million |
| Total Portfolio Valuation | $266 Million |

Genome BritishColumbia

**Genomics positively impacts life, every day.**

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