

Taking **Life Sciences** to the Next Level

Ontario's Strategy

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ONTARIO'S LIFE SCIENCES OPPORTUNITY

Ontario was in a precarious position at the start of the COVID-19 pandemic. We were dependent on foreign supply for critical goods and faced hollowed out domestic production capabilities. The pandemic also exposed our inability to procure innovation in health care to improve patient outcomes.

On our province's road to recovery, we have an opportunity to fix this. In fact, we must make it our responsibility. We must build the foundation for a world class life sciences sector that allows globally competitive companies to thrive. It is why we are laying a strong foundation for new investments that provide high paying jobs and develop innovative solutions to improve the lives of Ontarians.

The race is on. Around the world, governments are working with partners to:

- raise and attract new investments
- develop highly skilled talent
- commercialize innovation for the benefit of their people

Ontario has a thriving research ecosystem, supported by world class universities and colleges that produce one of the most highly sought-after workforces in the world. But more is needed, and we have a plan to deliver.

In 2021, Ontario achieved record breaking results in attracting new investment, recording more than half of all venture capital investments in Canada with \$8.4 billion including \$846.8 million in life sciences. We want to see Ontario's life sciences entrepreneurs capturing a greater share of this growing pool of venture capital. And we want to build on this momentum by making sure these rapidly growing companies have a partner that supports their growth – a government that helps them access talent, secure new investments and bring their products to market.

Our vision is to establish Ontario as a global biomanufacturing and life sciences hub leading in the development, commercialization and early adoption of innovative health products and services. Our goal is to maintain and grow Ontario's biomanufacturing and life sciences sector by targeting 85,000 high-value jobs in the life sciences sector by 2030, a 25% increase from 2020.

Growing Ontario's life sciences sector is essential to our plan to build a competitive economy. We want Ontario to be the place where entrepreneurs choose to build their companies – where medical breakthroughs are discovered and commercialized into innovative products and services made and procured here in Ontario for the benefit of Ontarians.

This is our plan for the future of Ontario's life sciences sector.

VISION: TAKING LIFE SCIENCES TO THE NEXT LEVEL

Establish Ontario as a global biomanufacturing and life sciences hub leading in the development, commercialization and early adoption of innovative health products and services.

Phase 1 will build up our life sciences sector through securing commercial-scale manufacturing capacity and supply chains while improving manufacturing readiness of Ontario's small- and medium-sized businesses through four pillars:



Grow Ontario's Biomanufacturing Footprint



Build Domestic Supply Chain Resiliency in Personal Protective Equipment and Critical Medical Supplies



Boost Commercialization Capacity of Ontario Companies and Startups



Adopt Ontario-made Innovations to Improve Healthcare

Phase 2 will build out Ontario's industry to become a leader in next-generation life sciences technology



2030 Anchor Objective

Maintain and grow Ontario's biomanufacturing and life sciences sector by **targeting 85,000 high-value jobs in the life sciences sector by 2030, a 25% increase from 2020.**

PHASE 1

PHASE 2



A Message from the Minister of Economic Development, Job Creation and Trade



The COVID-19 pandemic demonstrated first-hand the significance of having a strong life sciences sector. We fought hard in the global race for critical medical goods and won. In the early months, we secured ventilators and gowns and invested \$23.3 million to secure a commitment from 3M to make N95 masks in Brockville. Through the Ontario Together Fund, we are investing \$100 million in domestic manufacturers across the province to make personal protective equipment and compete to make vaccines in Ontario as well.

We are now on the verge of making every category of personal protective equipment in Ontario. Two years ago, this was not the case – but it didn't need to be this way. Years of inaction from previous governments left us dependent on the supply of critical goods from other countries, hollowed out our domestic production, and exposed our inability to procure innovation in health care to improve patient outcomes. Outdated policies and red tape drove up the cost of doing business in Ontario and drove manufacturers and good jobs out of our province. Amazing research in next generation health products and services was happening in Ontario but commercialized and scaled in other jurisdictions. Our health system was more often a barrier to growth rather than a partner for our local companies.

We've since taken action to fix this. We've reduced business costs in Ontario by nearly \$7 billion annually, implemented Ontario's first ever intellectual property action plan, and launched both Ontario Health and Supply Ontario with the goal of breaking down roadblocks in health procurement.

And we are releasing Ontario's Life Sciences Strategy – the first of its kind in over a decade. It aims to address long-standing barriers to growth and positions our province for success during this period of global transformation.

The time to act is now. Continuing to grow our life sciences sector will help support our economic recovery, strengthen our pandemic preparedness and build a stronger, healthier Ontario for the future.

Sincerely,

Vic Fedeli
Minister of Economic Development, Job Creation and Trade

2030 Goal 1: Grow Ontario's biomanufacturing footprint

What we'll do:

Secure new vaccine and medicine manufacturing mandates and commercial-scale investments by leveraging Invest Ontario to help to grow and diversify Ontario's biomanufacturing sector.

How we'll do it:

- Secure High-Value Investments
- Promote Ontario in Key Markets
- Reduce Red Tape

How we'll measure success:

By 2030 attract **5+** investments over \$100 million that will grow Ontario's footprint in biomanufacturing, including vaccine and medicine production.

Secure high-value investments

Within the past 18 months, Ontario has welcomed close to \$2 billion in new investments from global biomanufacturers including Sanofi, Resilience and Roche. These will have a huge impact on the health and well-being of Ontarians, while strengthening Ontario's supply chain and pandemic preparedness.

Together, these investments will boost Ontario's biomanufacturing capacity and deliver Ontario-made vaccines and treatments – including for COVID-19. And they will put our province at the forefront of advances in life sciences and mRNA technology.

Through the province's investment agency, **Invest Ontario**, we will leverage our strengths to secure new investments and production mandates from global biomanufacturers. The agency is equipped with financial and non-financial incentives to attract investment opportunities.

Promoting Ontario



The future of Ontario's life sciences sector depends on attracting new investments to our province and increasing the ability of Ontario companies to sell their homegrown innovations into global markets. It also depends on our ability to tell the story of Ontario's strengths and our connected ecosystem of partners – our world-class research institutes, hospitals, universities, colleges, technology incubators, start-ups, scientists and multinationals.

That is why Ontario is going to develop and launch a targeted marketing and investment attraction plan. Through targeted digital advertising and custom marketing content, we will attract and nurture investment leads in key markets in the United States, Europe and Asia. We will promote Ontario's skilled workforce, strengths in life sciences research and development, high-quality and competitively priced goods and services, business-friendly environment, and highly collaborative innovation ecosystem.

Leveraging **Invest Ontario**, along with Ontario's global network of International Trade and Investment Offices and industry partners, the province will position itself in high-priority markets as a premier destination to attract leads and game-changing investments in the life sciences and biomanufacturing space.

We will focus our marketing efforts on emerging areas such as regenerative medicine, cell and gene therapy, vaccines and related technologies. And we will promote export opportunities for Ontario companies – raising awareness of their potential in new export markets while leveraging Ontario's event presence to promote Ontario companies to global firms that could be potential customers.

We will send a clear message that Ontario is open for business.

Reducing Red Tape

Unnecessary red tape and regulatory burdens stifle entrepreneurship, investment and innovation.

That is why Ontario will continue to work across government to reduce red tape and clear the way for job creation and innovation. We will work closely with the Ministry of Health to continue to look for ways to provide greater regulatory flexibility to support the development of innovative research and health products while protecting patient safety.

Ontario has delivered nearly **\$400 million** in ongoing savings on regulatory compliance costs to businesses, not-for-profits, municipalities, universities and colleges, schools and hospitals. In addition to reducing regulatory burdens, Ontario's bi-annual Red Tape Reduction packages have streamlined Workplace Safety and Insurance Board (WSIB) premium payments. This is making Ontario's life sciences and biomanufacturing sector more globally competitive – and helps more Ontario innovators turn good ideas into globally relevant companies.

2030 GOAL 2: BUILD DOMESTIC SUPPLY CHAIN RESILIENCY IN PERSONAL PROTECTIVE EQUIPMENT AND CRITICAL MEDICAL SUPPLIES

What we'll do:

Ensure future pandemic preparedness by supporting the growth and stability of Ontario's domestic personal protective equipment and medical supply sectors, including building a long-term stockpile for provincial use.

How we'll do it:

- Invest in domestic production
- Improve pandemic preparedness



How we'll measure success:

By 2030 – Develop a robust category management approach to personal protective equipment and critical medical supplies where the majority of manufacturers providing product to the Ontario government and broader public sector are located in Ontario.

Investing in Domestic Production

In response to COVID-19, Ontario made significant investments to build domestic production and supply chains for critical medical supplies and PPE – like face masks, hand sanitizer, N95 respirators, ventilator components, nasopharyngeal swabs and rapid antigen tests. These will help keep Ontarians safe and healthy and prepared for future challenges, and Ontario's manufacturing sector competitive and strong.

The \$100 million **Ontario Together Fund (OTF)** is one way we are helping our manufacturers retool or adapt their operations to produce supplies and equipment for the health care sector and frontline workers.

As a result of our investments in domestic production, we are on track to produce every type of personal protective equipment in Ontario by 2024.

Improving Pandemic Preparedness



As part of the government's **Plan to Stay Open**, the government is introducing the **Pandemic and Emergency Preparedness Act** to ensure that Ontario's public services, and especially its critical frontline workers providing essential services, have a robust ongoing centralized supply chain for personal protective equipment and other critical medical supplies and equipment.

If passed, the legislation would ensure there is always a robust supply of personal protective equipment and other critical medical supplies and equipment available in Ontario, ready to be deployed to withstand the challenges of extraordinary events.

Ontario will leverage the province's extensive manufacturing capability wherever possible to maintain a healthy stockpile of quality personal protective equipment and other critical medical supplies in non-emergency times, ensuring preparedness and the safety and security of Ontarians in times of crisis.

2030 GOAL 3: BOOST COMMERCIALIZATION CAPACITY OF ONTARIO COMPANIES AND STARTUPS

How we'll measure success:

By 2030 attract **10+** Ontario life sciences companies newly listed on public exchanges (for example, TSX or NASDAQ) or subject to a merger/acquisition – and valued over \$250 million.

By 2030 - Double venture capital investment in Ontario's life sciences sector to \$725 million per year from its current five-year average of \$361 million.

What we'll do:

Prime Ontario's small- and medium-sized businesses for homegrown success by strengthening their ability to turn innovative research and ideas into Ontario-made products and services that the world wants to buy.

How we'll do it:

- Improve access to capital
- Improve business acumen
- Promote partnerships



Improve access to capital

Access to capital was the number one issue we heard during consultations. Ontario's life sciences companies face unique commercialization and growth-related challenges. Funding gaps are particularly felt at the earliest stages of commercialization when the path to market is the longest and highest risk.

Our best and brightest take risks to build companies, create high-paying jobs, and improve our health care. These entrepreneurs are the future of our economy and need a robust venture capital ecosystem that supports them.

Improve business acumen

Ontario will support innovators with the resources and tools they need to build ground-breaking ideas into globally relevant companies.



C-Suite mentorship: Ontario will launch a program that will connect early-stage Ontario companies with seasoned life sciences executives. Through this business-to-business mentorship, Ontario-based life sciences entrepreneurs will receive practical skills development and advice that will help them succeed.

Mentoring will focus on key areas such as attracting specialized talent, marketing, navigating regulatory pathways for approvals, obtaining licences, prototyping products, pitching investors and closing sales.

Medical Innovation Knowledge Xchange (MIX-KX): Aligning with these efforts, Ontario is supporting the Medical Innovation Knowledge Xchange (MIX-KX) to undertake learning, talent development and knowledge transfer activities to support our most promising scaling medtech firms. Through the industry-led network, Ontario's scaling medtech firms will be able to access key talent supports, including local talent market reports and new job-ready training opportunities for recent post-secondary graduates.

Intellectual property strategy: According to the Canadian Intellectual Property Office, small- and medium-sized enterprises that own intellectual property are three times more likely to expand domestically and four times more likely to expand internationally.¹

That is why, as recommended in the Expert Panel on Intellectual Property's report, we announced the province's first Intellectual Property Action Plan. Our government has also created a new agency – Intellectual Property Ontario – to help researchers and companies across Ontario maximize the value of their intellectual property.

Intellectual Property Ontario will give eligible innovators, researchers and businesses access to strategic advice, legal expertise and the educational resources they need to generate, protect, manage – and maximize the benefits from intellectual property.¹

¹ source: [https://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/wwapj/IP_Canada_Report_2019_eng.pdf/\\$file/IP_Canada_Report_2019_eng.pdf](https://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/wwapj/IP_Canada_Report_2019_eng.pdf/$file/IP_Canada_Report_2019_eng.pdf) (4.3 times more likely)

Promoting partnerships

To build up our innovation ecosystem, we will promote and support even greater collaboration between Ontario researchers and entrepreneurs. To help spark disruptive and ground-breaking innovation, we will encourage greater collaboration across industries – including our life sciences, information technology and advanced manufacturing sectors.



And we will continue to promote the growth of **Regional Life Sciences Clusters** by championing unique regional strengths and promoting research excellence happening across the province.

2030 GOAL 4: ADOPT ONTARIO-MADE INNOVATIONS TO IMPROVE HEALTHCARE IN ONTARIO

What we'll do:

Improve patient outcomes and help grow local companies by making it easier for new Ontario-made innovations to enter the Ontario health system.



How we'll do it:

- Supply chain modernization
- Innovation management and digital health
- Building new innovation pathways

Supply chain modernization

Supply Ontario will enable a whole-of-government approach to purchasing goods and services for the public sector, broader public sector and health care sectors to strengthen Ontario's supply chains and pandemic preparedness. Through better customer service, data collection, and strategic resourcing, they will make it easier to bring innovative ideas to market in Ontario.

The Building Ontario Businesses Initiative (BOBi) supports this mandate by requiring the government to give preference to Ontario vendors below trade thresholds and level the playing field for Ontario vendors above trade thresholds. New legislation introduced this year will ensure this continues to remain a priority of the provincial government for years to come.

Innovation management – digital pathways

Digital health is a top priority of our government. Ontario Health Teams (OHTs) are at the core of our government’s plan to build a modern, sustainable health care system that connects health care providers and services – while putting patients first. Over the past year, Ontario invested over \$81 million to support the advancement of digital health maturity across Ontario Health Teams.

To be effective, OHTs require early adoption of modern, Ontario-made technologies, tools and information that support digital health and patient-centred care.

To encourage this, the province is working on innovation challenges with OHTs and digital health vendors, with a focus on improving patient care. Projects approved or in the pipeline are as varied as using artificial intelligence to improve vision care for patients with diabetes to providing OHTs with the digital tools they need for population-health management approaches to care.

Building new innovation pathways

Beyond OHTs, Ontario will develop a strategy and long-term plan to better support the early adoption of new Ontario-made technologies across our health system.

From the identification of promising innovations through to generating and appraising the evidence and finally recommending innovations for health care system funding, Ontario will look for opportunities to improve our adoption of Ontario-made technologies that solve some of our greatest health care system challenges.

Over the next few months, we will work with **Supply Ontario** to begin developing a clinical supply chain model between the agency and Ontario Health.

In the longer term, the province will develop a plan to sustainably fund the early adoption of made-in-Ontario innovations and technologies across Ontario’s health care system.



THE ROAD AHEAD: FOSTERING NEW COLLABORATIONS WITHIN AND BEYOND THE HEALTH CARE ECOSYSTEM

If we want Ontario to become a global biomanufacturing and life sciences hub, then we need to act now. We need to fix long-standing barriers to growth that hinder our ambition and erode our economic prosperity.



Ontario's Life Sciences Strategy is a key piece in how we will attract new investment, develop a highly skilled workforce, and commercialize new and homegrown innovations for the benefit of Ontarians.

We know the impact and opportunity that Ontario's purchasing power – and Canada's largest publicly funded health care system – represents for innovators and entrepreneurs across our province. We're prepared to put it to work to accelerate Ontario-made innovation.

That's why this strategy announces two critical initiatives to better leverage this scale. First, the Life Sciences Innovation Program will help early-stage companies access capital and advance the commercialization of homegrown innovations in the health care sector. Second, we will work with Supply Ontario to leverage the Building Ontario Businesses Initiative and develop a strategy to encourage the early adoption of Ontario-made innovations. This will take time and the collective efforts of the whole ecosystem, but it is too big of a challenge to ignore at this critical time.

This is only the beginning.

We know there is more to do, and we know we can't do it alone. Ontario's new life sciences council will play a pivotal role in defining what comes next, in Phase 2. We are joined on this mission by the thousands of researchers, entrepreneurs, CEOs and stakeholders across Ontario who go to work every day inventing the future of medicine and health care. Their extraordinary passion, optimism, ability to spot opportunity and confidence to embrace risk, will make all the difference in the world, and in Ontario.

Our government will be there to support them, every step of the way.