



HealthTech and BioTech Ecosystem

2024-2026 Action Plan



An Overview:

Advancing Newfoundland and Labrador's HealthTech/BioTech Industry

HealthTech is the innovative application of technology in the field of health care. It encompasses various technological advancements, such as software, hardware and devices, and data analytics, to enhance the delivery and management of health care services. The importance of HealthTech to the province lies in its potential to revolutionize how health care is approached, improving patient outcomes, streamlining processes, and increasing access to quality care. The HealthTech industry encompasses various sectors that leverage technology to improve health care delivery, patient outcomes, and the overall health system. From telemedicine to wearable medical devices, these sectors transform how health care is accessed and managed.

BioTech primarily focuses on organic technology and the use of living cells and other cell materials to better understand health from a human context. The science involved includes the use of these tools for research to find more efficient ways of maintaining human health, understanding pathogens, and understanding human cell biology. Key areas of focus for BioTech in this province include genomics and precision medicine applications.

The HealthTech/BioTech sector in Newfoundland and Labrador is in its early stages in terms of the number of commercialized companies, however, there is a growing number of companies entering the sector. Efforts by TechNL's Bounce Health Innovation (Bounce), the Genesis Centre and other early-stage ecosystem partners led to a significant growth of new start-up firms within the province. Activity by Newfoundland and Labrador Health Services (NLHS) has helped to establish a concentrated cluster of globally competitive companies in all levels of business development.



Emera
INNOVATION
EXCHANGE

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Industry, Energy and Technology (IET) has made strategic investments to support HealthTech/BioTech growth throughout the ecosystem, including investments in Bounce Health Innovations, NLHS Living Labs, the Centre for Translational Genomics (CTG), and the Centre for Analytics, Informatics and Research (CAIR). The Department has supported the development of Highly Qualified People (HQP) and research across all sectors, including investments in Mitacs which helps cultivate talent and support for companies and academic research. Investments in Memorial University's Department of Computer Science (Data Sciences), the Core Sciences Building (labs and infrastructure), the Centre for Artificial Intelligence within the Faculty of Engineering all provide a foundation to help grow this sector. Leveraging these investments will provide a sustainable path to commercialization for emerging start-up companies and established companies seeking research and development opportunities.

Why a HealthTech/BioTech Sector Action Plan?

Within Life Sciences, the HealthTech/BioTech sectors are of particular importance to the province, due to the emergence of a significant start-up ecosystem that is focused on the intersection of technology and health. The companies that make up this ecosystem are providing unique solutions to a variety of health care challenges within the province and globally.

The **HealthTech/BioTech Sector Action Plan for Newfoundland and Labrador** is government's plan to support growth within the ecosystem, develop a critical mass of HealthTech/BioTech start-up companies, and globally promote the potential of NL's excellence in genomics and health research. Through collaborative efforts and strategic investments, the province is poised to carve a niche globally in the evolving landscape of HealthTech/BioTech.

To help support growth of the sector, in Spring 2024, IET worked with Bounce Health Innovation to consult with the province's HealthTech/BioTech sector and its supporting stakeholders. The resulting sector assessment identified the need for a unified action plan built from foundational pillars and support within the scope of IET's mandate. This Action Plan provides a unified approach for advancing the sector.

Vision for the HealthTech/BioTech Sector

Vision: A HealthTech/BioTech sector that supports new and innovative technologies, accelerates access, invests in research and development, has enhanced coordination and collaboration; and supports companies to develop locally and employ HQP to grow and scale their opportunities globally.

This vision is supported by the following foundational pillars:

1 Connected Innovation Ecosystem:

A vibrant ecosystem is characterized by continuous innovation and collaboration among stakeholders across the health care field. By fostering an environment of openness, creativity, and partnership, stakeholders will spark the development and adoption of breakthrough technologies that address unmet needs, drive efficiency gains, and expand the frontiers of knowledge. Creating a competitive advantage for Newfoundland and Labrador lies in developing a seamless ecosystem where health innovators (private or public) have access to the tools, data and supports to identify and solve complex health care challenges in an efficient coherent fashion.

2 Access to Capital, R&D, and Business Supports:

In the technology sector, access to capital is paramount in industries with long commercialization lead times; this is amplified within HealthTech/BioTech Sector. This access includes government programs, venture capital, equity, and other non-traditional financing methods. In addition to capital, business supports enable companies to navigate the path to commercialization. This includes market development activities, access to research facilities, ecosystem navigation services, testing/piloting/prototyping, and supporting the development of networks and partnerships.



3 Data-driven Insights and Personalization:

In health care, decisions are informed by real-time data, predictive analytics, and personalized insights. By harnessing the power of big data, artificial intelligence, and machine learning, new opportunities can be unlocked for early detection, disease prevention, and precision medicine, enabling more targeted interventions and improved clinical outcomes. Access to High Performance Computing (HPC) facilities and expertise will enable data-driven opportunities within these sectors.

4 Regulatory Excellence, Guidance and Ethical Leadership:

The sector requires regulatory excellence, ethical conduct, and responsible innovation. By upholding the highest standards of safety, efficacy, and ethical practice, confidence in HealthTech/BioTech solutions is instilled and trust fostered with industry and among patients, health care providers, and regulatory authorities. Government and stakeholders will work to establish standards and tools to help researchers and companies effectively navigate their research and development pathway.

Objectives

The Action Plan outlines the steps necessary to reach the following objectives:



1 Driving Economic Growth:

HealthTech/BioTech have the potential to become key drivers of economic growth for the province. By fostering innovation, entrepreneurship, and investment in HealthTech/BioTech startups and companies, the sector will stimulate job creation, attract talent, and contribute to the growth and diversification of the provincial economy.

2 Building a Place for Highly Qualified People:

The expansion of the sector presents opportunities for job creation and retention across a wide range of fields, including health care IT, biomedical engineering, data analytics, software development, and clinical research. As companies scale their operations, they will require skilled professionals in areas such as software engineering, data science, regulatory affairs, clinical validation, and business development, providing employment opportunities for the local workforce. IET will work with the Department of Immigration, Population Growth and Skills (IPGS) under this objective to partner in attracting and retaining a talented workforce.

3 Supporting Innovation Ecosystem Development:

Building a vibrant innovative ecosystem within the province will accelerate the development and commercialization of HealthTech/BioTech solutions. By fostering collaboration between universities, research institutions, health care providers, industry partners, and government agencies, the province will create a productive ground for innovation, entrepreneurship, and knowledge transfer. This ecosystem will support the translation of innovative research into market-ready products and services, driving economic growth and competitiveness.

4 Encouraging Health Care Delivery Innovations and Improvement:

Technology solutions have the potential to transform health care delivery and improve patient outcomes. By investing in digital health infrastructure, telemedicine platforms, remote patient monitoring tools, and AI-driven diagnostics, the province will enhance access to care, optimize resource utilization, and increase health care efficiency. These technologies will enable proactive, personalized, and preventive health care interventions, leading to better health outcomes and reduced health care costs over the long term.

5 Expanding Markets and Scaling Opportunities:

The province can leverage its expertise in HealthTech/BioTech to capitalize on local opportunities and expansion to global markets. By promoting homegrown innovations and establishing strategic partnerships with local and international stakeholders, the province can position itself as a hub for HealthTech/BioTech exports and attract foreign investment, including venture capital. Exporting HealthTech/BioTech solutions not only generates revenue and creates jobs but also enhances the province's reputation as a leader in healthcare innovation.

6 Leveraging Indirect Sector Benefits:

The development of this sector can lead to other benefits not directly tied to product commercialization. The province can extend health care services to rural communities, marginalized groups, and individuals with limited access to traditional health care facilities through the development of Newfoundland and Labrador grown solutions. Properly supported and implemented, technology can improve our population's health and reduce health care differences and enhance social inclusion.





ACTIONS

Working Together to Achieve Growth in the HealthTech/BioTech Sector

Provincial partners collaborate across multiple fronts to foster innovation, entrepreneurship, and growth within the HealthTech/BioTech sector. By working together to address key challenges and seize emerging opportunities, these partners will unlock the sector's full potential and drive positive impact for patients, health care providers, and communities across the province. The following actions represent IET's role to support sector growth and unlock the potential for the sector. With a focus on 12 key actions, this plan aims to deliver on the critical areas for improvement and objectives for the sector. It focuses on the foundational pillars to meet the province's objectives and to ensure successful implementation that will also lead to a long-term strategy for the sector.



Enhancing Leadership & Governance - Framework for Oversight & Decision-Making

Action: Create an industry, academic, government partnership network with a well-defined partnership framework.

A partnership network with a well-defined framework will provide a platform for ongoing collaboration and communication between stakeholders. This will build trust and strengthen relationships among industry, academia, and government, leading to more productive and sustainable partnerships. These partnerships facilitate the exchange of knowledge, expertise, and resources among industry, academia, and government, leading to an innovative approach to creating solutions. By bringing together diverse perspectives and skill sets, these collaborations can drive breakthroughs in technology, research, and policy.

Deliverables: Develop terms of reference highlighting the scope of responsibility, decision making processes, establishment of network, and increased area of focus for sector.

Leadership and Support: IET will play a coordinating role supported by Bounce, NLHS and Memorial University.

Timeframe: Short-Term

Action: Indigenous Engagement and Partnerships.

Indigenous populations have unique considerations that must be considered in health research. IET will engage Indigenous Governments and Organizations (IGOs) to identify ways to enhance R&D and to support their HealthTech/BioTech sector priorities.

Deliverables: IET will engage IGOs to identify key issues and opportunities related to the HealthTech/BioTech sector.

Leadership and Support: IET, Office of Indigenous Affairs and Reconciliation (IAR)

Timeframe: Medium-Term



Action: **Establishing issue specific resource teams to address immediate challenges within the sector.**

Through the development of the partnership network, participating stakeholders may set up teams to address sector issues. These teams will consist of appropriate expertise, to work on solutions to identified issues and challenges. These teams will be supported through sector stakeholder resources and, where necessary, IET programs and support staff.

Deliverables: The partnership network will create Teams as required to address challenges.

Leadership and Support: IET will play coordinating role supported by Bounce, NLHS and Memorial University and other stakeholders.

Timeframe: Short-Term; Ongoing

Action: **Development of an intra-departmental committee.**

IET will form an internal committee specific to the HealthTech/BioTech Sectors, to deliver various departmental programs ensuring clients are informed of all available supports and resources within the department. The committee will also engage clients, as a one-stop-shop, for potential project evaluation and advice. The committee will also work with other government departments and external stakeholders when required, to move concerns or opportunities forward where appropriate. This will also increase governments capacity at both the firm and sector level to identify and address issues and increase its understanding of business process, early-stage companies, and overall business acumen.

Deliverables: Development of the internal IET HealthTech/BioTech committee.

Leadership and Support: IET will provide staff resources including a Sector Lead.

Timeframe: Short-Term; Ongoing



Strengthen the advancement and cross-sector collaboration - Testing and Procurement

Action:

Utilize procurement and supply chain practices and introduce innovative demonstration projects to further encourage health innovation.

Innovations through R&D often result in the commercialization of new products and services, contributing to economic expansion and prosperity. Supporting early-stage companies with testing and procurement opportunities can help facilitate knowledge exchange, technology transfer, and commercialization. The Department will support an innovation demonstration initiative and projects with NLHS.

Deliverables:

Support to local companies and demonstration projects.

Leadership and Support:

IET will support financially and work with industry, Public Procurement Agency, NLHS and the Department of Health and Community Service (HCS) to initiate Innovation Demonstration projects between local companies and health entities.

Timeframe:

Mid -Term

Strengthen the advancement and cross-sector collaboration - Navigating the Ecosystem

Action: **Work to ensure a connected, comprehensive, secure, and transparent data ecosystem.**

Data is a key enabler to develop and adopt innovative technologies into a health care system. It is important that the Government of Newfoundland and Labrador develop a comprehensive data ecosystem and consider permission to access this data for the HealthTech/BioTech sector. This will support research and development, enable better and more comprehensive patient care, and lead to a more efficient health system through better supply chain management.

Deliverables: IET will work with HCS and NLHS to develop a data access protocol for the local start-up community providing efficient and feasible availability to data for research and development activities.

Leadership and Support: IET will provide support for technical expertise and advisory as needed in coordination with HCS and NLHS.

Timeframe: Short-Term; Ongoing

Action: **Developing supports, asset inventory and pathways for industry access to research and infrastructure.**

IET will develop inventory of sector assets available for industry. IET will also support efforts to develop industry protocols for accessing sector assets that encourages usage and provide a clear pathway for this collaboration.

Deliverables: Establishment of a working group with Memorial University, College of the North Atlantic (CNA) and other academic partners to identify key assets and identify efficient access and usage protocols. IET will work with NLHS to develop a pathway for small business to collaborate and access opportunities in the NL Health care system.

Leadership and Support: IET will facilitate access and supports and coordinate with HCS and NLHS.

Timeframe: Short-Term; Ongoing

Support the Creation and Growth of Innovative Businesses and Stimulate Entrepreneurship - Investment and Funding

Action:

Support for R&D and business development for HealthTech/BioTech companies

Supporting innovative businesses will encourage entrepreneurship and creativity, fostering a culture of innovation where companies are empowered to pursue their ideas. Funding through IET's Business Growth Program (BGP) will provide companies at various stages of development with access to financial support. This includes support for product development and commercialization, productivity improvements and innovation, knowledge development and technical assistance, and growth and internationalization.

Deliverables:

Improved communication of BGP program to the ecosystem, delivery of the program, and increased number of HealthTech/BioTech projects funded.

Leadership and Support:

IET will market and deliver the program.

Timeframe:

Short-Term



Action: **Build sector support organizations and applied research activities.**

Through the Research and Innovation Fund (RIF) and the Regional Development Program (RDP) IET will continue to provide support to strategic organizations (Bounce Health Innovations; NLHS-Living Labs; Memorial University) and applied research activities related to HealthTech/BioTech sector. IET will encourage, support and assist organizations and researchers create opportunities to engage and support local industry growth within their respective initiatives.

Deliverables: Promotion and delivery of the RIF/RDP program to ecosystem. Develop an industry engagement process best practices tool. Continued support to strategic organizations that support the sector.

Leadership and Support: IET will market and deliver the program. IET will work with stakeholders to identify and document engagement best practices.

Timeframe: Short-Term



Action: **Continue to elevate industry for venture capital (VC) investment and support HealthTech and BioTech at VC events.**

The Department will continue to support Pelorus and Sandpiper to deliver VC initiatives to the technology sector within the province. The Department will also support sector companies prepare for venture capital seed rounds and other relevant opportunities. This also includes financial support for consultants, travel, and market development activities.

Deliverables: IET to provide support for VC activities and Support VC funds including Pelorus and Sandpiper.

Leadership and Support: IET will provide staff resources where required.

Timeframe: Short-Term

Action:**Support internationalization and commercialization.**

Internationalization permits HealthTech/BioTech businesses to tap into global markets, reaching a larger customer base and expanding revenue streams. By engaging with international stakeholders, companies can develop business opportunities, gather insights into emerging trends and market preferences, understand global regulatory landscapes, and drive continuous improvement and innovation.

Deliverables:

IET will develop and test (in consult with internationalization partners and companies) a focused process to accelerate project and proposals with improved and responsive access to programs and services.

Leadership and Support:

IET staff

Timeframe:

Short-Term; Ongoing

Action:**Development of communications and marketing plans for sector.**

A consistent approach to sector messaging and branding among key stakeholder groups will be encouraged. Key messages will be developed for starting, growing and investing in the local HealthTech/BioTech sectors. This will include domestic audiences and local sector, the broader public as well as internationally and for the development of investment attraction.

Deliverables:

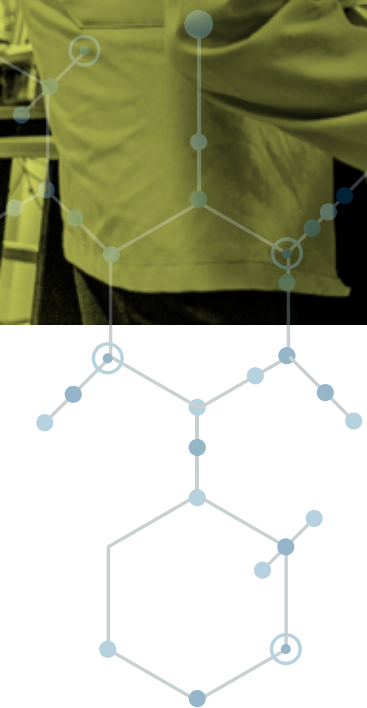
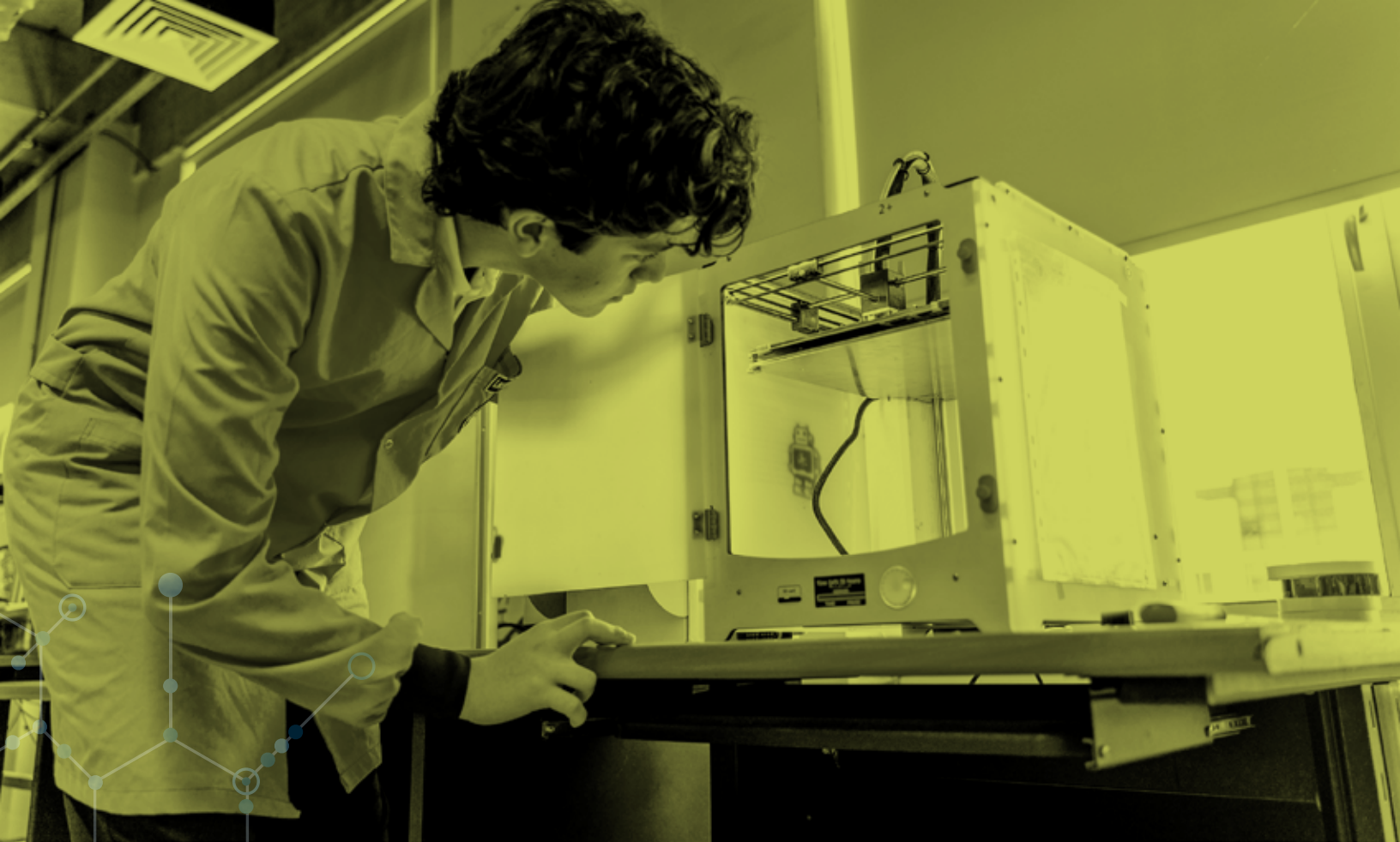
Consistent and cohesive messaging will be created and IET will work with local stakeholders to identify the key messaging and images that reflect the sense of community driving the NL competitive positioning to promote the sector based on target audience.

Leadership and Support:

IET will support the development of these plans

Timeframe:

Medium Term



NEXT STEPS

The efforts outlined above is a response to the key issues identified during the stakeholder consultation. IET recognizes the challenges presented and will move forward to address the identified foundational areas with partners.

During the next 24 months IET will use this Action Plan to address the critical areas to encourage sector growth and help establish the foundation necessary for a HealthTech/BioTech Provincial Strategy for release in 2026-2028.

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