Council of Canadian Innovators

A Mandate To Innovate

CCI's strategic guide for policymakers to meet the moment—and build a stronger, more innovative, and sovereign Canadian economy.

May 2025

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Executive Summary

Canada is facing down the biggest economic and security crisis in our country's postwar history. To keep Canadians safe and to protect our livelihoods, the newly elected government must hit the ground running. Canada's innovators are the key to solving our crisis and becoming a more secure and prosperous country.

In the 21st century, the foundation of security and prosperity is innovation: successfully creating and deploying new technologies and techniques into competitive markets. The leading countries of the future will be home to companies that respond quickly to disruption by commercializing valuable new intellectual property (IP), and export their innovations widely across the world.

Unfortunately, Canada is falling behind. We are not becoming more innovative and prosperous at the same pace as our peers. Labour productivity has stalled, spending on research and development is anemic, and the amount of wealth each Canadian creates each year is slowly declining.

To get back on track, Canada's federal government badly needs **A Mandate to Innovate.**

With smart policies and strategic vision, Canada can become a country that is home to companies with cutting-edge technology sought out all over the world. We can build a Canada that is an indispensable country of the future. We can be a country that plays a critical role in global security and defending democracy. Canada can be a proud, independent country that can accomplish anything we set our minds to.

But it's only possible with an innovative, competitive and resilient economy.

The Council of Canadian Innovators is proud to present this series of action items to the incoming government. We have developed these in consultation with experts and innovators themselves to carefully target policy areas across the federal government where swift action can change our economic trajectory and build a more secure, sovereign, prosperous and innovative Canada — the kind of Canada that the future can't do without.

Key Takeaways for the Incoming Government

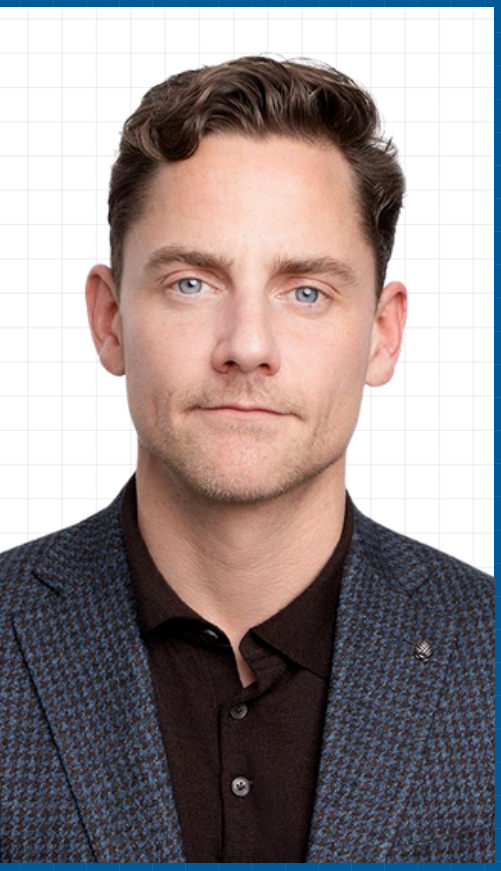
1. **Revolutionize innovation policy in Canada** by creating an independent agency with capacity and a mission to find and support the best innovators and ideas in Canada, staffed with experts and entrepreneurs, and equipped with the independence to act at the speed of business and free of short-term political considerations. Innovation agencies of this kind have been deeply important to the turnaround in performance in countries across the world — Canada's should focus on promoting innovation, generating and controlling intangible assets, acting as a bridge to government buyers, and helping firms tackle the barriers to scale.

2. **Compete head-on with the United States for the best and brightest** by making Canada every bit as attractive a destination for innovation investment and entrepreneurial talent as America. Canada has suffered from generations of bright graduates and seasoned entrepreneurs taking their skills out of the country. This is a reality we can no longer afford to accept.

3. **Make innovation central to our defence, health, and security** by making the Government of Canada the world's best customer for homegrown innovators. Investments in a new generation of dual-use defence technologies - as well as new health technologies, climate solutions and other public-purpose breakthroughs - shouldn't go to big, foreign companies whose competitive advantage is their experience ticking boxes instead of building the future. We need to engage innovators who want to build big things in service to their country and help them bring their goods to markets across the world, starting with our own governments.

4. **Supercharge the traditional engines of our prosperity** by investing in innovation and adding value in our cornerstone export industries - natural resources, agriculture, and energy. The Canada of the future can't just hew wood and draw water. To be a secure and prosperous country, we need to be global leaders in advanced mineral exploration, novel agricultural techniques, and clean energy sources.

Letter from CCI's President



Canada is at a crossroads.

The assumptions that shaped our economy for the last century — that prosperity would flow from branch-plant manufacturing, deep U.S. integration, and raw resource exports — no longer hold. The world has shifted, and Canada must shift with it.

Our competitors are accelerating. Since 2018, Canada's productivity has fallen into negative territory — the steepest slowdown in the OECD — while the U.S., Europe, and Asia sprint ahead. Add rising global instability, trade hostilities, and direct threats to our sovereignty, and the stakes for Canada's future have never been higher.[1]

But decline is not destiny.

To reverse course and substantially raise our standard of living, we need nothing less than a fundamental shift in how governments and domestic industries work together. Only through serious, strategic partnership can we secure good jobs, strong healthcare, and affordable housing for Canadians.

If we want a country where those things — **better jobs, bigger paycheques, accessible healthcare, and secure communities** — are a given, we must urgently confront our economic underperformance. In a global economy, falling behind isn't just about slower growth — it's about growing poorer. With our trade and diplomatic ties, especially with the United States, more unsettled than ever, the need to build a strong domestic foundation has never been clearer.

This report, *A Mandate to Innovate*, lays out a practical, department-by-department roadmap for the new federal government. It is both a challenge and an invitation: a challenge to break from outdated thinking and an invitation to work in real partnership with Canadian innovators to build a more resilient, productive, and self-reliant economy.

In the 2025 federal election, Canadians gave Prime Minister Mark Carney a mandate to innovate — and we at CCI stand ready to help turn that mandate into meaningful action.

Benjamin Bergen
CCI President / Président

About the Council of Canadian Innovators

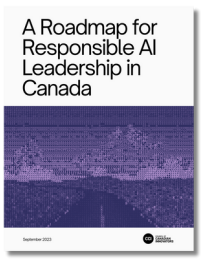
COUNCIL OF CANADIAN INNOVATORS | CCI | CONSEIL CANADIEN DES INNOVATEURS

The Council of Canadian Innovators is a national member-based organization reshaping how governments across Canada think about innovation policy, and supporting homegrown scale-ups to drive prosperity.

Established in 2015, CCI represents and works with over 170 of Canada's fastest-growing technology companies. Our members are the CEOs, founders, and top senior executives behind some of Canada's most successful 'scale-up' companies. All our members are job and wealth creators, investors, philanthropists, and experts in their fields of healthtech, cleantech, fintech, cybersecurity, AI and digital transformation. Companies in our portfolio are market leaders in their verticals, commercialize their technologies in over 190 countries, and generate between $10M - $750M in annual recurring revenue. We advocate on their behalf for government strategies that increase their access to skilled talent, strategic capital, and new customers, as well as expanded freedom to operate for their global pursuits of scale.

Learn more about our members and our initiatives at www.canadianinnovators.org.

Recent policy reports and publications from CCI



MANDATE LETTER ACTION ITEMS

Prime Minister of Canada

- **Build the foundations for a government focused on security, prosperity and sovereignty** by assembling an innovation-first Cabinet that thinks differently.
- **Create a disruptive, effective tool for innovators and government** with a mission-focused, arms-length agency to lead on helping firms scale and secure freedom to operate.
- **Deliver smarter government and more effective programs** by centralizing responsibility for in-house innovation programs in a dedicated Privy Council Office branch.
- **Bring new ideas and expert analysis to Ottawa** by creating a new Prosperity and Innovation Council to advise Cabinet on economic policy with original research and analysis, and break down barriers for private sector, academic and labour expertise to contribute to public service.
- **Unleash competition in Canada** with enhanced and independent competition law enforcement by severing the link between ISED and the Competition Bureau and strengthening its ability to pursue cases of corporate behaviour that harms competition and Canadians.
- **Deepen Canadians' access to the best our country has to offer** by tackling internal trade barriers and creating a single market for public procurement from coast to coast to coast.

Minister of Finance

- **Unlock innovation and support entrepreneurs by reforming the tax system.**
- **Give Canadians choice in how they manage their hard-earned money** by launching a comprehensive open banking framework that fuels innovation.
- **Focus our Crown corporations on the needs of businesses and innovators** by reforming and streamlining the Business Development Bank of Canada and Export Development Canada, especially with a view to increasing their appetite for making higher-risk investments and ensuring that their investment vehicles are well-suited for their targets and goals.
- **Commit to Canada's defence and maximize the impact of our defence spending** by championing, in partnership with key NATO allies, a multilateral Defence, Security and Resilience Bank.

Minister of Innovation, Science and Industry

- **End needless duplication, shutter underperforming programs, and cut subsidies that don't build prosperity in Canada.**
- **Focus Canada's AI efforts on scaling Canadian firms, smart regulation, and AI adoption** instead of spreading our efforts too thin.
- **Keep Canadians and their data safe** by building sovereign compute and cloud capacity for critical applications and foster a world-class Canadian supply chain.
- **Protect Canadian ideas and our capacity to innovate** by taking a sovereign, security-informed approach to IP, data, and other intangible assets to maximize freedom to operate.
- **Better protect Canada through economic security** by bringing the Investment Canada Act into the 21st century.
- **Strengthen the connections between publicly-funded research and economic success** by conditioning federal research funding on strong university and college intellectual property management (e.g. express licenses) and research commercialization practices that promote Canadian prosperity.
- **Advance Canadian leadership on standards** by merging existing federal standards bodies and encouraging Canadian firms to participate in international standards setting.
- **Focus on measuring what matters** and enhance support to Statistics Canada to conduct research and establish benchmarks for Canada's role and performance in critical global value chains, and assessing our international innovation competitiveness and economic complexity.

Ministers of Foreign Affairs and International Trade

- **Strengthen our economy with new products and new markets** by taking a new strategic approach to trade and expanding and strengthening the Trade Commissioner Service.
- **Protect Canada's global security interests and our economic competitiveness** by mapping, assessing, and acting to strengthen our position in global value chains.
- **Protect Canada's capability to respond to economic and security threats at home** with a policy approach that sees our standard of living, trade and technological competitiveness as fundamentally linked.

Overview of Mandate Letter Action Items

MANDATE LETTER ACTION ITEMS

Ministers of National Defence and Public Safety

- **Restore Canada's armed forces and the respect of our allies** by reinvesting in our defence industrial base, our military, and in advanced dual-use capabilities like cybersecurity and drones that offer Canada significant opportunities to serve as an arsenal to our allies.
- **Empower National Defence and our public safety agencies with the agility to procure what they need** by radically simplifying procurement, emphasizing accountability, results over process and building capacity to procure and co-develop early-stage technologies.

Ministers of Natural Resources, Environment and Climate Change, and Agriculture and Agri-Food

- **Diversify and drive innovation, investment and trade in critical minerals** by investing in innovation leadership, building on existing partnerships with our key allies, including the European-Canadian Raw Materials Partnership, and creating regulatory certainty for investors by increasing domestic alignment with global best practices.
- **Drive growth and innovation in Canadian cleantech** by strengthening carbon markets, making better use of procurement and technological challenge prizes, and leverage existing international rules and agreements to protect nascent industries from unfair competitive practices.
- **Secure Canada's energy resilience** by driving the modernization of Canada's electrical grid and continuing to fund important government energy initiatives, including Natural Resources Canada's Smart Renewables and Electrification Pathways (SREPs) Program.
- **Capitalize on Canada's unique potential as a food superpower** by reducing Health Canada approval times for agri-food products, making it easier and less risky for farmers to buy and try out new technology, and removing regulatory hurdles for the use of new farming techniques.

Minister of Public Services and Procurement

- **Unlock the buying power of the federal government and empower public servants and innovators** by reforming how government buys from innovators.

President of the Treasury Board

- **Unlock more flexible, innovative governance** by enshrining standards as statutory instruments in legislation, narrowing the scope of regulations, and expanding the use of regulatory sandboxes across government for emerging technologies.
- **Deliver public services more effectively** by empowering public servants to adopt AI and other technology that is right for them.
- **Ensure Canadians get more value for public money** by sharpening central audit and evaluation for programs across government.

Minister of Immigration, Refugees and Citizenship

- **Make Canada the world's top destination for the best and brightest** by maintaining and expanding programs that work like the Global Talent Stream and market Canada as a stable alternative to the United States, work to bring home Canadian entrepreneurs, and welcome elite scientific and engineering talent to our universities.

Minister of Health

- **Bring health data into the digital age** by moving forward on legislation to require secure, interoperable and standards-driven use of health data.
- **Power innovation in health and medical technology** by modernizing Health Canada's regulatory and service culture to better serve Canadians and innovators.
- **Improve care and empower health care practitioners** by working with provincial counterparts to simplify and standardize innovation procurement in health care systems.

Overview of Mandate Letter Action Items

A Mandate To Innovate

Innovation, Prosperity, Security

Competing and Winning in the 21st Century

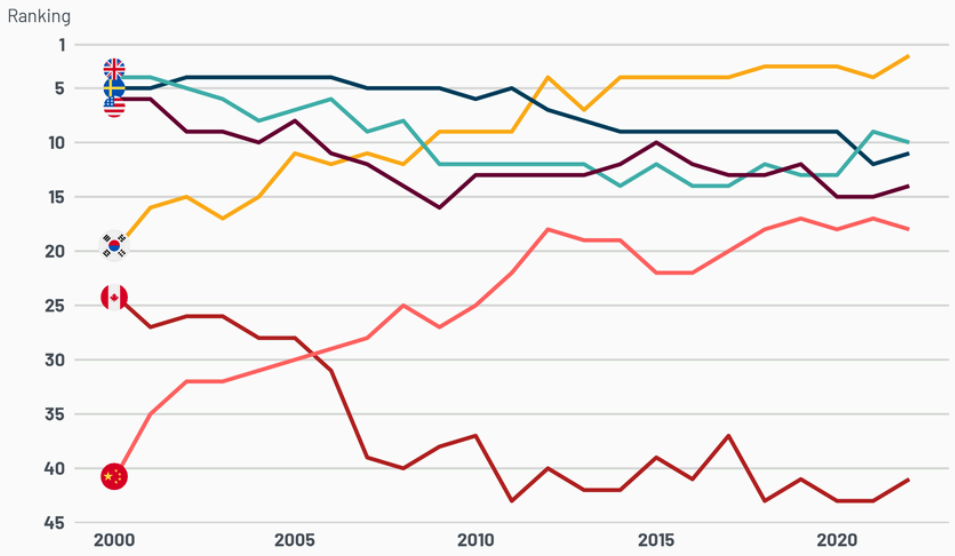
The foundation of security and prosperity in the 21st century is innovation: successfully creating and deploying new technologies and techniques into competitive markets. The successful countries of the future will be those with companies and economies that respond quickly to disruption, create and protect valuable intellectual property (IP), and export widely across the world. Economic research is increasingly clear that prosperity, innovation and economic security are deeply entwined.[2]

Unfortunately, Canada is not becoming more innovative and prosperous at the same pace as our neighbours and peers. This will undermine our security and make us more reliant on other countries. Worryingly, our labour productivity — a measure of how much we make for every hour worked and a reliable indicator of long-term economic prosperity outcomes — has been stagnant for years. Our economy's complexity, a measure of how technologically advanced and in-demand our exports are, has also crashed over the last generation.

New and emerging security threats in a fast-paced and globalized world are putting the risks of a stagnant economy into sharp focus. The COVID-19 pandemic, Russia's invasion of Ukraine, the rise of a more aggressive and innovative China, and annexation and trade war threats from the United States have all underlined for Canadians that complacency is not an option.[3] Countries must redevelop important industrial capabilities to stay safe and protect national standards of living. In a changed and insecure world, security policy is also industrial policy and innovation policy.

Intangible assets like IP and data present new threats to Canadian security and sovereignty as well as new opportunities. Canada's roles in global value chains (GVCs) will determine who our partners are and what economic role we can expect to play — we need to own high-value niches that generate wealth and prosperity. If we are not careful, companies based in other countries, with the support of their governments, will be happy to keep us in low-value, low-margin activities that enrich them instead of us

Figure One: Economic Complexity Index (ECI) Global Rankings
(2000-2022)



COUNCIL OF CANADIAN INNOVATORS
SOURCE: HARVARD ATLAS OF ECONOMIC COMPLEXITY

Innovation, Prosperity, Security

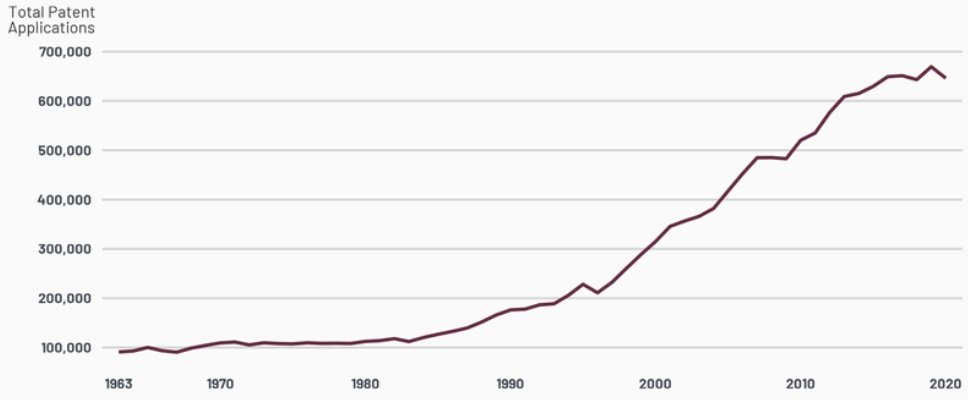
The New Intangible Economics of the 21st Century

We live in a transformed economy where national wealth comes from intangible assets. The vast majority of the value of companies listed on major stock exchanges — over 90% of the S&P 500, to take one example — is made up of intangible assets like patents, brands, and know-how. This means that innovation, and consequently innovators and their firms, have never been more important.

Intangible assets such as patents, brands, data and trade secrets have been the basis of the knowledge-based economy for decades. The commercialization of IP generates temporary monopoly rents. The enormous expansion of creation of IP after 1980 saw the profit share of national income in the United States, which was the most advanced innovation economy at the time, rise alongside it.

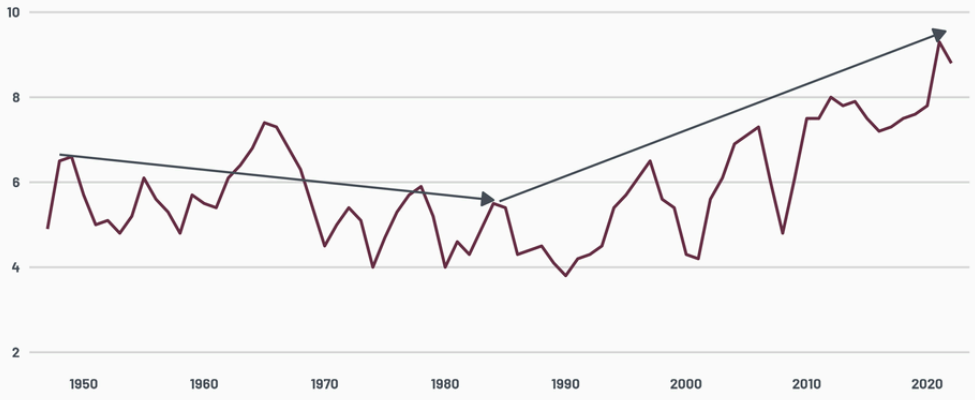
This tendency is accelerating. New technological changes in the 21st century — AI, smartphones, social media — have launched the data-driven economy. This economy features steep economies of scale and domination of network effects in many applications. These features enable the emergence of superstar firms that sit atop their industries on a global scale. The data-driven economy is a winner-take-most system. These winners generate massive economic rents for themselves and for their home economies.

Figure Two: US Patent Applications
(1963-2020)



COUNCIL OF CANADIAN INNOVATORS
SOURCE: US PATENT AND TRADEMARK OFFICE

Figure Three: Shares of Gross Domestic Income (1947-2022)
Profits after tax with inventory valuation and capital consumption adjustments: undistributed corporate profits with inventory valuation and capital consumption adjustments



COUNCIL OF CANADIAN INNOVATORS
SOURCE: FRED

Innovation, Prosperity, Security

The Importance of Canadian Innovators

Innovation drives the economy, and firms drive innovation. Canada needs to be a country where homegrown firms grow to global scale — especially firms that generate, retain and commercialize IP and data. The new economics of innovation dictate this as a critical issue for our prosperity and our security. If Canadian firms cannot create and keep the intangible assets that allow them freedom to operate in global markets, then they will be unable to compete. With few firms able to compete in the global innovation economy, Canada will be left with dramatically diminished capacity to innovate and dim prospects for its future as a rich, advanced economy.

A recent study of OECD economies found that the general slowdown in productivity growth actually reflected a titanic divergence between leading-edge firms, which achieved 2.6% labour productivity growth, and laggards, which achieved only 0.6%.[4] It has never been more important as an economy to be a country where industry-leading firms grow and stay.[5]

Canada right now is not one of those leading-edge countries. Despite a 2017 commitment by the federal government to double the number of high-growth firms, the number remains virtually unchanged from where it was when this goal was announced — at 14,000.[6] A lack of leading global firms is holding back our economic growth. If we want to improve our worrying trajectory, we need economic management that puts innovators and innovative businesses at its heart.

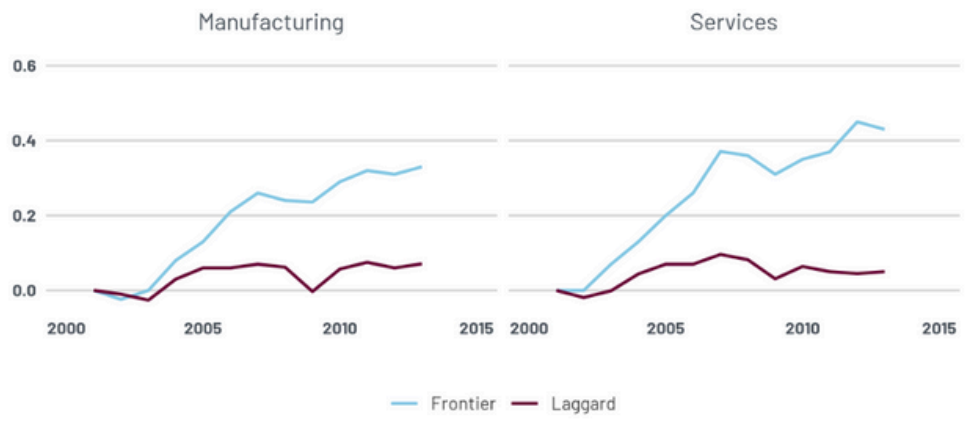
For the most part, Canadian governments have sought foreign direct investment (FDI) from foreign IP- and research-intensive firms as a jobs strategy. But this does not create the same economic benefits as supporting scaling domestic firms in terms of moving the needle on Canada's dismal prosperity trajectory.[7]

Canada already has an unusually weak relationship between patent filings, widely used as a proxy for innovation, and our productivity growth. Unlike most other countries that have seen domestic inventors file growing numbers of patents, our productivity has remained stagnant. This is in part because of patents filed by Canadians resident abroad — we have the dubious honour of being the world's third-largest exporter of inventors after China and India — and in part because the control and direction of R&D by foreign firms means that spillovers from research conducted in Canada leave the country and contribute to productivity growth and growing wealth in other countries.[8]

Today's innovators need a federal government focused on their four key needs: access to talent, capital, customers, and crafting regulations and marketplace frameworks that help them scale instead of throwing up arbitrary barriers to growth.

Figure Four: Labor Productivity in Global Frontier Firms and Lagging Firms

(2001-2013)



COUNCIL OF CANADIAN INNOVATORS
RECREATED FROM: ANDREW ET AL. (2016)

Innovation, Prosperity, Security

New Tools for Prosperity

A new economy defined by the importance of intangible assets and leading-edge businesses needs new policies. This doesn't mean less or more government involvement — it means smarter government.

The challenge for Canada is to have a government that understands the new dynamics of the innovation economy and is able to help innovators scale and build a more secure and prosperous country. Every country uses policy tools to drive entrepreneurship. Canada should aim to be the country whose government gets the most growth for its dollar with well-targeted policies and a nimble, expert public service that works more closely with innovators, workers and the broad business community closely.

For generations, Canada's approach to innovation policy has focused on tax credits to subsidize research and development (R&D) in the private sector, funding academic basic research, and subsidizing training researchers at universities. These are all important to maintaining a healthy base of industrial R&D, but they do not target the key activities and factors that Canada needs: domestic control and ownership of critical IP and scaling firms focused on exporting high-value-added goods and services.

A new Cabinet should take on the challenge of building a Government of Canada that is more entrepreneurial and innovative and that better supports entrepreneurs and innovators.

This means creativity about new instruments — using public procurement as an innovation policy lever and paring down regulations that aren't serving the public interest well. It also means new ways of thinking more broadly about governance in the economy by closely linking innovation, prosperity and security.

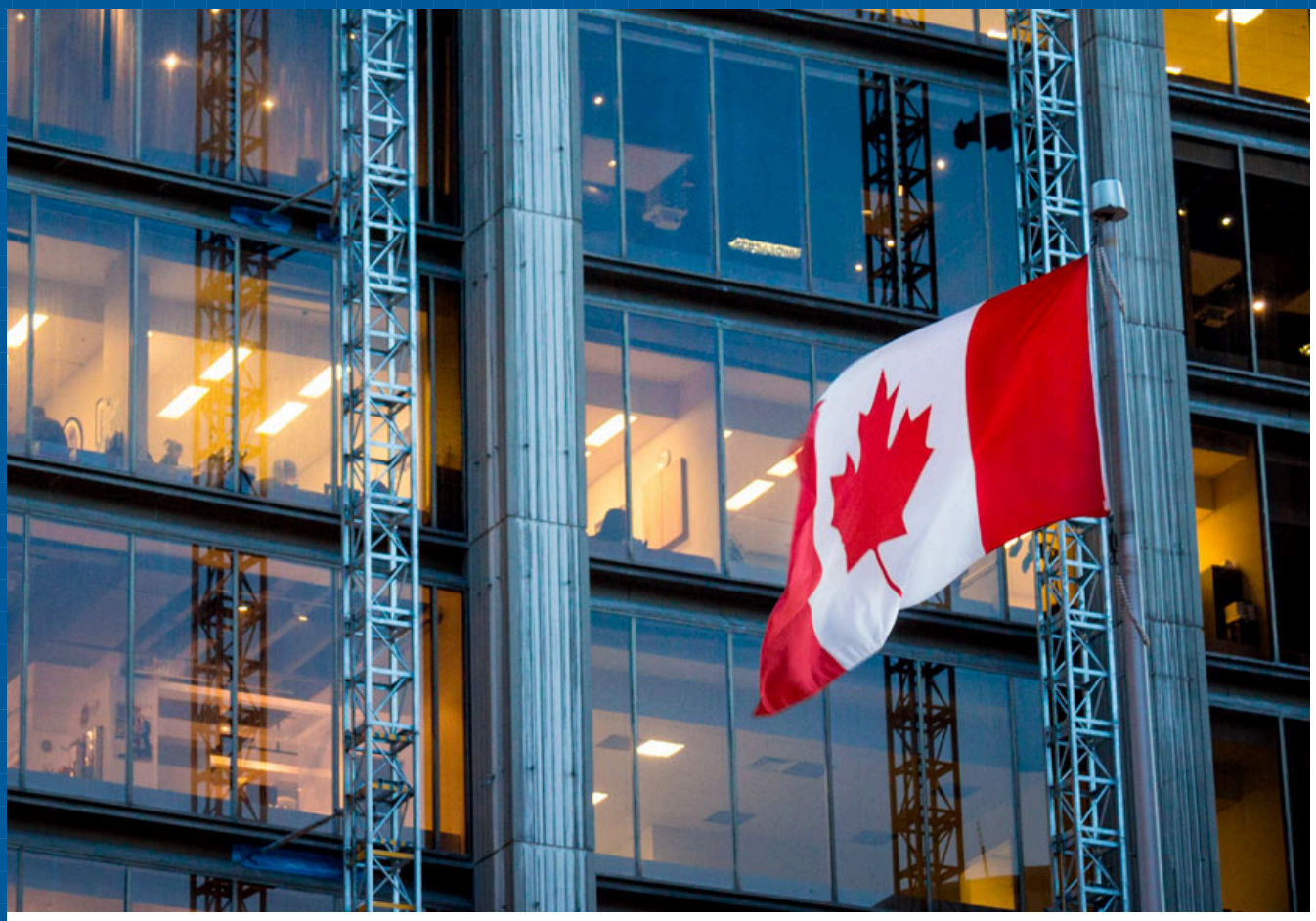
Challenges like the emergence of AI, the need to reinvigorate Canada's military, and managing our economic ties to the United States in ways that maximize Canada's security, prosperity and sovereignty will test our governments in new ways. These challenges carry risks, but they are also opportunities to do things differently.

An innovative Canada is a safe and prosperous Canada, as well as a more compassionate Canada better able to protect the vulnerable and give everyone a fair chance at a better life. A new Cabinet has a unique opportunity to start building the structures and setting up the policies that will help innovators compete and win globally and build the Canada we want.

Innovation, Prosperity, Security

A Mandate To Innovate

Mandate Letter Action Items



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Prime Minister of Canada

The Prime Minister of Canada will have an important role to play in enabling the growth and success of Canada's scaling, innovative firms that do so much to build national prosperity. Innovators need access to talent, access to capital, access to customers, and the right marketplace frameworks. Firm, decisive leadership can set the right tone for the Government of Canada to build on what works and to stop doing what doesn't. The Prime Minister also has the unique prerogative of making decisions about the structure of government that can make it work better.

Build the foundations for a government focused on security, prosperity and sovereignty by assembling an innovation-first Cabinet that thinks differently.

One of the first tasks that the Prime Minister faces is assembling a Cabinet. The decisions that they make about who sits at the Cabinet table have enormous influence on the success or failure of key initiatives and the Prime Minister's own legacy. This incoming government is facing immediate challenges unlike those faced by any government in living memory, and will need to hit the ground running as soon as possible.

That's why the Prime Minister should be sure to appoint Cabinet ministers with extensive experience as innovators in the private sector, who understand the new dynamics of the modern economy and believe that building up Canadian firms is one of the most effective tools we have in making our country safer, more prosperous and more innovative.

Create a disruptive, effective tool for innovators and government with a mission-focused, arms-length agency to lead on helping firms scale and secure freedom to operate.

Generations of policy experiments in making Canada more innovative and prosperous have focused on stimulating inputs like research and development spending and on attracting foreign direct investment have not worked. These reflect misunderstandings of the modern innovation economy - research and development are activities that firms do when they expect them to be profitable, and foreign direct investment in critical technology sectors exploits our assets and erodes Canadian capacity to innovate. Subsidizing both without understanding the underlying dynamics of the innovation economy have produced mediocre results.

Governments have also struggled to implement policies successfully. At the operational level, policies are either abandoned too quickly to effectively learn lessons or stay in place long after they have proven ineffective. Short-term political considerations routinely intrude on making long-term policy, and silos across government lead to an innovation policy suite that adds up to less than the sum of its parts. Departments are simply not able to manage this kind of focused work that requires private sector expertise over the long term.

The next Prime Minister should follow the example of other successful innovation trade-exposed, smaller economies and establish an arms-length agency empowered to pursue clear goals, hire the right people, and work at the speed of business. The agency should be incorporated as a Crown corporation and take existing expertise and policy tools from Innovation Canada and the National Research Council.[9]

INNOVATION AGENCIES AND CORPORATIONS

Research into innovation policy and economics has found strong results from arms-length innovation agencies and corporations in driving the growth of competitive innovative firms.

The Israeli Innovation Authority (formerly the Office of the Chief Scientist) and Business Finland (formerly TEKES) bring together private sector expertise with a public mandate to increase innovation in their economies. They have contributed to making their economies substantially more dynamic through operational independence, strategic risk-taking, and smart programming.

Firms are key to prosperity - successful, innovative firms make outsized contributions to productivity growth and diffuse technology adoption and other good management practices across the economy.

The agency should have a mandate to boost industrial research, strengthen Canada's base of intangible assets, and act as a bridge between innovators and public sector buyers. Ultimately, it should aim to increase the number of high-growth firms in critical technology areas, and work as well to provide business intelligence and analysis to government policy efforts and provide expertise about the innovation economy to operations such as procurement.

Beyond grant and loan programs similar to those in existing innovation agencies, Canada's should be empowered to support government department and agencies in buying from innovators. By developing expertise, helping public servants identify needs, and derisking the innovation procurement process, the agency can make the public sector a much better and more impactful buyer of innovation. CCI's report Buying

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Prime Minister of Canada

Ideas ways in which the agency could structure its procurement programming.

As capacities develop, it could take on new tasks critical to our long-term innovation success, such as providing national leadership on developing intellectual property and intangible assets. This should build on and strengthen provincial efforts, combining best practices from Quebec's Axelys and Ontario's IPON.

The agency should also support or absorb the Innovation Asset Collective to build out a portfolio of strategic intellectual property assets to maximize the freedom to operate of Canadian firms.

Deliver smarter government and more effective programs by centralizing responsibility for in-house innovation programs in a dedicated Privy Council Office branch.

While Canada needs a standalone innovation agency to focus on giving innovators the tools they need to scale, in-house programming needs much closer oversight and coordination in order to ensure results, monitor for unintended consequences, and to clearly report to decision-makers on their options.

The next Prime Minister should create a unit in the Privy Council Office, headed by a Deputy Secretary, dedicated to oversight and coordination of all in-house innovation programming and initiatives.

Bring new ideas and expert analysis to Ottawa by creating a new Prosperity and Innovation Council to advise Cabinet on economic policy with original research and analysis, and break down barriers for private sector, academic and labour experts to contribute to public service.

The Government of Canada does not benefit as much as it should from existing expertise outside of government. Consequently, policymakers do not get the best possible advice about how to manage complex economic issues in an uncertain and rapidly-changing landscape.

An advisory Prosperity and Innovation Council would fill a longstanding gap in Canadian economic policymaking, and provide policymakers with analysis and research to inform efforts to enhance prosperity and boost productivity. As Canada faces new and enormously challenging geopolitical circumstances, the next Prime Minister should tap patriotic Canadians with expertise on growing businesses at home and abroad, strategic trade, intellectual property, and critical technology sectors to serve on this Council.

Unleash competition in Canada with enhanced and independent competition law enforcement by severing the link between ISED and the Competition Bureau and strengthening its ability to pursue cases of corporate behaviour that harms competition and Canadians.

Open competition is vitally important to free markets and to ensuring that the best, most innovative firms rise to the top. Anticompetitive forces entrench incumbents that become insulated from their own customers, depress innovation, and shrink paycheques for their workers.

To further strengthen competition enforcement in Canada, the next Prime Minister should remove the Competition Bureau from the Department of Innovation, Science and Economic Development and allow it to exist as a freestanding law enforcement agency, as well as better equipping it for enforcement.

Deepen Canadians' access to the best our country has to offer by tackling internal trade barriers and creating a single market for public procurement from coast to coast to coast.

Trade barriers between provinces are a longstanding drag on our national prosperity. One way that the federal government can lead on building a more prosperous Canada is by working with provinces to eliminate arbitrary barriers and spearheading regulatory alignment, including on industrial carbon pricing.

Federal leadership on simplifying and aligning public sector procurement practices across Canada is also an enormous opportunity. Procurement at all levels of government makes up 15% of Canada's GDP, about as much as Alberta's contribution to our economy or the contribution of the natural resources sector.

A procurement marketplace that functions much more like a free market from coast to coast to coast could create new economic activity and make government more effective without additional spending.

Action Items

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Minister of Finance

Access to capital is a critical barrier for Canada's scaling innovators. Our tax system needs an overhaul to reflect new economic and geopolitical realities. Our venture capital ecosystem, including the Crown corporations, is not as large and active as in the United States. Commercial banks and Canadian institutional investors demonstrate little appetite for investing in growing Canadian companies. The incoming Minister of Finance must lead on unlocking more dynamism and innovation in our economy through stronger and more integrated financial and capital markets, a more competitive tax code, and clear mandates for our financial Crown corporations.

Unlock innovation and support entrepreneurs by reforming the tax system.

The incoming Minister should move forward on modernizing the Scientific Research and Experimental Development tax credit to reward innovation and commercialization in Canada, reintroducing flow-through shares for innovative, capital-intensive businesses, and bring us closer to tax competitiveness with the United States by temporarily reducing the capital gains inclusion rate for productive investments in Canadian enterprises and stimulate access to capital creating a federal tax credit for investment into Canadian small businesses to match successful provincial programs.

Canada's Scientific Research and Experimental Development tax credit is the single largest science and innovation policy lever in the federal government's toolkit. With an expected annual outlay of nearly $4 billion in 2024, it is ten times larger than any other science and innovation policy tool. In a constrained fiscal environment, the Government of Canada should be seeking to maximize the long-term benefits of SR&ED for the Canadian economy by focusing the policy on Canadian firms building and commercializing valuable intangible assets by following CCI's recommendations for SR&ED reform and on designing a complementary innovation box incentive.[10] The incoming Minister could further consider placing a cap on the number of years that a small company can claim the enhanced SR&ED credit as a cost-saving measure and to force so-called 'zombie firms' with low potential to exit.

Canadians deserve much more transparency about how SR&ED is working. The government must develop more comprehensive evaluation metrics to ensure the system effectively contributes to innovation outcomes in Canada. Most importantly, this means making data on SR&ED uptake and net benefits more transparent to Canadians and allowing for periodic refinement based on evidence to optimally target the credit to maximize long-term growth. This includes tracking the production, ownership and net commercial benefit of intangible assets derived from publicly funded R&D. SR&ED will deliver material and long-term value to Canada primarily when downstream IP enables the global success of domestic firms. Funding R&D projects where the resultant IP belongs to foreign firms that assert it against Canadian firms is counter-productive to the goal of raising business investment in research and development.

Flow-through shares are a tool used to promote investment in capital-intensive enterprises that potentially have long lags before investors see significant returns. This is the case for many deep tech and life sciences fields. The incoming Minister should ensure that the platform commitment to flow-through shares is enacted for investments in deep tech and life sciences, particularly those listed as sensitive technology areas, to be eligible for the use of flow-through shares.

Innovators welcomed the commitment to scrap the poorly-targeted and counterproductive increase to the capital gains inclusion rate. More can be done to incentivize investing in Canada, staunching our brain drain and strengthening access to capital in Canada. On a time-limited basis, the incoming Minister should reduce the inclusion rate on capital gains realized from investments into Canadian startups and scaleups.

Research from the Canadian Venture Capital and Private Equity Association projected that the proposed increase to the inclusion rate would have caused a 22% decline in venture capital and a 48% decline in private equity investment. Conversely, the American Qualified Small Business Stock exemption, which is roughly analogous to this proposal, prompted a 12% increase in investment.[11]

British Columbia, Nova Scotia, Newfoundland and Labrador and British Columbia all have venture capital tax credits. A federal incentive on similar lines would reduce interprovincial barriers and incentivize new investments in Canadian companies

Give Canadians choice in how they manage their hard-earned money by launching a comprehensive open finance framework that fuels innovation.

Open finance — also called open banking, consumer-directed finance and more — is long overdue in Canada. Our financial sector needs healthy competition and innovation, and Canada's incoming Finance Minister needs to ensure that innovators are finally able to enter the market in safe and regulated ways that empower Canadians to manage their own money how they choose.

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Minister of Finance

Focus our Crown corporations on the needs of businesses and innovators by reforming and streamlining the Business Development Bank of Canada and Export Development Canada, especially with a view to increasing their appetite for making higher-risk investments and ensuring that their investment vehicles are well-suited for their targets and goals.

The Business Development Bank of Canada (BDC) and Export Development Canada (EDC) have long track records of helping entrepreneurs build businesses in Canada, but need reform. BDC and EDC have both seen their balance sheets and mandates expand during the COVID-19 pandemic, and there is a clear need to clarify their mandates so they are not competing with each other, are focused directly on the business needs of entrepreneurs and innovators, and ending practices that hurt entrepreneurs, such as demanding personal guarantees. Their appetite for risk both need to increase as well in order to better support early-stage companies get to the point where they can scale, and specialized funds need to be aligned with their targets - for example, BDC's Deep Tech Fund faced serious problems because it made far larger investments than most companies needed or wanted at early stages.

Commit to Canada's defence and maximize the impact of our defence spending by championing, in partnership with key NATO allies, a multilateral Defence, Security and Resilience Bank.

Making Canada safer by ramping up defence is not something that can be achieved overnight. Canada can make progress in the shorter term by working with allies to charter and capitalize a Defence, Security and Resilience Bank as a freestanding, multilateral organization. This Bank could provide low-cost finance capital for long defence project cycles, reduce sensitivity to short-term budgeting considerations, and position Canada as a constructive participant in our international alliances.[12]

Canada would need to spend roughly $15 billion more each year on defence to reach its current standing commitment to the NATO minimum of 2% of GDP, and Canada may well decide to go beyond this target. A multilateral lending institution focused on financing defence commitments would help insulate long-term spending from short-term political cycles.

Beyond working with partners to establish this new institution, in concert with the incoming Minister of National Defence, the Minister of Finance should develop a credible plan to meet and even exceed this target and to meet the commitment of spending 20% of defence budgets on research and development.

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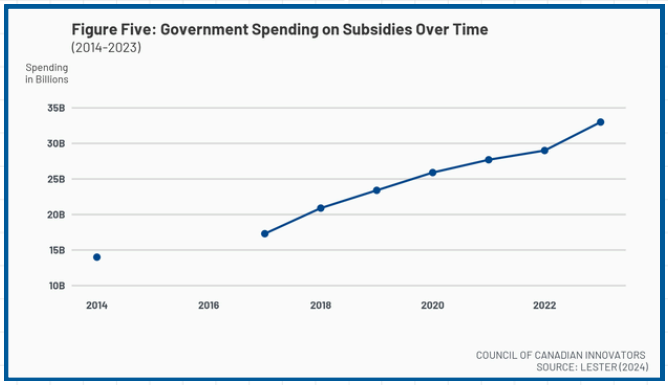
Minister of Innovation, Science and Industry

The Minister of Innovation, Science and Industry plays an important role in coordinating federal innovation programming, funding basic research, and leading on regulation of critical technologies. The incoming Minister must lead on making the ISED suite of programs more effective and targeted to supporting growth and scale of Canadian companies, focus on promoting commercialization of federally funded research, and better leveraging national assets like the National Research Council (NRC).

End needless duplication, shutter underperforming programs, and stop subsidies that don't build prosperity in Canada.

The ISED portfolio oversees, on average, $2.6 billion in grants and contributions through its spending programs each year. Across the entire federal government, planned spending on business subsidies, including tax breaks and subsidized credit through Crown corporations, will reach $50 billion by 2027-2028 under announced policies. Many of these programs should be substantially reformed, consolidated together, or scrapped. In a time where fiscal choices have real tradeoffs, economic, value-for-money objectives should come first.[13] The incoming Minister of Innovation, Science and Industry should play a leading role in any whole-of-government review process.



Programs for business support should have clear, measurable objectives tied to Canada's national prosperity. Business support programs should follow the international best practice of "export discipline" with a clear focus on scaling export-oriented firms for a time-limited period and on building intangible assets. This is an approach based on building up firms that are already proven winners in the market instead of spreading scarce resources widely on firms with low potential or on 'zombie firms' that rely on public funding to continue operating.

Discretionary funding should not, except in exceptional circumstances, go to foreign-headquartered firms. Canada must prioritize intangible asset retention as a key pillar of its national economic strategy to transform the country's world-class research outputs into real productivity and employment growth for Canadians. Foreign-headquartered firms in technology-intensive sectors establish Canadian research and development branch plants to produce intellectual property that is commercialized abroad. This doesn't just mean that Canada misses out on the vast majority of the IP wealth created here. This practice also narrows pathways to commercialization and success for Canadian companies by restricting their freedom to operate, or their legal rights to compete abroad. Research also increasingly shows that multinationals are effective at limiting positive spillovers and channelling knowledge inwards to other corporate units rather than into a local innovation ecosystem. This also makes those ecosystems less dynamic and innovative.[14]

Focus Canada's AI efforts on scaling Canadian firms, smart regulation, and AI adoption instead of spreading our efforts too thin.

Canada was an early pioneer of AI research, and Canadian inventors are filing more AI patents than ever — 2022-23 saw an increase of 57%, an impressive growth rate that puts Canada second among G7 countries.[15]

Unfortunately, many patents filed by Canadians continue to be owned by foreign-headquartered firms — by 2023, just 7% of the intellectual property rights that were generated through the government's Pan-Canadian Artificial Intelligence Strategy were owned by Canadian private sector firms.[16] This matters. Other countries may see considerable benefits, despite Canadians having paid for the substantial research and education efforts that made it possible to file the patents in the first place.

Canada has AI innovators with the potential to be significant global companies. Federal AI strategy to this point has not had enough focus on commercialization, scaling firms, and adoption.

The incoming Minister has an opportunity to fix this. Canada needs an approach that focuses on the barriers facing scaling firms as well as barriers to investment in and adoption of AI across the Canadian economy, including development of a light-touch regulatory framework that makes innovators and investors want to build in Canada. Government can also lead by being an effective and enthusiastic adopter of AI itself and using

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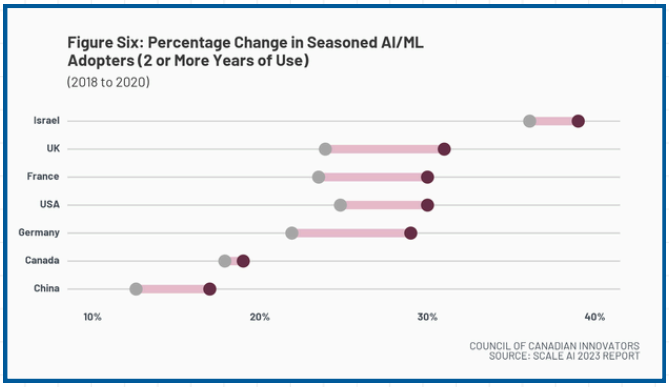
procurement as a strategic tool to solve public problems and to accelerate the growth of competitive firms.

Access to customers, sales and revenues within Canada, however, is a growing problem and may prompt cutting-edge and scaling AI firms to base themselves elsewhere. According to a Canadian Chamber of Commerce report, only 9% of surveyed firms used generative AI tools, with another five percent planning to start shortly, and 73% haven't considered using these tools.[17] Similarly, Scale AI's 2023 AI at Scale report found that 48% of Canadian companies were not using AI, 34% had been using AI for under two years, and 19% had used AI for over two years. In the US, UK, and France, by comparison, around 30% of firms were seasoned adopters with over 2 years of AI use.[18]



While global adoption of AI technologies is still in an early stage, signs of potential labour productivity gains makes encouraging wider adoption worthwhile. This is especially the case in Canada, where we have historically lagged peer economies in productivity growth and risk falling further behind.

Compute access, and in particular access to sovereign compute that is wholly Canadian-controlled, are also important issues. Canada's historic strength in AI research offers a promising opportunity to engage with our international partners. In doing so, Canada can gain access to secure infrastructure and computing power located in the trusted jurisdictions of our economic and political allies.

The European High-Performance Computing Joint Undertaking (EuroHPC JU) is an initiative between the EU, participating member states, and private stakeholders to develop supercomputing infrastructure and support research and innovation activities. Canada should build on its entry into Horizon Europe — an ongoing EU scientific research initiative — in January 2024 and seek membership into EuroHPC JU to supplement the country's current compute capacity.

Keep Canadians and their data safe by building sovereign compute and cloud capacity for critical applications and foster a world-class Canadian supply chain.

For critical and sensitive applications relating to keeping Canadians and their data safe in a world that is becoming less safe, Canada should have the capabilities to deploy and maintain compute capacity that is fully controlled by and for Canadians. In a time of rapidly accelerating cyber-attacks from both criminal and state-aligned actors, an assured amount of secure compute is in a very real sense an issue of national defence and security.

Sovereign and domestic compute are not equivalent. Foreign-controlled cloud service providers, even if offering services and hosting infrastructure on Canadian soil, are subject to laws like the US Cloud Act. A sovereign approach to compute should not include foreign companies that are subject to another country's laws and jurisdiction.

Using another country's cloud computing infrastructure relies on ongoing trust and favourable American or E.U. policy regimes around data protection. It also relies on the willingness and ability of large hyper-scalers to provide access to their services.

The Government of Canada should identify critical domestic hardware suppliers as well as service providers with which to partner on leading the development and deployment of a modest secure, domestic compute capability for highly sensitive needs.

Protect Canadian ideas and our capacity to innovate by taking a sovereign, security-informed approach to IP, data, and other intangible assets to maximize freedom to operate.

In today's economy, security policy is industrial policy and innovation policy — and government actions must reflect that. A new approach to IP and intangible assets begins with taking a renewed focus on these assets as one of the key desired outputs of federal business policy.

Other countries — China, the United States, South Korea, and Nordic countries, for example — have built a considerable advantage in establishing control over the valuable IP assets that will cement leadership in key technology areas. Canada will need to make aggressive efforts to catch up. The incoming Minister should target matching the average rate of patenting per capita in

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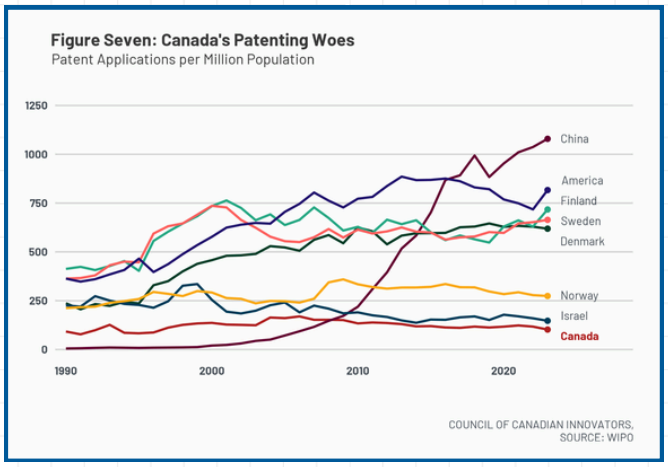
innovative Nordic countries within 10 years. Canadians currently file just over 100 patent applications for every million Canadians, where Danes, Swedes and Finns file between 600 and 700. Catching up on owning the future must be an important priority.



The experience of 'patent tiger' economies South Korea and Israel show that pushing for patent quantity quickly leads to higher patent quality as well.[19]

Trade and foreign direct investment are important policy areas that shape how Canadian firms engage with the global intangibles economy. Digital trade is a critical export for Canada, and the Government of Canada should work to ensure that Canadian firms are present in important international standard-setting processes and that trade agreements enable Canadian firms to compete fairly in export markets.

Better protect Canada's economic security and capacity to innovate by bringing the *Investment Canada Act* into the 21st century.

The *Investment Canada Act*, in our new economic and security environment, needs an update. When it comes to acquisition of Canadian firms and assets by foreign actors, government must go beyond crude indicators like size and deepen its capacity to assess the implications of foreign acquisition of IP, the effects on freedom to operate, data assets, digital-only presence of foreign firms, and the role of firms in innovation ecosystems.[20]

The Investment Canada Act was written for the industrial economy and for goods crossing national borders instead of services flowing seamlessly across the entire globe. It has not fully been brought up to date with the realities of the data-driven innovation economy. Recent changes to incorporate economic security conditions as a category for review are promising steps forward, but more could be done to strengthen the Act.

The sections of the law laying out its purpose should explicitly recognize that fundamental changes to the economy require a different approach and create a much larger imperative for government to act in defence of Canada's interests. The Act would also benefit from creating a Technology and Innovation Advisor's office to provide the Minister with actionable advice on national and economic security and net economic benefits to Canada in the context of foreign acquisitions.

Strengthen the connections between publicly-funded research and economic success by tying federal research funding on strong university and college intellectual property management (e.g. express licenses), improving research commercialization practices that promote Canadian prosperity, and modernizing the NRC.

Canada has a long track record of successful and well-regarded research at universities and colleges. At the same time, we are a falling behind in the innovation economy, with lower rates of patenting, technology adoption and diffusion, and numbers of global companies in innovative sectors than we should have given our scientific success.[21] Canada also has the dubious distinction of being a world leader in exporting inventors — the third largest in the world after China and India.[22]

Among the world's major advanced economies, Canada spends the least on research as a share of GDP. At the same time, Canada spends more as a share of GDP on research performed in the higher education sector than any of these countries.[23]

Canadians have long prided themselves on a science and research community that 'punches above its weight' in science outcomes. Canadian breakthroughs in AI and life sciences have contributed greatly to the global growth of AI companies and to the success of foreign-headquartered pharmaceutical companies in recent years. But the reality is that Canadian public spending on higher education and basic research is not, on its own, driving strong economic outcomes for Canadians. Canadians expect that generous levels of public support for academic research should come with prosperity, rising standards of living, and stronger public services for all Canadians.

Punching above our weight on research excellence is an asset, but governments should not pursue it to the

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exclusion of other science and research policy priorities. Right now, Canada is underperforming our innovation fundamentals — despite our research strengths, we are really punching below our weight.

Currently, over 50% of Canadian-invented patents are now foreign-owned, and technology transfer practices by post-secondary institutions are driving the early transfer of IP out of Canadian hands before it can be commercialized.[24] This is one of the key drivers of Canada's 'patent productivity paradox' described above and a drag on Canada's prosperity.

Social and economic benefits should be an important consideration for federal science and research policy. Innovation leaders like Switzerland, Sweden, Taiwan and Austria have developed policies that effectively capitalize on the reality that innovation and research dollars do not have a linear relationship to each other, that successful innovations build on each other, and that they rely on ecosystems of innovators, entrepreneurs and skilled workers that are not limited to researchers in post-secondary institutions. Governments in those countries focus on diffusing innovations through the economy and promote technical and vocational skills education that help companies stay innovative and globally competitive.[25]

The incoming Minister should task either the existing research funding councils or the proposed research capstone agency, in collaboration with the innovation agency, with promoting the commercialization and mobilization of university research. This process should especially target incentive structures that currently do not work to promote innovation and entrepreneurship.

This should include identifying and promoting intellectual property management, commercialization best practices, including the use of express licenses.[26] Currently, American technology transfer offices license patents at three times the rate of Canadian universities.[27] This is a worrying gap, and an important challenge for Canada's science, research and innovation community to address.

Finally, the Minister should reform the National Research Council to allow its labs and facilities more organizational autonomy to act as innovation enablers and work more flexibly with the private sector and with academic researchers. This could include spinning out facilities as independent companies, with ownership of capital assets remaining with the NRC.

Advance Canadian leadership on standards by reforming and consolidating federal standards bodies and encouraging Canadian firms to participate in international standards setting.

Standards are a critical part of our modern economy — they are the invisible layer of governance that gives consumers and investors confidence in functional products and services. Standards allow for mutual interoperability between countries while avoiding regulatory red tape, and countries like the United States, South Korea and China have made participating in international standards tables important elements of their innovation and industrial strategies.

Canada has no fewer than three federal government standards bodies. The Canadian General Standards Board and Accessibility Standards Canada can be dissolved with their important standards development roles transferred to existing accredited, non-profit standards bodies.

The Standards Council of Canada (SCC) should be reformed into an independent not-for-profit that accredits standards development and conformity assessment organizations. The National Research Council could absorb existing SCC functions related to participation in international and regional standards bodies, as well as ISED's role in the International Telecommunication Union.

Instead of these organizations, the next Minister should create a Standards Commission to drive adoption, recognition and use of standards across federal organizations and the private sector.

Finally, the Minister should, in cooperation with the innovation agency, work to promote Canadian companies' participation in international standards setting bodies to drive Canadian leadership in the global innovation economy.

Focus on measuring what matters and enhance support to Statistics Canada to conduct research and establish benchmarks for Canada's role and performance in critical global value chains, and assessing our international innovation competitiveness and economic complexity.

Policymakers do not understand the innovation economy well. Deepening data collection and analysis of innovation economy issues and metrics will help refine policy and give important business intelligence to innovators and investors.

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Ministers of Foreign Affairs and International Trade

In a world marked by profound uncertainty and fiercely competitive markets, innovators need foreign and trade policies that help them grow and export across the globe. The Ministers of Foreign Affairs and International Trade will have an important role in informing and setting Canada's economic security posture, promoting trade, and providing international context and insights across government as well as to the private sector.

Strengthen our economy with new products and new markets by taking a new strategic approach to trade and expanding and strengthening the Trade Commissioner Service.

Tariff threats from the United States have laid bare a very stark reality — while integration has had benefits for Canada, it has left us poorly equipped to deal with an aggressive and protectionist American government. While Canada will remain an open economy, we need a new, sovereign strategic approach that uses all the tools and levers at our disposal, including mutual recognition agreements for standards, as well as strengthening domestic value-added industries and security reviews. Trade agreements that position Canadian companies to win in global markets is the best future for a small open economy. To achieve it we need to re-build a close and standing cooperation between government and private sector stakeholders akin to the United States Trade Representative's sectoral tables which inform all aspect of US trade negotiating strategy. The incoming Minister should also consider equipping Global Affairs Canada with a Technology Diplomacy Office to coordinate and represent Canada's interests in emerging technology governance, international standards bodies, and multilateral forums.

The Trade Commissioner Service (TCS) is also a key asset. The incoming Ministers of Foreign Affairs and International Trade should strongly consider upscaling the program, which helps Canadian companies identify and win export opportunities all over the world. The TCS should also be equipped with more expertise on IP strategy, e-commerce, and data compliance to drive more impact.

Protect Canada's global security interests and our economic competitiveness by mapping, assessing, and acting to strengthen our position in global value chains.

Global value chains are the breadth of activities, carried out all over the world, that serve to produce, add value to and sell products and services. Carving out valuable economic niches within important GVCs is central to Canada's economic security. The government should identify advanced technologies where Canada plays or can play complementary, value-added roles in production — such as sensors or advanced packaging in the semiconductor supply chain — to further strengthen ties to our allies and reduce dependency on hostile global actors. Nationalistic economic policies and threats from historic allies make integrating Canada into international supply and value chains even more urgent. Canada should be playing a critical role in the production of key technologies to strengthen our capabilities and our partnerships.

As many countries learned during the COVID-19 pandemic, countries without valuable contributions to make to the global economy are not valued partners and allies and cannot count on protection or resources in crisis and end up at the back of the line.

The Government of Canada needs to fully understand Canada's role in critical GVCs and work to strengthen Canada's position in them, including critical minerals production but also IP-heavy downstream roles that add more value in high-technology sectors.

The role of firms and countries in GVCs is important to their economic, business and security interests. Without strong firms in downstream, value-added, IP-intensive roles in important global value chains, Canada will be left with little to offer world markets and key allies that could not be sourced from other countries. Indispensability in technology-intensive value chains is key to the security of countries like South Korea and Taiwan.

The Government of Canada should undertake a comprehensive mapping exercise of major value chains in which Canada participates to identify potential security and supply vulnerabilities, opportunities to develop and commercialize key intellectual property, and to help scale Canadian firms in valuable positions.

Protect Canada's capability to respond to economic and security threats at home with a policy approach that sees our standard of living, trade and technological competitiveness as fundamentally linked.

Economic complexity is a measure of how common and how diverse a country's exports are compared to other countries. Countries with a diverse set of exports that include goods that few other countries are able to produce have highly complex economies. Studies indicate that complexity is a strong and reliable

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Ministers of Foreign Affairs and International Trade

predictor of national income and growth.[28] Canada has seen a notable and worrying decline in economic complexity over the last generation.

In 2000, Canada had the 22nd most complex economy in the world. Alarmingly, we now have the 41st. Since complexity is a measure of capabilities and results, it is self-reinforcing. Apart from the dramatic ascent of South Korea from 20th to 3rd, the top 10 most complex economies have remained remarkably consistent since 2000. Consistent reinvestment by leading firms in refining processes and developing new products drives and maintains complexity and makes it easier for countries to jump in and compete in 'adjacent' capabilities that have similar capital, skills and resource inputs. Losing capabilities makes it harder to make back that ground.

This creates challenges for long-term sustainable growth as well as our capacity to produce advanced goods critical to our national security and sovereignty. Our country relies on basic, low-complexity industries to drive GDP growth. This has decreased national production capability. It indicates a failure to grow a critical mass of Canadian-headquartered firms that compete and win in global markets in highly complex products that enable our economy to accumulate productive knowledge and technology. Based on our rank and Economic Complexity Index rating, Canada ranks amongst developing, rather than developed, countries.[29]

Canada's alarming decline in economic complexity is a concern for our long-term security and prosperity. Complexity should inform an integrated approach to policymaking regarding our defence industrial base, our innovation and production capabilities, and our standard of living. As with GVCs, the Government of Canada should collect more fine-grained information about Canadian production capabilities and complexity. Complexity considerations such as adjacency should inform industrial investment priorities. With these tools, security and trade measures like tariffs, support measures, and export controls can be targeted for maximum effectiveness.

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Ministers of National Defence and Public Safety

Making Canada safer by reinvesting into the Canadian Armed Forces as well as national security agencies, and changing how they bring their own capabilities up to date, will be an important part of the incoming Ministers' mandates and critical to Canada's security.

Restore Canada's armed forces and the respect of our allies by reinvesting in our defence industrial base, our military, and in advanced dual-use capabilities like cybersecurity that offer Canada significant opportunities to serve as an arsenal to our allies.

Canada is currently on target to reach its NATO commitment to spending 2% of GDP on defence by 2032-2033. This is likely too slow given a rapidly changing geopolitical context and significant acceleration of rearmament plans by European allies. The incoming Ministers of National Defence and Public Safety should lead on accelerating our timeline to meeting and exceeding the 2% threshold, as well as meeting the commitment to spend 20% of our military budget on research and development.

Direct threats to our sovereignty are a crisis. Rearming allies present an opportunity for Canada to play an important role in the world, and to become a more prosperous and secure country at the same time.

Canada should pursue a Canadian Defence Industrial Strategy that focuses on building capacity in key dual-use sectors and capabilities - minerals, technology-intensive fields, manufacturing - with considerable focus on key IP and data. Canada has an opportunity to insert Canadian IP assets into critical global value chains, dual-use technologies, and military assets, and should orient our defence manufacturing and production around export opportunities as well as our own use.

While defence production and even value chain mapping will take time to do properly, Canada is already a cybersecurity powerhouse, with $3.2 billion in direct and indirect economic impact, and over $1.15 billion in exports. Identifying and working to scale firms in key cybersecurity and defence capability areas can be accomplished much more quickly and should be an early focus.

Quantum, artificial intelligence, drones and robotics are also areas with highly developed Canadian capabilities in dual-use technologies that represent significant export and defence opportunities.

Empower National Defence and our public safety agencies with the agility to procure what they need by radically simplifying procurement, emphasizing accountability, results over process and building capacity to procure and co-develop early-stage technologies.

Procurement processes that are not fit for purpose are at the heart of Canada's struggles to properly equip our military. Procurement should be substantially overhauled, with wider latitude given to military buyers to meet evolving needs with clear lines of accountability and a focus on aggregate results.

In a rapidly changing threat and technology environment, iterative co-development with firms is much likely to produce equipment and technological solutions that are fit for purpose than traditional procurement processes that require exhaustive requirement inventories at the outset of a years-long process.

In anticipation of a thorough policy overhaul, the Ministers should equip the forthcoming Defence Procurement Agency and Bureau of Research, Engineering and Advanced Leadership in Science (BOREALIS) with the authority to conduct transactions outside of the traditional process and to work across government to break down siloes. This is similar to the American military's Other Transaction Authority that has driven the success of organizations like the Defence Advanced Research Projects Agency.

USING NEW TOOLS

The US Government has had Other Transaction Authority (OTA) as a tool on the books since 1958. This is a legal tool that allows officials to enter into contracts for research, prototypes and innovation with suppliers without resorting to full, cumbersome full procurement processes. Traditionally, it was used sparingly by NASA and more enthusiastically by DARPA. The US Congress recently expanded the use of OTs to other departments and agencies and raised the allowable maximum for OTs to up to $250 million (USD).

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Minister of Immigration, Refugees and Citizenship

Access to the talent innovators need is one of the biggest barriers that scaling companies face. The best technology backed by robust funding can't propel Canadian innovators to global scale if they can't get the right people with the right skills in place. The incoming Minister of Immigration, Refugees and Citizenship will have an important role to play in ensuring that the world's best and brightest can come here to contribute their talents to building a more prosperous and innovative Canada.

Make Canada the world's top destination for the best and brightest by maintaining and expanding programs that work like the Global Talent Stream, and making the most of the current crisis in the United States to bring home Canadian entrepreneurs, and welcome elite scientific and engineering talent to our universities.

Brain drain is a serious issue for Canada - we are the world's third-largest exporter of inventors after China and India and high proportions of STEM and engineering graduates leave the country for the United States.[30] This means that immigration has to be a part of our overall innovation strategy.

Canada is an attractive destination for top international talent, and the existing Global Talent Stream program works well to bring sustainable numbers of highly-skilled individuals that Canadian companies need to scale their operations and make important innovative breakthroughs. The incoming Minister should aim to make this program work even better for innovators who need to bring in talent to scale their operations.

As business and political conditions in the United States become more difficult for innovators, the incoming Minister should launch a campaign to bring Canadian entrepreneurs and innovators home. Returning entrepreneurs have been critical to the innovation success of countries like Taiwan and South Korea, and Canada can make the most of this moment by making coming home the best decision for entrepreneurial Canadians living abroad.

At the same time, retrenchment of research funding in the United States and the precarious state of many U.K. universities leaves Canada with an important opportunity to be a safe haven and stable destination for researchers seeking work in top global universities. The Minister should consider, in collaboration with their peers and provincial counterparts, how to contribute to making the most of this opportunity for Canada to attract the world's best scientists.

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7/10

Minister of Public Services and Procurement

Public procurement, across all levels of government, makes up nearly 15% of GDP, making it about as economically significant as our natural resources sector. Public procurement of innovation has been a driver of technological progress and national prosperity in many jurisdictions across the globe. Canada's federal government has an opportunity to be a leader in transforming its marketplace for goods and services to solve public challenges by buying from innovators.

Unlock the buying power of the federal government and empower public servants and innovators by reforming how government buys from innovators.

Canada's procurement status quo leaves both buyers and sellers frustrated. Reform is necessary, and CCI's landmark report *Buying Ideas: Procuring Public Sector Innovation in Canada* points to tangible steps the government can take to improve our system. Flexible procurement processes would empower public servants to get the tools they need to do their jobs more effectively and save money through more efficient operations in critical public services like health care.

Procurement of innovation more broadly can also be a powerful tool of economic development and industrial growth. Companies that successfully sell to governments send an extremely valuable signal to the rest of the market, one that helps attract new customers and orders and can have profound impacts on innovation in entire fields of emerging technology.

The paradigmatic example is the role of the United States Department of Defence as an early customer of American aircraft manufacturers as well as semiconductor and computer firms. Finland was a farsighted public buyer in telecom, and this became an important factor in the development of Nokia as a globally competitive innovator in telecommunications equipment. The same can be said of the Swedish telecommunications authority and Ericsson.

More recent empirical research on innovation procurement has demonstrated links between policies allowing for more flexible innovation procurement to reported private sector innovation outcomes and firm success. Some research even shows stronger innovation impacts from procurement compared to grants and tax credits.

Innovation procurement policy design is critically important: overcoming the inertia and other barriers that characterize traditional procurement and bringing the cultures of government and innovative businesses into sync is key to success.

CCI's research has found that overspecification, lack of dialogue or co-development in scoping needs, lengthy processes, a lack of in-house capacity and technical expertise, an absence of broader commercialization pathways, and cultural risk aversion are the big existing barriers.

The root problem is that procurement as a process is designed to avoid risks, and more specifically, it is a process that rates the risk of a properly-conducted process as zero. This is plainly wrong, as we have seen from a series of procurement disasters ranging from the Phoenix pay system, surface ships, and others. A better procurement system would empower public servants and hold them accountable for results.

The incoming Minister of Public Services and Procurement should embrace successful international models for innovation procurement, simplify and develop new flexible standards governing procurement, and work with the innovation agency to promote innovation procurement across government.

EMPOWERING PUBLIC SECTOR INNOVATION

Finland has developed an impressive policy suite around the public procurement of innovation – a 2021 European Commission report ranked it first in the European Union (EU). Part of its success is the role of their innovation agency, Business Finland, and its Innovative Public Procurement (IPP) program.

Public sector budgeting is often inflexible, and an external source of funding – particularly in its early stages – can substantially de-risk the effort for buyers. IPP funds and advises, via an application process, public innovation procurement projects. They focus on co-development with vendors and prioritize innovations that could be commercialized broadly. Evaluations of a predecessor program found a powerful enabling effect, with all surveyed participants indicating that their project would not have gone ahead without support from the agency. Participants singled out the value added by agency staff advisors as particularly important.

Action Items

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President of the Treasury Board

The President of Treasury Board has a key leadership role at the Cabinet table on scrutiny of expenses, government operations, and on government-wide regulation. The incoming President will accordingly have to be a leader on updating how government operates for the 21st century economy and take quick action to reform cumbersome regulatory processes that struggle to keep up with the pace of technological and economic change.

Unlock more flexible, innovative governance by enshrining standards as statutory instruments in legislation, narrowing the scope of regulations, and expanding the use of regulatory sandboxes across government for emerging technologies.

Creating and updating regulations is enormously cumbersome for government. Incorporation of standards by reference is a workaround that allows government to make use of the flexibility and power of voluntary standards developed through open, collaborative and consensus-based processes.

The Statutory Instruments Act, however, does not currently allow for standing references to standards, and new versions of standards must be incorporated into law as they become available. This means that regulations often lag behind the latest versions of standards, with security, efficiency and technical implications for Canadians and for Canadian businesses.

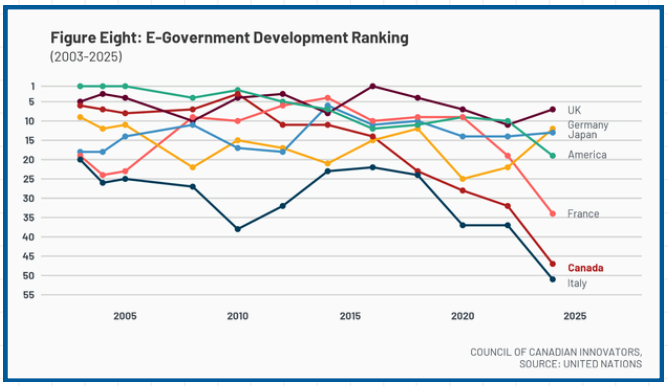
The incoming President of Treasury Board should amend the Act to recognize standards as statutory instruments on a rolling basis.[31] The President should also update the Cabinet Directive on Regulation to limit regulations to essential requirements, and leave technical details to consensus-based standards developed through accredited standards bodies, with the federal government as an active participant.

This would allow regulators to spend more time on protecting the health, safety and well-being of Canadians instead of on heavy bureaucratic processes needed just to keep existing regulations up to date.

Finally, the President should expand the use of regulatory sandboxes for emerging technologies, which allow for collaborative, iterative learning that results in better protections for Canadians and for business where new technologies have made old regulations obsolete or no longer fit for purpose.

Deliver public services more effectively by empowering public servants to adopt AI and other technology that is right for them.

Adopting AI and other digital technologies in the public service to help deliver programs and services more effectively is an inevitability, just as adoption of computing and informational technologies were. Canada was an early leader in deploying technology in government - our national ranking in the UN's E-Government Development Index was 6th in 2005. By 2024, however, we had fallen to 47th. We are running in place as the rest of the world leaps by.



The incoming President of Treasury Board should give wide latitude to departments and teams to experiment with new technologies while collecting data to codify best practices.

Ensure Canadians get more value for public money by sharpening central audit and evaluation for programs across government.

Currently, primary responsibility for evaluations and audits rests with individual departments. This leads to a system where each department effectively acts its own watchdog. Programs are evaluated individually, rather than as part of a broader policy suite with a view to getting Canadians the best value for money and minimizing overlap between programs with similar objectives.

The incoming President of Treasury Board should ensure that the central agencies of government have a complementary evaluation and audit capacity to ensure that public funds are well spent in pursuing government objectives.

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Minister of Health

Canadians know that our health care system is under intense strain, as are the doctors and nurses who keep us safe and healthy. Too many Canadians aren't getting the health care they need and long wait times, dated technology and short staffing are making it harder. The incoming federal Minister of Health will have an important role in helping change this by driving innovation in health care.

Bring Canadian health data into the digital age by moving forward on legislation to require for secure, interoperable and standards-driven use of health data, and creating a pan-Canadian data stewardship model.

Getting timely and accurate health information is still a challenge for health care providers across Canada. Patients cannot easily access their own information. The incoming Minister of Health should promptly introduce legislation that prohibits data blocking practices and that mandates interoperability as well as the development of flexible standards governing how organizations comply with those principles. Currently, too many health care systems are locked in to vendors that limit how data can be collected, used and shared for the benefit of patients outside of their own digital ecosystem. Outdated technologies like faxes are also less secure than modern systems - the leading cause of unauthorized disclosure of health information in Ontario is misdirected faxes.[32]

A Pan-Canadian health data framework should also allow for responsible stewardship of health data in the public interest that creates clarity on data ownership, rights and acceptable secondary uses. The incoming Minister should give strong consideration to the existing structures - embodied in the Canadian Institutes for Health Information and the Canadian Health Infoway - to assess if they are still fit for purpose.

The US and EU currently have national or union-wide mandates on health data. Canada's regulatory provincial patchwork makes it harder for Canadian innovators to compete and scale in our own country, and makes it more difficult for them to deliver products and services that improve patient care, reduce risks of misdiagnosis, and deliver better information about the state of health care in Canada.

Power innovation in health and medical technology by modernizing Health Canada's regulatory and service culture to better serve Canadians and innovators.

Health Canada's primary responsibility as a regulator is to protect the health and safety of Canadians. Currently, however, some of Health Canada's bureaucratic practices do not make Canadians safer, but do substantially complicate doing business in Canada for innovators and slow the improvement of patient care and health outcomes.

For example, unlike in Australia or the United States, even non-material changes to medical software - which could be as minor as changing the colour of a user interface element - requires notifying Health Canada, usually by fax, and waiting for months for approval. In peer countries, companies are instead required to maintain auditable logs of changes that can be examined upon request. Additionally, requiring frequent changes to medical device or drug establishment licenses whenever a company wishes to introduce a new, approved product or to stop selling one creates a significant paperwork burden with uncertain timelines for negligible effects on health and safety.

Canadian innovators have expressed that Health Canada's overall approach can be so manually labour-intensive that for Health Canada staff that, paradoxically, rules are applied in ad hoc and seemingly arbitrary way, with Health Canada officials providing inconsistent interpretations of existing rules. Health Canada rules and structures also incorporate considerable amounts of duplicative oversight - for example, Health Canada must approve early-stage clinical trials that are already governed by robust research ethics and approval processes.

The incoming Minister should examine the practices and regulatory culture of countries like Australia that are better able to manage regulatory burdens, enabling innovation while protecting citizens.

Improve care and empower health care practitioners by working with provincial counterparts to simplify and standardize innovation procurement in health care systems.

While improving innovation procurement should be a whole of government priority, the incoming Minister of Health has a unique situation in relation to their provincial counterparts. The Minister should work with their provincial colleagues to simplify and standardize procurement by health care systems across Canada to make it easier for doctors, nurses and other health care providers to use innovative care and technology to strengthen our health care system and improve patient outcomes. AI technologies, for example, can reduce the amount of time that health care providers spend on paperwork and other administrative tasks, but require strong standards and frameworks to protect privacy and patient trust.

The most recent round of transfer agreements with the provinces and territories included commitments on strengthening health data and digital tools, and future rounds of funding agreements should focus on including provisions for adoption of new technologies intended to improve patient care.

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Ministers of Natural Resources, Environment and Climate Change, and Agriculture and Agri-Food

The Ministers of Natural Resources, Environment and Climate Change, and Agriculture and Agri-Food oversee cornerstone Canadian industries with enormous innovation potential. Shifting environmental and geopolitical conditions are driving rapid innovation and adaptation in these industries, and these ministers have a unique opportunity to enable profound transformations that drive exports, growth, and investment. Energy, natural resources and agriculture are all at the cusp of generational changes and Canada has unique chance to solidify its role as a world innovation leader in these industries.

Diversify and drive innovation, investment and trade in critical minerals by investing in innovation leadership, building on existing partnerships with our key allies, including the European-Canadian Raw Materials Partnership, and creating regulatory certainty for investors by increasing domestic alignment with global best practices.

The world will need a wide variety of critical minerals in great quantities in the coming years. Without Canadian critical minerals, the future simply doesn't happen - advanced global manufacturing is simply not possible without them. Mining companies are looking and digging deeper and deeper into the earth for new reserves. Geospatial exploration and novel drilling techniques and technologies make this possible. Building on Canada's existing advantage in mining and doubling-down in IP-heavy, upstream sectors - mining exploration and advanced extraction - will strengthen our existing position in the global mining industry.

As a democratic country offering regulatory certainty, Canada can position itself as an invaluable partner to our long-term allies and integrate ourselves into mineral and resource supply chains in key positions that create wealth in Canada. International trade agreements, like the European-Canadian Raw Materials Partnership, provide Canada with the opportunity to help lead the creation of new world-class global economic, social and governance (ESG) standards and criteria. Canada should continue to engage with the EU as a strategic partner in critical minerals and look to build on existing relationships with other allies, including Japan, Korea and Australia, to further harmonize our critical mineral regulations and develop global best practices in exploration, extraction, and processing.

Drive growth and innovation in Canadian cleantech by strengthening carbon markets, making better use of procurement and technological challenge prizes, and leverage existing international rules and agreements to protect nascent industries from unfair competitive practices.

Canadians want clean energy leadership and they have made it clear that technology, innovation and stable industrial carbon markets are the way forward. The incoming Minister of the Environment and Climate Change should work with provincial counterparts to align the structure of provincial carbon markets. Larger and more integrated carbon markets send clearer signals to innovators and investors about the most promising and cheapest ways to reduce emissions and remove emitted carbon from the atmosphere. Carbon contracts for difference maintain policy certainty for investors and ensure that they can invest in Canadian companies with confidence.

The incoming Minister should broaden the use of challenge prizes based for emissions reduction and carbon removal technologies, which will be an important part of meeting our climate goals. As the cost of removal technologies comes down, Canada's natural advantages - land, coastline, ample resources and energy - enable us to can be an export leader in markets for offsets and credits internationally from the voluntary sector, governments, and the private sector.

Growing domestic capacity and innovation in cleantech requires strategically protecting nascent industries like solar panels and batteries from unfair competition that doesn't follow international rules. Fully enforcing international trade regulations will allow Canada to address the behaviour of countries like China that circumvent import and dumping restrictions by conducting largely cosmetic, final assembly in secondary countries. This illegal dumping harms Canadian businesses, our capacity to innovate and ownership of critical technologies.

The incoming government should take a more proactive approach, easing the burden on Canadian companies to prove that a foreign firm has broken the rules and is unfairly harming domestic industry. In particular, the government should adopt a similar approach to the United States in the previous administration and blacklist companies from trade if they are identified as routinely violating or skirting dumping laws. The government should also consider leveraging a more robust supply chain due diligence regime to crack down on imports made using forced labor, such as in the Xinjiang region of China.

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Ministers of Natural Resources, Environment and Climate Change, and Agriculture and Agri-Food

Secure Canada's energy resilience by modernizing Canada's electrical grid, including by maintaining Natural Resources Canada's Smart Renewables and Electrification Pathways (SREPs) Program.

Net zero commitments, new technologies and power management systems will transform Canada's electrical grid. In the data-driven economy, energy is an invaluable and irreplaceable input that powers innovation. By 2030, AI alone is projected to increase global data center energy demand by 160%. Canada will see significant increases in demand for energy in the coming years; by 2050, electricity demand in Ontario is expected to grow by 75 percent. Modernizing Canada's electrical grid — improving interties, expansion and storage to help deliver energy more effectively and efficiently — will help the country meet its growing energy needs and enhance energy resiliency.

A lack of harmony between federal and provincial energy goals and regulatory barriers to new projects slows grid modernization and a focus on short-term issues prevents necessary investment in electrification at the provincial level. Provincial utility providers, for example, face capped rates that prevent investing in capacity. Even when they have the resources, grid infrastructure projects often struggle to receive timely approval. Projects face over 90 regulations across several federal statutes, as well as provincial hurdles. Streamlining regulations will reduce approval times and drive investment by providing certainty that projects will be undertaken and completed in a reasonable time frame.

The federal government can clarify and simplify regulations, fund electrification and encourage pan-Canadian electrical integration as a cost-effective pathway for a more efficient national grid. Natural Resources Canada programs such as the Smart Renewables and Electrification Pathways Program (SREP) bring together provinces, Indigenous groups, and the federal government to coordinate and drive grid modernization. Through providing funding for utility and system operator-led projects and engaging with provinces to determine which grid investments are most pressing, SREP aligns national policy and create incentives for electrification. The government should continue to fund modernization initiatives through programs like SREP to reduce the formal and informal barriers to new electrical projects.

Encourage innovation and adoption in Canada's agricultural sector by reducing Health Canada approval times for agri-food products, making it easier and less risky for farmers to buy and try out new technology, and removing regulatory hurdles for the use of new farming techniques.

Transparent and efficient regulatory approval processes guarantee that Canadian farmers can use the best domestic technologies as well as help companies secure valuable IP protections that can make them competitive export leaders all over the world. In Canada, new agricultural technologies are regulated by Health Canada, whose approval processes often take significantly longer than its counterparts around the globe. It is common for a 4-year regulatory process in the United States to take twice that time in Canada. Even initial meetings with regulators require significant up-front work on the part of businesses and innovators. As a result, firms become aware of potential regulatory hurdles only after a product is ready for market. Establishing a concierge service within Health Canada would offer early, ongoing regulatory guidance, helping firms anticipate and address hurdles throughout the approval process. This would reduce costly delays and provide innovators with greater certainty.

The approval and adoption process in Canada also often neglects the challenges that innovators and farmers face. Testing and validating a new technology is a critical part of the commercialization process but can come with substantial risks for users. Farmers trying pre-commercial products often fear decreased productivity and reduced yields, and adopting new technology needs up-front capital investment. Adopting a risk-sharing scheme between government and industry can better account for the uncertainty farmers face when using pre-commercialized or newly commercialized technologies. The government should continue to promote technological adoption through tax credits and subsidies through existing programs like the Agricultural Clean Technology (ACT) Program, as well as introduce new programming to compensate for the potential financial loss of a year of yield change for farmers testing novel innovations. This provides a critical avenue of government support, allowing innovators to refine and demonstrate their offerings.

As the global agriculture sector evolves, novel atypical farming techniques like controlled environment agriculture (CEA) will be key to maintaining Canadian competitiveness. CEA facilities illustrate the hurdles that agri-food innovators face. Existing land use regulations slow the expansion of atypical production, depressing productivity and undercutting agricultural resilience. Modernizing by-laws and planning criteria to take novel agricultural technologies and food systems into account when assessing the best use of land is a critical first step in driving more efficient production.

Action Items

Appendix | Components of Sovereign Industrial Strategy

In the 21st century economy, where growth happens through ownership and control of intangible assets, policymakers must take a concerted approach to create strategies through the lens of the firm. Firms are where innovation and productivity happen. Firms making outsized returns in competitive global markets are the key to national prosperity and productivity. Creating the right environment to enable them to succeed requires a multifaceted policy approach and strong institutions and an industrial strategy that reflects modern competition and global markets.

Policy Areas	Policy Instrument
Macro-Level Policy	• Development banks or other long-term financing • Fiscal policy • Monetary policy • Infrastructure investment • Anti-trust and competition policy • Data governance
Business Support	• R&D programs and tax policy • Assistance to small/medium sized enterprises • Public-private partnerships • Venture Capital • Public procurement • Optimizing firm coordination and linkages • Sovereign Compute infrastructure
Trade Policy	• Import tariffs and quotas • Export subsidies and support • Incentives and regulation of foreign direct investment • International trade agreements • Interprovincial trade promotion • Standards setting and mutual recognition
Research & Innovation Policy	• University research funding • Research centres and agencies • IP and data rights • Standard setting • High performance computing
Education and Training Policy	• Subsidies and tax policy for labour training • Skill formation and upgrading • Machine Learning Capital strategies
Security	• Cost classifications for 2% NATO objective • Dual-use lens, where appropriate • Economic-security integration

Components of Sovereign Industrial Strategy

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Endnotes

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