Innovation and Prosperity Report: Charting a Sovereign, Value-Added Future for Manitoba

Prepared by the Innovation and Productivity Taskforce for the Minister of Innovation and New Technology

Message from the Chair

This report would not have been possible without the dedication and insight of the many public servants, sector leaders, and advisors who share a commitment to evidence-based policy and to securing a resilient, prosperous future for Manitoba within the 21st century economy. Throughout this process, we benefited from the expertise, responsiveness, and professionalism of the Government of Manitoba. Their deep engagement reflects a public service that is not only capable, but determined to deliver long-term, strategic value for Manitobans.

I am especially grateful for the leadership of Premier Wab Kinew, Minister Mike Moroz (Innovation and New Technology), and Minister Renée Cable (Advanced Education and Training). Their commitment to building a sovereign, value-added economy to the benefit of all Manitobans has been evident at every step.

This work reflects the efforts of a committed group of citizens who understand that Manitoba's long-term success depends on its ability to build capacity, exercise control over its strategic assets, and partner meaningfully with domestic firms and Indigenous communities.

On behalf of everyone who contributed to this process, I thank the Government of Manitoba for the opportunity to support its path to long-term, sovereign, value-added growth.

Sincerely,

Jim Balsillie
Chair – Innovation and Productivity Task Force

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Executive Summary

The world is in the later stages of an unprecedented economic transition.

Over the past 40 years, the global economy has been transformed from a system rooted in physical production of tangible goods, into a new economy in which wealth, power and security are rooted in the ownership of intangible assets like intellectual property, data, and artificial intelligence.

In the tangible production world, if you produced forks comparatively better than me, but produced knives comparatively better than you, then we had an incentive to cooperate and trade because this made us both better off.

However, in the intangible economy, when you have the absolute advantage of controlling the patents, the trade secrets, the software, and data used to efficiently produce both the fork and the knife, this allows you to extract a highly profitable fee for their use. And we are now moving into a new world where artificial intelligence systems built on proprietary data can supercharge the winners. This shift creates an economic system where a few actors can act as gatekeepers, shaping the rules and capturing most of the benefits, while workers, communities and smaller firms risk being left with fewer options.

The most competitive and prosperous economies understood this economic shift, and built strategies based on controlling intangible assets.

Meanwhile, Canada's standard of living is declining. Our national per capita GDP is shrinking by 0.4% annually over the last five years, making it the worst performance among the top 50 developed countries. Further, in 2024 the OECD projected Canada will be the slowest-growing advanced economy through 2060. This decline is not an abstraction: it shows up in paycheques that do not stretch as far, in households struggling to keep up, and in fewer opportunities for young people to get ahead.

This economic underperformance is principally a consequence of Canada's policy community missing the shift from a production economy to a contemporary, knowledge-based, and data-driven economy. Because we didn't adjust our policies to account for this major transformation of the global economy, our economy has been shortchanged by hundreds of billions of dollars annually, reducing wages, limiting job growth, and eroding the quality of life that Manitobans expect and deserve.

Premier Kinew commissioned our Innovation & Productivity Task Force to support his commitment to building a more sovereign, prosperous, secure, and resilient Manitoba.

Our mandate is to deliver recommendations that serve these objectives within the context of changed economic and geopolitical realities. Our work focuses on six priority areas: Intellectual Property, Data and Artificial Intelligence, Sovereign Infrastructure, Skills & Human Capital, Alignment with federal policy, and Sectoral Considerations.

Each is essential. A strong Manitoba is foundational to a strong Canada. We are optimistic about the opportunity for this government to seize the future.

Manitoba is home to exciting technology firms, but tech is not just a sector; Technology permeates every part of the economy. Every business today is a tech business, including Manitoba's core sectors like energy, agriculture, manufacturing, financial services, mining, healthcare and government services. In every part of the economy, firms either develop innovative technologies to achieve a competitive edge, or they're forced to buy technology services from other firms that reap the economic rewards.

The digital transformation of the past four decades has created an economy where wealth, power, and security depend on owning and controlling intellectual property, data, and artificial intelligence. These intangible assets now drive more than 90 percent of the S&P 500's $49 trillion value and have ushered in an era of machine knowledge capital that complements and competes with human expertise. The challenge is not whether AI will shape Manitoba's future but how to ensure it creates better work, fairer pay, and stronger communities. Manitoba's prosperity strategy must therefore focus on building and owning these assets so their benefits are captured for the province's economic, social, and security interests.

The Task Force recommends a focused strategy to build Manitoba's prosperity through ownership, capacity, and coordination. First, the province should strengthen its ability to generate and protect intellectual property, ensuring that research and innovation are commercialized domestically and that firms can compete from a position of ownership. Second, Manitoba should establish sovereign control over data, artificial intelligence, and compute infrastructure, treating privacy and cybersecurity as economic advantages rather than constraints. Third, investment in modern infrastructure must integrate clean energy, trade corridors, and digital networks in partnership with Indigenous Nations, positioning Manitoba as a model for inclusive nation-building and long-term resilience. Fourth, Manitoba must build a skilled and adaptable workforce by linking education, training, and industry through a continuous feedback process that keeps skills development current with economic change. Fifth, strong federal-provincial coordination is also essential to align policies on IP, data, and infrastructure and to deliver joint investment in shared national priorities. Finally, the province should maintain structured dialogue with firms and sectors to ensure programs remain responsive to business realities and to strengthen domestic innovation. Together, these actions provide a coherent blueprint for a sovereign, value-added future in which Manitoba captures the full benefit of its ideas, industries, and people.

It is long past time for updated strategies, and the task force members have embrace the opportunity to help chart this reorientation. The path forward is not about moving away from these traditional strengths but rather optimizing them with sovereign, value-added strategies.

Manitoba doesn't have to choose between its traditional, resource-based economy and the digital transformation. It can and should do both, ensuring that every innovation strengthens the foundation of good jobs and long-term security and prosperity for Manitobans.

Strategic Pillars

Intellectual Property Generation & Ownership

The shift to a knowledge-based economy in the past 40 years, caused firms and countries to focus on strategically generating valuable IP assets. In today's economy, productivity comes from *new* owned ideas that bring in *new* high profit margin revenue. IP has a direct impact on wealth and power at the firm level and nationally, which is why smart innovation jurisdictions focus on owning and protecting these assets.

Canada's systemic inattention to this race is at the root of our longstanding erosion of productivity and prosperity, with Canada's deficit on IP payments and receipts widening at an alarming rate. Reversing this trajectory will require expert coherent policies to stem decades long IP leakage alongside building the urgently needed expertise to manage this sophisticated realm.

This includes revisiting policies for research funding, university partnerships, foreign direct investment attraction, investment screening frameworks, research tax credits, IP education curriculum, IP clinics, sovereign patent pools, strategic standard-setting, procurement, and domestic scale-up orientation.

Data and Artificial Intelligence Ownership & Control

The world is in a new era where data and AI are a profoundly disruptive. They represent a powerful and valuable new form of capital. AI is a new general-purpose technology (GPT) that, like electricity, is a new factor of production, like labour or capital. Data is its essential input.

> ***General-purpose technologies (GPTs)*** *are technologies that can affect an entire economy (usually at a national or global level). GPTs have the potential to drastically alter societies through their impact on pre-existing economic and social structures. The archetypal examples of GPTs are the steam engine, electricity, and information technology. Source: Wikipedia*

The implications of data and AI, however, are vast and cross-cutting. Data and AI governance encompasses values, the distribution of wealth, preserving competitive markets, preserving health especially for our youth, maintaining the integrity of democratic processes and information systems, ensuring national security – and indeed preserving individual agency and privacy.

The emergence of the data-driven economy and AI over the last 20 years has led to natural monopolies and the ensuing economic concentration. This is due to natural economies of scale and scope, network externalities, and information asymmetries, posing challenges for competitive markets and business dynamism, as well as sovereignty for both Manitoba and Canada overall. If we do not own and control the facilities, networks, and compute capacity where this data resides, the benefits will flow outward. Data and compute sovereignty is therefore not a technical detail but a defining question for Canada's future prosperity and Manitoba's leadership within it.

The antidote is sovereign strategic investment and governance. Manitoba can lead by owning the underlying data assets, setting the rules for their use, and capturing the economic returns here at home. By doing so, Manitoba can help secure Canada's digital future, ensuring our workers, communities, and businesses are not just consumers of technology but owners and builders of it.

This is not a peripheral issue, it is the foundation of whether Canada will be sovereign in the 21st century. Manitoba has the resources, the talent, and the will to lead the way.

Infrastructure

While policy recommendations for new physical infrastructure are outside the scope of our mandate, potential new infrastructure is poised to have a transformative effect on the prospects of several key sectors in Manitoba's economy. Our sectoral strategies will build on the assumption that the time is right for these major infrastructure projects to proceed.

The Premier's vision can serve multiple concurrent objectives: secure the province's long-term prosperity, lead as a nation-builder, advance reconciliation, and protect citizens.

The Premier Kinew Government's new Nation-to-Nation approach with Indigenous Nations, focused on building respectful and trusting relationships with Indigenous communities, is a precondition to generating the social licence needed to pursue ambitious projects. Manitoba is committed to reconciliation and economic empowerment for Indigenous Nations. This means respecting the Treaty relationship and recognizing Indigenous communities as original stewards of the land. Ensuring that communities benefit from these potential infrastructure projects requires establishing mechanisms for continuous dialogue with Indigenous Nations and communities to actively seek input early in the process, build trust, and promote collaborative partnerships.

Canada and the world need what Manitoba has, both in natural resources and in transformative potential infrastructure.

Manitoba Hydro provides world-leading renewable clean energy which massively reduces the carbon footprint of all activities within the province. High-voltage DC transmission lines connecting Manitoba's hydro system east to Ontario and west to Saskatchewan and Alberta would strengthen the national grid, reduce climate risk, and power the infrastructure needed for Canada to compete in the AI economy. Fibre optic communications lines could also be laid alongside this infrastructure as embedding fibre optic lines alongside new infrastructure secures domestic control over data flows, strengthening digital sovereignty and future-proofing the province's data strategy.

Manitoba's role as a national connector gives it a unique advantage. With the Port of Churchill as Canada's only Arctic seaport linked to the continental network, and with the potential |to enhance east-west electricity and data connections, Manitoba can anchor a modern infrastructure strategy that supports both traditional prosperity-driving industries and emerging digital sectors. This is the foundation for positioning Manitoba as Canada's hub for sovereign AI infrastructure, where clean energy, resilient grids, and secure data systems converge.

Skills & Human Capital

The downward pressure on labour over the past 35 years can be categorized into five structural phases:

1. **Globalization via trade agreements** beginning in the early 1990s that arbitraged labour to lower-cost countries, hollowed out domestic industries, and forced Canadian workers to compete primarily on cost.
2. **The start of the global knowledge-based economy** in the mid-1990s that separated tangible production supply chains from intangible value chains, with prosperity accruing to firms that controlled patents, trade secrets, and data.
3. **The E-Commerce Revolution** of the early 2000s that destabilized long-term worker security, expanded precarious employment, and created what has been called the "precariat" class.
4. **The start of the global data-driven economy** around 2010 that commodified human attention, entrenched gig employment structures, and concentrated power in a handful of digital platforms that monetized data at scale.
5. **The emergence of the contemporary machine knowledge capital era,** where AI has become a new factor of production that displaces some roles, amplifies others, and accelerates structural change across sectors.

In a knowledge-based, data-driven economy, a skilled workforce is essential to innovation, productivity, and long-term growth. Manitoba's success will in part depend on its ability to train, attract, and retain talent across disciplines, from engineering and computer science to the social sciences.

Manitoba has a strong and adaptable talent base that is well positioned to thrive in a constantly evolving world. By better aligning education, research, and economic development, the province can unlock even greater potential. The opportunity ahead is to build on existing strengths with a more strategic and sustained approach that brings these efforts together in partnership. The recently released Economic Development Strategy is an important step in this direction, creating momentum for stronger links between skills, research, and industry. The recommendations in this report are designed to reinforce that foundation and ensure Manitoba's workforce at the centre of its economic future.

Federal-Provincial Alignment

As Manitoba seeks to both expand and reorient its approaches for prosperity, security and sovereignty, it is critical that they are in alignment with those of the federal government. It is not acceptable to be at cross purposes at this time of national and provincial challenge.

Alignment should be sought in these areas:

- Public sector capacity-building for contemporary economic realities
- Nation-building infrastructure funding strategies
- Comprehensive intellectual property (IP) strategy
- Data and AI as sovereign economic levers
- AI and data governance legislation and implementation
- Modernized standards development and alignment.
- Foreign direct investment (FDI) review and investment attraction strategy
- Integrated intergovernmental strategy and coordination mechanisms.
- Sovereign value-added approach across sectors to drive long-term prosperity.

This is a time for province-building *and* nation-building. To embrace updated thinking, we first need to escape outdated thinking. The opportunity is before us all.

Sector Considerations

The task force undertook two core strategic approaches to its work plan:

1. Advocating for upgrades to five horizontal areas that will make broad contributions to the desired economic and outcomes. These five areas are introduced above, specifically: infrastructure, intellectual property, data and AI, skills and human capital and Federal-Provincial alignment.
2. Taking a sectoral approach to engaging with Manitoba-based firms to understand, codify and advocate for *their* vision for the opportunities ahead.

Innovation and productivity are generated and owned inside the firm. If Manitoba wants the prosperity outcomes of improved innovation and productivity within its economy, this can only be achieved via enhanced performance by thriving Manitoba-based firms.

A sectoral approach provides structure to the engagement. All potential sectors and subsectors are welcome to participate. Having the Manitoba Chamber of Commerce on the task force and leading this sectoral outreach is of great benefit to our work. We view this section and its targeted activities as a living document within the Ministry of Innovation and New Technology.

Conclusion

The world is in the later stages of an unprecedented transition: from a tangible economy, where produced goods are traded via comparative advantage, to an intangible economy where economic rents are extracted via owned intangible assets. However, in the intangible economy, when you have the absolute advantage of owning the IP and/or AI, this allows you to extract a highly profitable fee for their use. This is a structurally uncooperative economic system that invites strategic behavior by dominant actors because one party becomes the economic landlord and the other the tenant. Manitoba and all Canadians need to be clear-eyed and unsentimental as to this reality by crafting strategies that lead to a more sovereign, prosperous, safe and secure future for all.

Recommendations

Intellectual Property Generation & Ownership

Context & Importance

Intellectual property is now the key factor of whether firms can compete in the global intangible economy. It is the mechanism that allows firms and other innovators to transform ideas into defensible assets, attract capital, and negotiate from strength in global markets. For Manitoba firms, securing intellectual property means securing freedom to operate: the ability to commercialize, scale, and enter new markets with confidence that their innovations cannot be easily replicated or challenged by larger, better-resourced competitors.

Many intellectual property assets carry dual-use potential, with applications in both civilian markets and security or defense contexts. For example, AI models, advanced materials, or cybersecurity tools developed in Manitoba may underpin agricultural or health innovations while also having relevance for critical infrastructure or national defense. This dual-use nature makes IP ownership and control even more important, since allowing these assets to be captured elsewhere not only weakens commercial competitiveness but undermines Canada's sovereignty and security. Manitoba's IP strategy must therefore account for the broader implications of dual-use assets, ensuring that innovation strengthens both economic prosperity and national resilience.

Current State & Gaps

Beyond firm-level competitiveness, the governance of IP carries wider consequences for sovereignty and security. We are witnessing a global race by large firms *and* advanced nation-states to own critical IP, especially patents, particularly for areas with both economic and non-economic impacts. Jurisdictions that fail to anchor ownership of their intangible assets see value siphoned away as intellectual property, data, and talent are absorbed into foreign platforms. By contrast, those that establish strong IP strategies not only protect domestic firms but also retain control over economic spillovers that shape prosperity, national resilience, and the security of citizens. Manitoba must approach IP as a form of strategic infrastructure, ensuring that ownership and control remain aligned with its long-term economic interests.

Manitoba has long had a strong community of inventors, creators, and innovators, many of whom have founded firms that contribute not only to the province's innovation ecosystem but also to the broader economy. These businesses generate employment, attract investment, and strengthen the province's tax base. Today, Manitoba's innovation ecosystem is beginning to gain momentum. According to the Canadian Venture Capital Association, Manitoba firms received approximately $125 million across five transactions in the most recent reporting period. While this figure captures only a portion of overall growth, it shows rising investor confidence

in the province's firms. At the core of most of these firms lies their intellectual property. These intangible assets, including patents, trademarks, copyrights, trade secrets, industrial designs, and contractual rights, form the foundation of defensible value. With the right funding, advice, and services, they can be converted into protected and commercialized assets that generate long-term returns. Without adequate protection, however, firms and other innovators risk losing control of their ideas, weakening their ability to commercialize innovations, and undermining their competitiveness.

Types of Intellectual Property

1. Contracts
2. Patents
3. Copyrights
4. Domain Names
5. Geographical Indications
6. Industrial Designs or Design Patents
7. Trademarks
8. Tradenames
9. Trade Secrets
10. Utility Models
11. Personality Rights
12. Plant Breeders Rights
13. ICT (Integrated Circuit Topography)

Federal programs such as Elevate IP and IP Assist currently offer some support, providing education, strategy development, and limited implementation services. While valuable, these programs are often duplicative and constrained by a "one size fits all" approach. Firms may be required to repeat training they have already completed before accessing the supports they truly need. Moreover, the future of the programs is unknown and largely reflect federal priorities that do not always align with Manitoba's specific needs.

Case for Action

The way forward for Manitoba is to build beyond these federal models by ensuring IP funding supports are tied directly to business goals and firms' levels of development. Some innovators arrive at the doorstep already knowing they need contract support or a patent filing and should not be required to repeat introductory education sessions before receiving assistance. Provincial programs should be adaptive, portable, and responsive to each firm's strategic objectives, including recognizing education undertaken through other programs or jurisdictions to minimize redundant effort and friction for firms. At the same time, funding should be complemented by expert advisory services and clear requirements that build internal decision-making capacity, ensuring that public investments are good investments, translating into durable competitiveness.

Capacity-building must also be a priority. Manitoba's innovators need to advance beyond basic awareness of IP to a level of strategic literacy where they understand which assets are valuable, how to protect them, and how IP connects to commercialization, finance, and partnerships. A rubric with incremental levels of proficiency would allow firms to track their progress and ensure they are positioned to negotiate from strength. Unlike current offerings, the emphasis should be on building skills within firms, creating firms that are more resilient and globally competitive.

Access to IP expertise must also be broadened. Establishing IP legal clinics, ideally in collaboration with Robson Hall Law School at the University of Manitoba, would give early-stage firms and other innovators affordable access to counsel and practical support, while also training the next generation of lawyers. Clinics could provide workshops on IP fundamentals, one-on-one consultations, and even support for filings where appropriate. This approach would help level the playing field for smaller innovators while building local expertise in an area where Manitoba has historically had a smaller IP law bar.

Manitoba should also pursue the development of a provincial patent portfolio aligned with priority sectors. A collective portfolio would give SMEs access to strategic assets they may not be able to develop independently, defend them from predatory assertions by larger firms, and create leverage in global markets. To succeed, such a portfolio must be rigorously curated for legal scope, relevance, and market value, with maintenance in key jurisdictions. Properly designed, it would act as both shield and signal, protecting innovators while also attracting investors. Alignment with national initiatives like the Innovation Asset Collective would be valuable, but Manitoba's approach must ensure that local priorities guide the strategy.

Manitoba has already taken early steps in this direction with the $5 million allocation to Research Manitoba to attract research chairs and build collective IP capacity through the launch of the Intellectual Property Collective, a program intended to ensure innovations developed in Manitoba benefit Manitoba, provide a framework for strategic alignment across research institutions commercialization pathways, and provincial economic priorities, and help today's researchers protect and translate their work into practical application and economic value. To maximize the return on this investment, Manitoba should look closely at best practices from initiatives such as Ontario's Intellectual Property Ontario (IPON) and Quebec's Axelys, which have created provincial vehicles to help researchers and innovators translate discoveries into commercial outcomes while retaining ownership within their jurisdictions. At the federal level, the Innovation Asset Collective (IAC) provides a complementary model for pooling patent assets and building IP literacy among SMEs. Together, these examples highlight the importance of institutions that do more than provide education or one-off services: they create the structures

that allow innovators to hold and defend their intangible assets at scale. Manitoba's challenge is to adapt these lessons into a model that fits its own economy, ensuring that public research dollars generate commercial outcomes backed by ownership and control strategies to ensure long-term prosperity for Manitobans.

Finally, post-secondary institutions must be part of the solution. Taxpayer-funded research should be structured so that the resulting IP is commercialized in Manitoba and contributes to Canada's innovation economy rather than being captured elsewhere. Stronger linkages between universities, industry, and government, such as the Lab2Market Prairies program, are needed to ensure that taxpayer funded investments into research are translated into domestic ownership, commercial outcomes, and high-value jobs. This reorientation is essential if Manitoba is to secure long-term benefits from its research base. The Economic Development Strategy articulates a complementary vision by committing to provide tailored IP supports.

By pursuing these steps, Manitoba can build an IP ecosystem that is adaptive, sophisticated, and globally competitive. Programs must be flexible and business-aligned. Innovators must be equipped with strategic literacy. Early-stage firms must have access to expertise. SMEs must be able to draw on collective assets. Universities must be reoriented to ensure that public research strengthens the domestic economy. Major infrastructure projects to build sovereign IP and data capacity will also generate a wide range of value-added roles, from legal and technical advisors to commercialization specialists, expanding Manitoba's innovation workforce and strengthening long-term competitiveness.

Because much of IP law and policy is federal, Manitoba must coordinate closely with the Government of Canada. Federal frameworks should support rather than constrain Manitoba's ability to capture value, and provincial strategies must be designed to shape federal policy in a way that advances local interests. Partnerships with institutions such as the IAC, Robson Hall Law School, Manitoba's post-secondary educational institutions, and other intermediaries will be important, but always with the goal of strengthening provincial sovereignty over the value generated by Manitoba firms. IP is the foundation of prosperity in the intangibles-driven global economy. By embedding IP strategy into industrial policy, Manitoba can ensure that the innovations of its entrepreneurs translate into lasting economic returns, better jobs, and greater resilience.

RECOMMENDATION: Develop a provincial IP strategy that secures ownership, protects dual-use assets, and embeds commercialization as a foundation of competitiveness and sovereignty. This requires aligning funding, capacity, and institutions so that public and private innovation translates into economic value, value-added jobs, and long-term security.

A. Deliver adaptive IP funding supports tied to business goals and firm maturity, complemented by portable education and expert advisory services.

B. Build IP capacity through incremental proficiency levels and legal clinics that strengthen literacy, secure freedom to operate, democratize access to expertise, and expand Manitoba's innovation workforce.

C. Develop provincial structures, including a patent portfolio and post-secondary commercialization pathways, while leveraging existing models to maximize effectiveness.

Data and Artificial Intelligence Ownership & Control

Context & Importance

The introduction of this report noted the critical importance of artificial intelligence (AI) as a general-purpose technology within the intangibles-driven global economy. Manitoba's path to prosperity in the twenty-first century lies in harnessing machine-knowledge capital to enhance the province's traditional strengths in all sectors - particularly natural resources, agriculture, and manufacturing. Stakeholders inside and outside of government grasp the transformative potential of AI. However, they are also uncertain about how the technology can be applied to their circumstances and are anxious about the broader risks it presents.

The explosion of AI and Internet of Things (IoT) technologies has triggered a worldwide movement advocating for increased control and ownership of personal data. People are increasingly uneasy about the potential privacy infringements lurking behind every click and swipe. Manitoba has not been immune from cybersecurity breaches of both private and publicly held data, which erodes public trust.

Ethical and efficient governance is crucial as data/AI continues to supercharge innovation, decision-making, and economic growth. For individuals and civil society, good data governance ensures that personal and sensitive information is protected, fostering greater public confidence in digital services in both the public and private sectors.

Canada is behind on establishing governance frameworks. Other jurisdictions have noticed these shifting tides and have enacted strict regulations. Examples include the European Union's General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA). These laws redefine individuals' rights over their data, placing heavy responsibilities on businesses to handle data transparently and securely. They also include mechanisms to enforce accountability. In Canada, we have the Personal Information Protection and Electronic Documents Act (PIPEDA) which primarily applies to private sector organizations involved in commercial activities. PIPEDA has not been updated to reflect rapid shifts in the data-driven economy. Previous attempts to modernize the legislation reflected a capitulation to the interests of dominant foreign platforms rather than protecting Canadians and building domestic capacity. What is required now is a comprehensive framework that embeds sovereignty, ensuring protections are not viewed as "red tape" but as a trustworthy foundation for competitiveness.

The gap at the national level has also created uncertainty for firms. The growing volumes of unstructured data carry both opportunity and risk, complicating efforts to meet regulatory obligations while preserving consumer confidence. The challenge is not to balance protections against innovation, but to recognize that privacy, security, and economic opportunity must advance together. Jurisdictions that govern this way capture both trust and value, while those that treat protections as a trade-off risk losing both. The real task at hand is to understand how value is created in the economy; mitigate the spillovers into privacy and security and govern accordingly.

Artificial intelligence intensifies these stakes. As a new general-purpose technology, AI functions as a factor of production comparable to labour or capital, and data is its essential input. Just as previous eras required factories and industrial infrastructure to produce tangible goods, the data-driven economy requires sovereign control of AI models, compute, and digital infrastructure as its new "factories." The implications extend far beyond efficiency gains: data and AI governance shape wealth distribution, market competition, national security, and individual

agency. Natural monopolies and network effects have concentrated economic power in a handful of firms, eroding sovereignty for many jurisdictions. The antidote is sovereign strategic investment and governance, owning the underlying assets, setting the rules for their use, and capturing economic returns.

At its core, this is a question of digital sovereignty. Digital sovereignty is not only about protecting privacy and security but ensuring that economic spillovers are captured domestically rather than extracted by external actors. Provinces that fail to establish sovereign strategies for data, AI, and compute will find their ecosystems hollowed out, while those that do will be able to anchor long-term competitiveness.

What Manitoba requires to overcome these challenges is a coherent, long-term strategy that empowers sovereign control over the data and AI innovations developed by its firms and start-ups. This means treating data, AI, and compute as strategic infrastructure, ensuring ownership and governance remain within Manitoba and Canada's legal frameworks. By embedding principles of control, proactive governance, and independent oversight, the province can safeguard trust, stimulate adoption, and channel the benefits of the data economy toward its own long-term prosperity.

This will need to be supported through immediate, urgent actions to unlock investment from both inside and outside Manitoba and to accelerate the building of sovereign AI and data infrastructure. As with other jurisdictions, this requires government not to stand back but to actively shape markets through procurement, regulatory frameworks, and capacity-building investments that create the conditions for domestic firms to scale. A suite of initiatives and regulatory reforms will also be required to build a resilient and prosperous digital economy that involves the collection, management, sharing, and protection of data across government, the private sector, academia, and civil society.

Current State and Gaps

Regional Shares of Global GDP, 1980-2025

	1980	2010	2024	2025	Change 2010-2025
World	**12,743**	**66,800**	**110,585**	**113,816**	
United States	2,857	15,049	29,185	30,507	
China	304	6,139	18,748	19,232	
Global North	5,728	28,480	35,637	36,545	
of which Canada	276	1,617	2,241	2,225	
Global South	3,853	17,132	27,015	27,532	
Shares					
United States	22.42%	22.53%	26.39%	26.80%	4.28%
China	2.38%	9.19%	16.95%	16.90%	7.71%
Global North	44.95%	42.63%	32.23%	32.11%	-10.53%
of which Canada	2.17%	2.42%	2.03%	1.96%	-0.47%
Global South	30.24%	25.65%	24.43%	24.19%	-1.46%
Shares ex China					
United States	22.97%	24.81%	31.78%	32.25%	7.45%
Global North	46.05%	46.95%	38.80%	38.64%	-8.31%
of which Canada	2.22%	2.67%	2.44%	2.35%	-0.31%
Global South	30.98%	28.24%	29.42%	29.11%	0.87%

In the post-2010 period, which is the data-driven economy, the main shift was in market share from the Global North to the United States. This shift was due to the capture of data rents by US platform firms.

Source: IMF World Economic Outlook Database April 2025, Calculations by Dan Ciuriak

The global distribution of economic power has shifted decisively in the data-driven era. The United States expanded its share of world GDP by capturing outsized data rents, while China nearly doubled its share by shielding and scaling its domestic champions. Canada's share fell below 2%. This was not only about missed opportunities to compete but also about a failure to capture value from this new factor of production. Countries that failed to establish sovereign strategies for data, AI, and compute saw their domestic ecosystems hollowed out as their IP, firms, and talent were absorbed into larger foreign platforms. Canada exemplifies this pattern, where critical digital assets generated at home have too often been controlled and commercialized elsewhere.

Manitoba already has many competitive advantages within the digital economy. Its educated workforce, relatively low cost of living and affordable property prices will be key to businesses attracting and retaining talent. These are also complemented by a clean energy grid, high-quality institutions of learning and applied research, a geographically central location, stable political environment, and abundance of freshwater and critical minerals – all things prioritized by investors when choosing to build or relocate their facilities. As a result, the province is already a hub of applied AI excellence in ag-tech, engineering, and health research, among other industries.

The government's decision in late 2024 to create a Department of Innovation and New Technology has meanwhile created an institutional mechanism to promote, oversee and expedite new data and AI initiatives at the cabinet level, within the civil service and in collaboration with industry and other stakeholders. This has led to decisions to invest $2 million into a program to help SMEs eliminate barriers to AI adoption, as well as $5 million in additional grants for Research Manitoba to attract new research chairs and create an IP collective.

However, when it comes to owning and controlling data and AI for innovation and the creation of new value-added industries, significant portions of the population live and work in rural and northern areas that lack broadband connectivity. Left unaddressed, this means the province's north-south, urban-rural digital divide will be aggravated by AI becoming fundamental to everyday life.

The province's data storage and cloud computing infrastructure is also almost wholly owned or operated by American firms, such as Microsoft, Google, and Amazon Web Services. It is therefore important to avoid local actors becoming overly reliant on private networks and development platforms which could be subject to steep price increases in the future.

Manitoba has an opportunity and an imperative to strengthen its talent retention and build a world-class digital workforce. Many young people are drawn to digitally focused jobs, and by continuing to grow Manitoba's technology ecosystem, we can create more opportunities for them to build their careers right here at home. A 2024 report from the Canada West Foundation noted that half of youth in information technologies and digital media were exploring opportunities outside Manitoba. This underscores the importance of investing in local innovation, digital firms, and partnerships that give young workers strong reasons to stay and thrive in Manitoba.

The Manitoba government must also modernize its own digital capacities to better support this growth and delivery of government services. Stakeholders consistently note that improving access to public data will unlock innovation and help businesses scale. Strengthening data management, standardization, and availability across departments would make Manitoba an attractive hub for AI-driven research and entrepreneurship.

The Government's Digital and Technology Solutions agency is well placed to build this capacity. By developing clear support systems, training modules, and usage policies, government can

ensure civil servants across all departments are able to use AI responsibly and effectively. This will enable Manitoba to reduce costs, enhance service delivery, and improve decision-making. With coordinated investment and leadership, Manitoba can position itself as a leader in digital governance and innovation, ensuring both the public sector and private sector benefit from the opportunities of the AI era.

The Case for Action

According to survey data from Statistics Canada, only around 12% of Canadian businesses were actively using AI in 2024/2025 – among the lowest adoption rates in the OECD. A report from Deloitte Canada released this past March predicts that Canada will miss out on an additional 8 percent of GDP growth over the next decade if it does not close its AI adoption deficit relative to other jurisdictions around the world. Manitoba would be similarly affected.

Manitoba does not need to enter the race to build costly frontier models to benefit from AI technologies and digital assets and can leverage AI and digital assets strategically without being forced into a full-scale arms race. The province can build on work by peer jurisdictions to support our firms and ensure the benefits of AI flow to Manitobans first.

The proliferation of lower-cost, open-source models that entrepreneurs and developers can freely use, modify, and share could usher in a more even playing field, benefitting smaller actors and jurisdictions such as Manitoba. Indeed, the province already has most of the inherent advantages it needs to thrive in the global digital economy.

The real imperative for Manitoba is to develop policies that drive the implementation and adoption of existing technologies in diffuse ways across the economy so that people and firms of all sizes can access them and gain a better understanding of how they work. Policymakers and political leaders must recognize that the globalized, borderless digital economy driven by intangible assets and machine-knowledge capital functions differently than the system built around the exchange of physical goods and services. Previous orthodoxy was that governments should intervene as little as possible. Yet in the new economy, building prosperity will require serious industrial policy.

It is critical that the government consider its strategy for engaging with Manitoba's firms to align strategic objectives and create the conditions for them to thrive. Regulatory frameworks, and tools such as strategic procurement and regulatory frameworks must be used to create the conditions for promising domestic firms in strategic sectors to scale and build domestic capacity. Failing to do so risks losing talent, start-ups, and IP to predatory acquisitions. In turn, this strengthens the gravitational pull of larger, more established tech hubs. This requires policy alignment across federal, provincial, and municipal levels to ensure Manitoba's firms are not navigating fragmented or contradictory frameworks. These choices will determine whether Manitoba builds a sovereign ecosystem of value-added industries from which to capture data/AI and rents from external users, laying the foundation for productivity gains and innovation breakthroughs. The outcome will have a greater impact in the long run than moonshot efforts to invent resource and capital-intensive frontier models. This is especially true among Manitoba's SMEs, which comprise more than 99% of the province's private sector businesses.

By embracing intelligent and unified data/AI strategies, the Manitoba government can give enterprises the clarity and confidence to navigate this complex landscape. Prioritizing compliance, security, and transparency will help businesses not only regain trust but also mitigate risks and uphold ethical standards in data/AI stewardship in the data-driven global economy.

RECOMMENDATION: Establish a framework that secures sovereign control of Manitoba's data, AI, and compute infrastructure, with protections treated as a foundation of competitiveness, as the strategic basis for long-term prosperity and trust.

A. Build sovereign compute and digital infrastructure with Federal and Provincial investment, supported by a standing AI stakeholder council and dedicated annual funding for a Manitoba AI strategy.

B. Establish robust protections so Manitoba's data and citizens remains secure, subject to Canadian law, and resilient against cyber threats, while ensuring privacy and security are drivers of trust and adoption.

C. Build public trust through proactive governance, transparent reporting, and a new coordinating role with the Canadian Centre for Cyber Security and local providers.

Infrastructure

Context & Importance

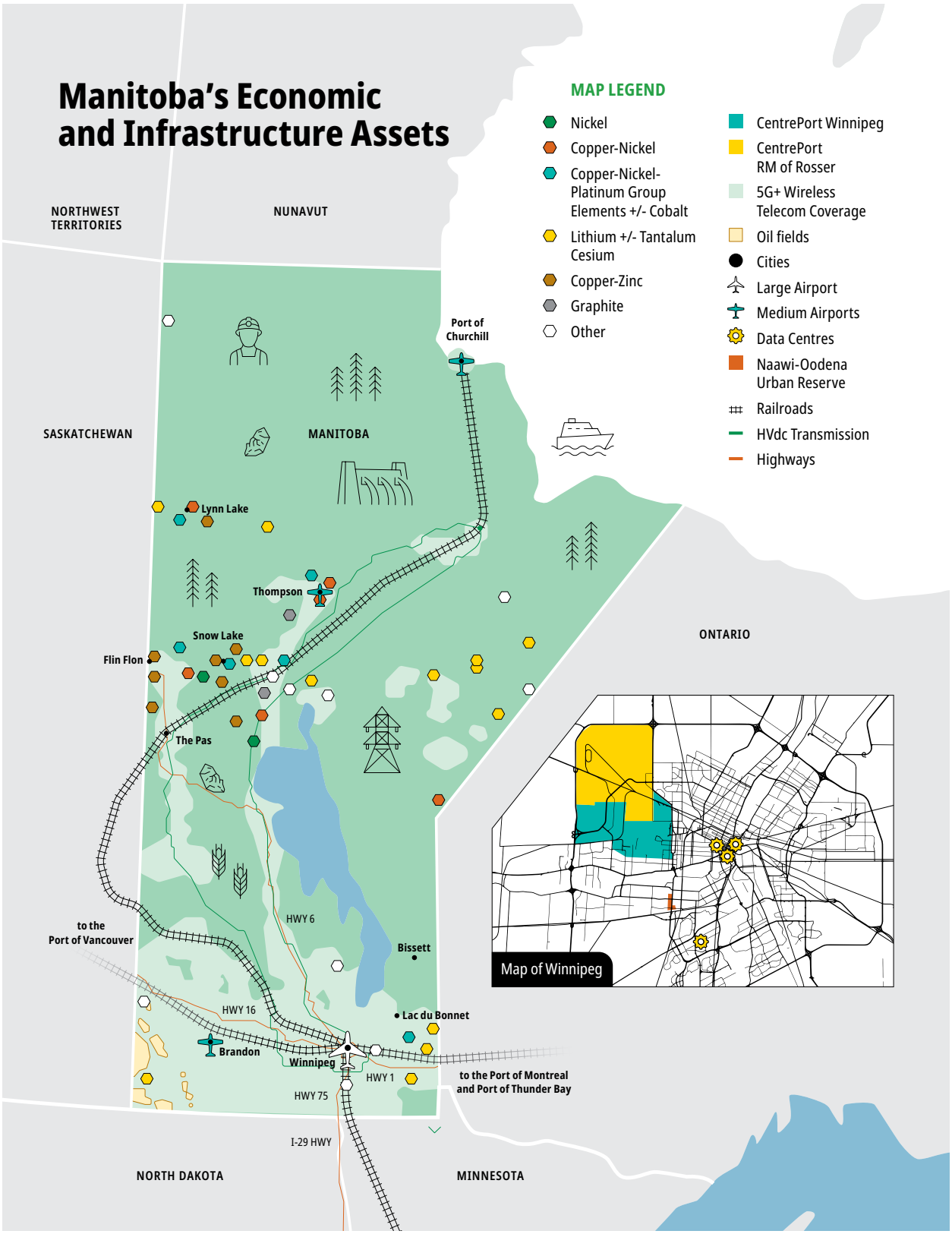
Manitoba is poised to lead the next generation of nation-building in Canada. With the right infrastructure, the province can unlock its full economic potential, strengthen national supply & value chains, and deliver lasting prosperity for Manitoba and Canada. Infrastructure is no longer just about fixing roads or laying track. It is a strategic lever for growth, resilience, and sovereignty. By building integrated systems across transport, energy, digital, and resource infrastructure, Manitoba can position itself at the centre of a more secure, connected, and prosperous Canada.

Current State

Premier Kinew is stepping forward. Manitoba's 2024–25 budget included more than $3.7 billion in capital infrastructure investments, targeted at roads, bridges, flood mitigation, and northern access. Additionally, the 2024 *Securing Our Critical Mineral Future* strategy identifies infrastructure as the primary enabler of economic transformation, highlighting the need for transportation corridors, transmission lines, and refining capacity to fully leverage Manitoba's advantage. With 46 of the 50 minerals on the 2025 United States Critical Minerals List, Manitoba is positioned to become a global supplier of clean-growth inputs if the infrastructure is there to support it.

Case for Action

Manitoba's opportunity lies in its role as a national connector with a vision that goes beyond provincial boundaries to support the movement of goods, energy, and resources across Canada. Recent federal and provincial announcements, including investments in rail and port modernization, fibre expansion, and regional grid upgrades, underscore the scope of what is possible. A Made-in-Canada approach to building infrastructure can bolster key industries in other provinces, drawing on steel from Ontario and aluminum from Québec, to ensure national supply chains are strengthened. Manitoba infrastructure can provide export access, energy reliability, and critical supply & value chain redundancy. Whether it is helping move Saskatchewan's uranium, Alberta's energy, Ontario's manufactured goods, or Western Canadian grain, Manitoba can and should be a backbone of national logistics.


Manitoba's Economic and Infrastructure Assets
MAP LEGEND
Nickel
Copper-Nickel
Copper-Nickel-Platinum Group Elements +/- Cobalt
Lithium +/- Tantalum Cesium
Copper-Zinc
Graphite
Other
CentrePort Winnipeg
CentrePort RM of Rosser
5G+ Wireless Telecom Coverage
Oil fields
Cities
Large Airport
Medium Airports
Data Centres
Naawi-Oodena Urban Reserve
Railroads
HVdc Transmission
Highways
NORTHWEST TERRITORIES
NUNAVUT
SASKATCHEWAN
MANITOBA
ONTARIO
NORTH DAKOTA
MINNESOTA
Port of Churchill
Lynn Lake
Thompson
Snow Lake
Flin Flon
The Pas
Bissett
Lac du Bonnet
Brandon
Winnipeg
HWY 6
HWY 16
HWY 1
HWY 75
I-29 HWY
to the Port of Vancouver
to the Port of Montreal and Port of Thunder Bay
Map of Winnipeg

Beyond physical infrastructure, Manitoba is advancing a governance model that prioritizes Indigenous leadership from the outset. Rather than pursuing expedited approvals through legislative shortcuts, the province is demonstrating that long-term trust, shared decision-making, and equitable participation can accelerate, not delay, major project delivery. This approach is already producing results through formal agreements with Indigenous partners, the proposed creation of an Indigenous Crown corporation, and a growing pipeline of nation-building projects. Taken together, these efforts are laying the groundwork for a new model of inclusive economic development. With the right infrastructure in place and a shared commitment to execution, Manitoba is on a credible pathway to becoming a "have" province, contributing more to the national economy than it receives and leading on economic and security transformation with integrity, capacity, and vision. Momentum is also growing at the national level. Prime Minister Mark Carney has announced the creation of a Major Projects Office to streamline the approval of highways, ports, energy corridors, and other nation-building infrastructure. As he stated, "It's time to build big, build bold, and build now." This commitment is the driving force behind the opportunity before Manitoba, an opportunity which the Manitoba government has demonstrated it is ready to seize. Aligning provincial priorities with requests for updated investment tools, institutional capacity and implementation frameworks is key to advancing these projects expediently. Large-scale infrastructure development cannot be realized by Manitoba alone. Federal alignment is essential to unlock the financing, regulatory frameworks, and institutional coordination needed to advance strategic corridor development, enable Indigenous equity participation, and de-risk private investment. Equally important is the need for updated policy approaches that reflect new economic and geopolitical realities and facilitate the sovereign, value-added vision for Canada articulated throughout this report. Manitoba's leadership in both realms is paving the way for a prosperous future for itself and for Canada.

RECOMMENDATION: Advance a bold, inclusive infrastructure agenda that positions Manitoba as the national model for sovereign, value-add nation-building and ensures long-term stability and prosperity for all Manitobans

A. Implement and expand plans for large-scale, long-term infrastructure projects that align with Indigenous partnership models and both national and provincial economic goals such as trade corridors, resource development, clean energy, digital connectivity, and emergency resilience.

B. Champion a first-of-its-kind approach to major infrastructure projects that incorporates the sovereign, value-added recommendations for innovation and prosperity as articulated in this report to shape a new model for strategic growth and resilience.

Skills & Human Capital

Context & Importance

The spillovers of the knowledge-based, data-driven transformation touch every aspect of our lives, perhaps most tangibly on our workforce. Developing a skilled workforce in these emerging economic realities is compelling new approaches to education. From the earliest stages of learning, through post-secondary education and mid-career reskilling, policymakers must adapt the current workforce, and prepare a resilient and agile workforce for what is ahead.

Current State & Gaps

In 1961, economist Nicholas Kaldor identified a set of “stylized facts” about modern economic growth, including the observation that the shares of national income received by labour and capital were broadly constant over long periods of time. This stability meant productivity gains translated into wage growth, reinforcing social contracts and broadly shared prosperity. That foundation has since eroded. This disruption has unfolded over the past 35 years through five overlapping structural shifts.

First, the globalization of labour in the 1990s arbitraged jobs to lower-cost countries, hollowed out domestic industries, and forced Canadian workers to compete primarily on cost. These trade dynamics lowered prices for consumers but eroded domestic bargaining power and weakened the foundation of prosperity.

Second, the rise of the global knowledge-based economy in the mid-1990s separated tangible production supply chains from intangible value chains. Firms that controlled patents, trade secrets, and data captured far greater returns than those that simply manufactured goods. Prosperity began to follow knowledge and ownership rather than physical output.

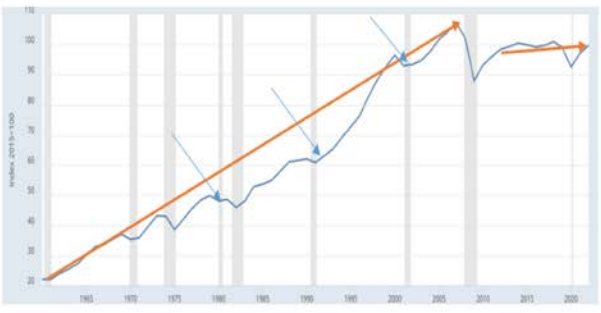
Third, the e-commerce revolution of the early 2000s created a new social class, the “precariat.” Employment norms were destabilized, long-term worker security was undermined, and many people faced an increasingly uncertain attachment to the labour market.

Fourth, the emergence of the global data-driven economy around 2010 commodified human attention and entrenched precarious employment structures under the banner of the gig economy. Economic power became concentrated in a handful of firms that monetized data at scale, while stable employment declined further.

Fifth, we have entered the contemporary machine knowledge capital era, where AI itself has become a new factor of production. Machine learning systems displace some roles while amplifying others, creating demand for new forms of expertise but also exposing entire sectors to structural change, often faster than our institutions and policies can adapt.

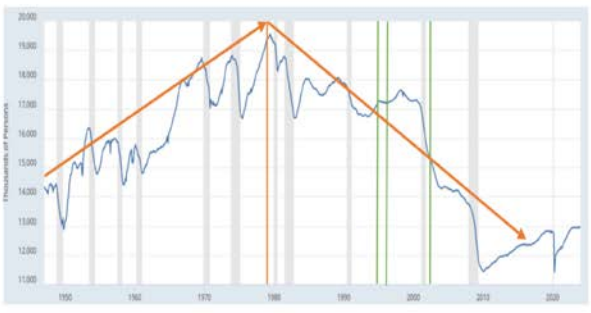
Taken together, these shifts have severed the relationship Kaldor described. Productivity continues to grow, but wage growth has decoupled, with prosperity accruing disproportionately to holders of capital and intangible assets. The widening gap between output and earnings leaves workers increasingly disconnected from the gains of economic growth.

Manufacturing Output, United States
1960-2023



Source: Federal Reserve Economic Data

Manufacturing Employment, United States
1960-2023



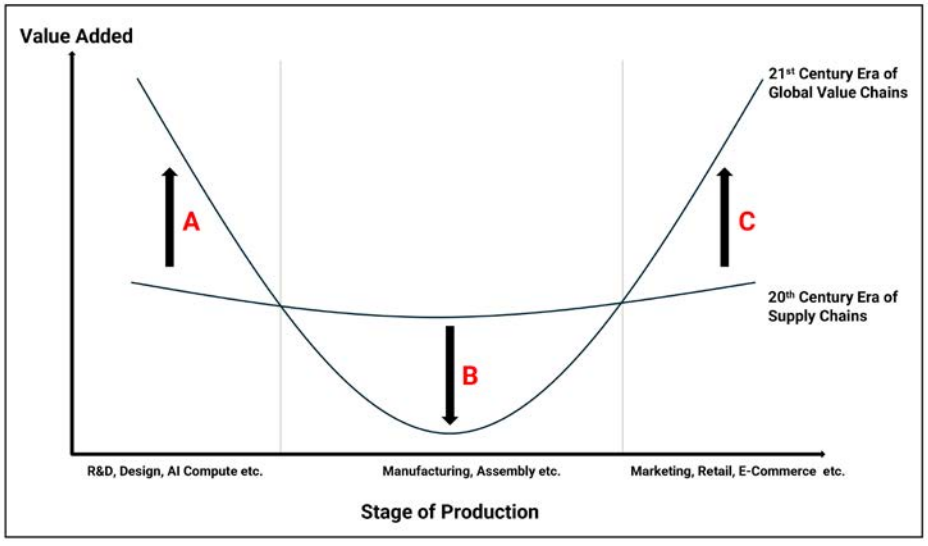
Source: Federal Reserve Economic Data

Research from the US Federal Reserve Economic Data (FRED) illustrates this shift with clarity. As productivity in the US steadily rose over the past 60 years, employment in manufacturing declined as automation and intangible investment enabled greater efficiency with fewer workers. By investing in knowledge, technology, and embedding control through policy frameworks, the US moved up the value chain. Canada, by contrast, relied on adding more labour input without building the institutional or industrial capacity to own the intangible assets such as IP or to capture value-added segments of production. This divergence is more than a productivity gap. It is a strategic misstep that leaves Canada in a weaker position to capture prosperity.

Escalating tariffs and trade frictions have exacerbated this disruption. Tariffs imposed on Canadian exports by the United States have raised costs, restricted market access, and weakened competitiveness in key sectors that should be natural advantages for Manitoba. At the same time, Chinese tariffs and trade barriers are squeezing other export markets, leaving Manitoba fighting a war on two fronts. These pressures reduce opportunities for Canadian workers and firms and compound the structural challenges already reshaping the economy. They underscore why Manitoba must double down on building sovereignty at home, so our prosperity cannot be undermined.

Case for Action

Creating and owning ideas is the path to long-term prosperity. At point A, upstream activities such as research, design, and IP generation create wealth, good jobs, and durable value. At Point C, controlling downstream functions like branding, marketing, and distribution is equally powerful, as these activities capture profitability and influence. Together, A and C determine the terms of trade across the entire value chain. Point B, the midstream work of production and assembly, will always be necessary, whether re-shored or off shored, but control of B also provides a strategic advantage and learning environment that feeds back to A & C for a fulsome approach to both control and value. But if firms only focus on B without securing control of A & C, they are locked in a race to the bottom where cost is the only basis for competition.



Education for prosperity must therefore focus on preparing workers to operate across all three parts of the curve: to own ideas, to create them, and to take them to market in new and globally competitive ways. Major infrastructure projects in transmission, transport, and resource

corridors will create jobs, but their long-term impact will be limited unless complemented by deliberate investments in advanced education, R&D, and graduate retention mechanisms.

Major infrastructure projects will continue to play an important role in job creation. Investments in roads, transmission lines, and resource corridors create employment opportunities across regions, particularly in construction and skilled trades. They are nation-building undertakings that provide near-term benefits for workers and communities. Yet if these projects are not complemented by strategies to capture value at A & C of the smile curve, Canada risks repeating the cycle of creating jobs without securing the long-term prosperity that comes from intellectual property, data, and market control. Infrastructure must be paired with a value-added approach that equips workers not only to build but also to shape and own the systems that define the future economy.

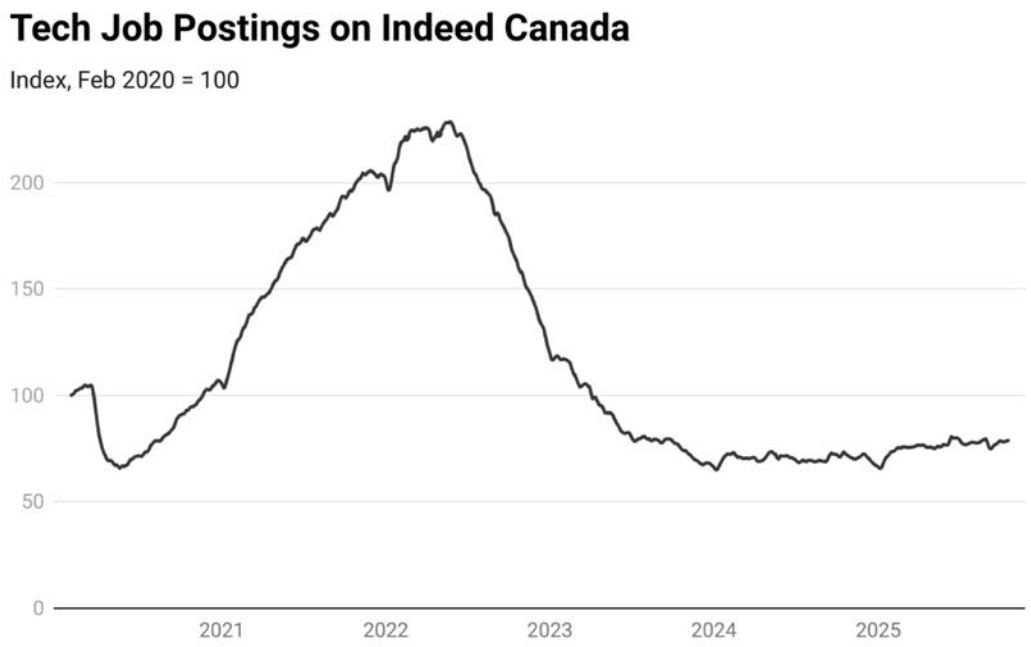
At the heart of this potential for growth are strong domestic firms. It is firms, not governments, that generate productivity with IP, cultivate global brands, and control distribution platforms. Governments can shape the ecosystem, but without firms anchored in Manitoba - and Canada more broadly - that can hold positions at the high ends of the curve, the workforce risks being relegated to low-value activities while profits accrue elsewhere. Manitoba's education and workforce strategies must therefore be oriented toward producing a skilled workforce that supports the growth of competitive, resilient firms capable of holding these high-value positions in the global marketplace. Manitoba is already uniquely positioned to empower domestic firms in the AI and biosecurity, energy, ag-bio and clean industrialization sectors because it holds assets that no other province can replicate:

- The cleanest firm power in Canada through hydro, enabling green electrification.
- The National Microbiology Lab (Canada's only CL-4 lab) and the Manitoba Centre for Health Policy data advantage for biosecurity and real-world AI testing.
- A proposed biofoundry, creating opportunities in synthetic biology and applied biotech, where engineering and life sciences converge.
- Continental and Arctic trade infrastructure through CentrePort and Churchill,
- Critical minerals and advanced manufacturing including lithium, aerospace, and zero-emission vehicles.

"Unfortunately, there's a lot of people who just saw a generation of people naturally just get jobs and huge salaries right away,… I think we're in a time where just hustling for your job is a very big thing."

The Globe and Mail – August 3, 2025

The pace of this transformation has created upheaval in the workforce. Students who commit years of study and take on significant debt are finding that by the time they graduate, the job market they were preparing for has been fundamentally altered. Entry-level positions that once served as reliable stepping stones are being displaced or reshaped by machine learning capital. The result is a growing discrepancy between credentials earned and opportunities available, leaving many young people anxious about their futures and questioning the value of traditional career pathways. Disrupting young people's transition into the workforce is also spilling over into other elements of adulthood, undermining economic and social milestones such as career progression, home ownership, and long-term financial security that was once a guarantee.



As of early July, tech job vacancies on Indeed Canada were down 21 per cent from February 2020 and tech employment has faded from 2023 peaks.

Source: Indeed Hiring Lab

It is also reshaping how students and institutions think about postsecondary education itself. The dominance of single-discipline pathways such as computer science as 'a one-way ticket' to stable employment is no longer secure. New approaches are emerging that value interdisciplinary training, adaptability, and human-centred skills. Social sciences are becoming critical for guiding how technologies are developed, integrated, and governed. They help shape the ethical, organizational, and societal aspects of innovation, ensuring that technical progress is matched with the capacity to manage its consequences.

"Computer science programs at universities across the country are now scrambling to understand the implications of the technological transformation, grappling with what to keep teaching in the A.I. era. Ideas range from less emphasis on mastering programming languages to focusing on hybrid courses designed to inject computing into every profession, as educators ponder what the tech jobs of the future will look like in an A.I. economy."

New York Times - June 30, 2025

The scale and speed of these shifts make clear that Manitoba needs a deliberate and coordinated approach. Consultation with workers and the labour movement must be central to the department and the government. Workers and unions bring practical expertise about what these changes mean on the ground, and their voices are essential to building policies that protect good jobs, strengthen fair wages, and ensure prosperity is broadly shared.

A synchronized feedback loop is required to keep workforce development aligned with the realities of the knowledge-based, data-driven economy. Such a mechanism must capture all relevant considerations, from curriculum design and skills pipelines to lifelong learning

opportunities and the pace of adaptation. To ensure cohesion, the federal government must also be at the table so that Manitoba's workforce priorities advance in concert with federal funding structures, governance of programs, updated marketplace frameworks, and broader economic and security priorities.

RECOMMENDATION: Convene a dynamic and structured feedback loop with key stakeholders to continuously align Manitoba's workforce development with emerging economic and security realities. This mechanism should provide real-time insight into shifting skills and workforce needs, ensure education and training systems remain relevant, and strengthen domestic firms.

A. Generate a reporting process, drawing on input from industry, postsecondary institutions, Indigenous communities, and labour organizations to provide a comprehensive evidence base for responsive policy.

B. Ensure the federal government participates in this process so Manitoba's workforce priorities are fully integrated into national strategies, funding programs, and governance frameworks.

Federal-Provincial Alignment

Context & Importance

Given Canada's unique federated structure, policy and program coordination between federal and provincial governments is an imperative. Strategies will not work if we turn on the furnace at one end of the room and the air conditioner at the other end.

Canada needs to focus on strong, sovereign, competitive, and diversified value chains for manufacturing, resources and services. We have structural advantages because of our abundant land, energy and resources. It's long past time for economic policies to incorporate contemporary structural realities to better capitalize on these advantages. This will be needed for both horizontal and sectoral approaches. Doing this effectively will drive better jobs and economic growth for Canadians and contribute to a sovereign and secure Canada.

Current State & Case for Action

1. Public Sector Capacity-Building for Contemporary Economic Realities

Canada's economic and security vulnerabilities reflect the fact that public institutions have not adapted to the structural demands of the modern economy. The shift toward intangible assets, dual-use technologies, and data-driven value chains requires deeper analytical capacity, better foresight, and coordinated strategies.

Manitoba should advocate for renewed federal institutional capacity. This includes restoring the Economic Council of Canada with in-house expertise to conduct structural economic analysis, support forward-looking policy design, and coordinate strategy across key domains such as trade, procurement, intellectual property (IP), data governance, competition, and standards.

To complement the recommendations in this report, Manitoba should call for federal action to:

- **Develop tools to measure and manage the intangible economy,** including spillovers from IP, data, and dual-use technologies.
- **Improve horizontal coordination across federal departments** so policies in trade, innovation, procurement, standards, and investment work toward shared long-term goals.
- **Build specialized analytical expertise within the federal public service** to respond to the dynamics of a knowledge-based economy.
- **Conduct early-stage policy modelling** to anticipate risks and opportunities across emerging sectors and **integrate structural foresight** so policy can evolve in response to innovation-driven change.

Canada's institutional decline is evident in several areas. For example, the removal of the Sectoral Advisory Groups on International Trade eliminated a mechanism that once drew on expert input from business, labour, academia, and provinces. While Canada stepped away from structured trade engagement, the United States continued to strengthen its advisory capacity through the U.S. Trade Representative, which still integrates hundreds of stakeholder voices into policy development.

The advisory committee system, established by the U.S. Congress in 1974, was created to ensure that U.S. trade policy and trade negotiating objectives adequately reflect U.S. public and private sector interests. The advisory committee system consists of 26 advisory committees with a total membership of approximately 700 citizen advisors.

Current geopolitical and economic conditions have created the most collaborative federal-provincial environment in a generation. This alignment presents a strategic opportunity. All levels of government in Canada stand to benefit from renewed institutional capacity, which will support stronger policy coordination. Manitoba should advocate to shape and support this federal renewal, while building the provincial capacity needed to lead within it.

2. Funding Strategies for Nation-Building Infrastructure

The competitiveness of Manitoba specifically, and Canada overall, depends on the quality of transport, energy, and communications infrastructure services. Constructing and updating these services is essential to our future. This will require unprecedented investments that leverage both federal and private capital, particularly in regions like Manitoba where the economic potential is clear.

Canada's infrastructure deficit is a growing liability for long-term productivity, supply chain resilience, and regional development. From northern access roads to high-speed connectivity and clean energy transmission, modern infrastructure must be planned as a strategic enabler of national objectives. This includes supporting value-added production, decarbonization, regional equity, and secure access to global markets.

Manitoba has signaled its intent to lead on infrastructure. Budget 2024–25 commits over $1.1 billion to transportation, flood protection, and northern access projects to drive growth and resilience. The province's *Securing Our Critical Mineral Future* report reinforces this direction, identifying infrastructure as essential to unlocking resource and value-added potential. Together, these initiatives reflect a broader provincial strategy to position Manitoba as a key player in Canada's economic transition. But Manitoba cannot act alone. Realizing these ambitions will require coordinated federal investment and financing mechanisms that bring private capital to the table and align with national priorities.

Other jurisdictions are moving faster. The United States has mobilized large-scale investment through the Inflation Reduction Act and CHIPS Act, combining public funding with procurement mandates and tax incentives. The European Union has integrated infrastructure financing into industrial and climate strategy through programs such as the Green Deal Industrial Plan. These models are scaling infrastructure to meet strategic goals while crowding in private capital.

Canada needs a similarly coordinated strategy. One-off announcements and fragmented projects are not enough. What is required is a long-term, transparent strategy that aligns public investment with national objectives and enables regional execution.

To support this, Manitoba should advocate for:

- **Clear, long-term federal infrastructure investment plans** linked to industrial and economic outcomes.
- **Financing models that attract** private capital, including public-private partnerships and blended finance
- **Regional infrastructure strategies** co-developed with provinces and Indigenous communities, that include plans for training and development.
- **Dedicated funding streams** for enabling infrastructure in critical minerals, clean energy, and agri-value chains.
- **Integrated planning of digital and physical infrastructure,** recognizing data and compute as foundational services
- **A modernized fiscal framework** that enables long-term capital investment while maintaining accountability

Canada's future prosperity depends on the infrastructure it chooses to build now. Manitoba is ready to lead, but it cannot do so without national alignment and meaningful capital deployment.

3. Comprehensive IP strategies, including for Research Funding

A world once built on open science, liberalized trade, and a patent system that rewarded genuine invention has shifted to one defined by closed science, closed markets, and the monopolization of knowledge and data. In this environment, comprehensive IP strategies are essential to economic resilience and national security. While the IP recommendations in this report are important, provincial reforms alone cannot achieve a complete strategic approach. Federal jurisdiction over IP policy, legislation, and international obligations limits how far provincial action can reach. Other jurisdictions such as the United States, United Kingdom, and European Union have embedded IP into their economic strategies as a tool of control, competitiveness, and sovereignty.

Building IP capacity among Canadian innovators requires coordinated national alignment. Canada needs a strategy that advances firms and innovation ecosystem supporters toward IP maturity. IP must be embedded in postsecondary programs in business, engineering, computer science, and other innovation-critical disciplines. Following international examples such as South Korea, IP awareness should also begin in primary and secondary education. Founders need support to move beyond basic awareness to the strategic use of IP in business decisions. Coordinated legal clinics in law schools can provide low-cost IP guidance to early-stage firms and researchers. Canadian innovators must also be supported in securing and commercializing patents, trademarks, industrial designs, trade secrets, and copyrights. These supports must be targeted and consistent to expand Canadian firms' freedom to operate.

Too much university-generated IP is either abandoned or transferred to foreign entities, undermining national prosperity and security. Publicly funded IP must ultimately accrue to Canadian firms. Granting councils should adopt ex ante IP management practices, supported by a national patent collective with a framework to identify and retain IP aligned with strategic sectors such as nuclear, quantum technologies, and defence-related innovation.

The Canadian Intellectual Property Office (CIPO), as the federal IP regulator, must better serve Canadian firms. Several straightforward reforms should be pursued:

- **Introduce an enhanced Canadian provisional patent** that secures a stronger domestic priority date and encourages domestic firms to file in Canada first
- **Ensure Patent Cooperation Treaty search reports from CIPO are high quality and well-regarded internationally.**
- **Reform small entity rules** to permit defensive licensing and pooling without penalty.
- **Clarify guidance on patentable subject matter** to support stronger domestic protection.
- **Consider joining the European Unitary Patent System** to reduce costs and improve enforcement for Canadian firms.

Governments must coordinate across IP, data, procurement, competition, digital policy, tax, cybersecurity, standards, international trade, and regulation. Standards are especially strategic, embedding sovereign approaches across innovation and national policy frameworks.

4. Standard-Setting Internationally, Nationally and Provincially

Standard-setting at the international, federal, and provincial levels is essential to achieving economic, social, and security goals. Regulatory policy exists to protect the public from harm while also fostering innovation, competition and sovereignty. While these principles remain, the surrounding environment has evolved rapidly.

Standards are not just technical tools. They are strategic instruments that embed sovereign approaches to economic development, national security, and innovation policy. They define accepted practices, reduce complexity, and eliminate duplication. Yet Canada lacks organized levers at all levels of government to guide the development and use of critical standards. This absence undermines growth, weakens sovereignty, and limits our ability to respond to economic and societal change. **Additionally, sustained federal-provincial engagement through accredited processes is long overdue.**

Manitoba requires an **expert-driven and adaptive process for the timely creation, adoption, and integration of standards.** This should be established under provincial authority to support regulatory modernization. It would foster collaboration across ministries, Indigenous governments, industry, and standards bodies helping to integrate consensus-based voluntary standards and eliminate outdated regulations. Further this approach would prioritize jurisdictional equivalency and mutual recognition with other provinces, territories, and trading partners to reduce regulatory friction, lower compliance costs, and improve market access for firms.

The federal government must also modernize its fragmented standards governance model and attune it to international counterparts such as the EU, US, and UK who have long recognized the strategic importance of consensus standards and have established coordinated mechanisms and legislative levers to ensure their effective use. By recognizing standards as statutory instruments, Canada can simplify rule-making, streamline adoption, and reduce regulatory burdens, including internal barriers to trade. **Manitoba should urge the federal government to reform institutions like the Standards Council of Canada into a not-for-profit body and narrow its mandate to simply accrediting standards and conformity assessment bodies.** The mandate to lead strategy, policy, and coordination among jurisdictions on the use of standards should exist as a separate government entity, such as the creation of a Standards Commission. This would address current systemic inefficiencies, conflicts of interest, and governance risks and ensure the effective use of standards in regulatory frameworks to drive innovation, protect the public, and enhance sovereignty and competitiveness.

Digital infrastructure is national infrastructure, and sovereign control over the standards governing it is essential to our sovereignty, prosperity and security.

5. Sovereignty and Economic Value-Add Strategies for AI

Data, AI, and compute capacity are now core drivers of economic performance, sovereignty, security, and competitiveness. As a new factor of production, they must be treated as essential infrastructure. Their value lies not only in how they are applied, but in the ability to access, govern, and control them within domestic legal and policy frameworks.

Sovereign compute refers to the capacity to manage computing infrastructure independently of foreign technologies, platforms, and jurisdictions. Without this capability, Canadian public and private institutions risk exclusion from critical innovation activities. High-performance computing, secure cloud infrastructure, and controlled access to large datasets are now prerequisites for leadership in the global AI economy.

International counterparts have already acted. The European Union's AI Factories initiative, along with Horizon Europe, demonstrates how public investment can be structured to advance both technological capacity and digital sovereignty. These programs link advanced compute infrastructure with applied AI research and public service development, ensuring that strategic technologies remain under European control.

Canada lacks a comparable national framework. Despite global recognition of our AI research leadership, Canada continues to lose economic value and policy leverage by failing to secure domestic ownership of AI platforms, data assets, and compute capacity. This shortfall contributes to the country's declining standard of living and growing productivity gap.

Manitoba should advocate for a national strategy that positions data, AI, and compute as critical infrastructure. Funding and policy should:

- **Prioritize domestic ownership and long-term control of AI models, compute infrastructure, and core datasets.**
- **Support the build-out of sovereign compute capacity,** including high-performance computing and trusted cloud systems governed by Canadian law.
- **Establish shared digital infrastructure** so that innovators, including those outside large firms, can access essential tools and resources.
- **Incentivize government service AI applications** in strategic sectors.
- **Align industrial and procurement strategies** with Canadian control of data/AI infrastructure.
- **Fund operational governance functions** including ethical oversight, data stewardship, and cyber security.

These actions will unlock Manitoba's potential to lead in key sectors, capture the value of local innovation, and contribute to national prosperity.

To support this transition, Manitoba should advocate for the creation of a federal digital sovereignty commission that operates collaboratively across the federation. This commission should bring together leaders from government, industry, and academia with a mandate to develop enforceable frameworks for data governance, AI ownership, compute access, and infrastructure oversight. Its role should be to ensure that public investments and institutional capacity are aligned with long-term national interests, while integrating the contributions of all jurisdictions.

Just as earlier generations built prosperity through investments in transportation, energy, and communications infrastructure, today's economy demands strategic action to build and retain control over digital infrastructure. Manitoba should embed these priorities in its innovation strategy and work with national partners to ensure that investments in data, AI, and compute deliver long-term value for Canadians.

6. AI and Data Governance Legislation

The economic opportunity of data and artificial intelligence is immense, but it comes with a responsibility to govern in the public interest. AI and related technologies are reshaping the economy and society, including public service delivery, democratic institutions, health systems, and infrastructure. Yet Canada's privacy and digital governance laws remain inadequate. They fail to address the pervasive influence of AI and data or the power of dominant platforms, exposing Manitobans to surveillance-based business models, opaque automated decisions, algorithmic bias, and data insecurity.

Manitoba should advocate for a renewed federal legislative framework that reflects the civic, economic, and national security stakes of AI and data. These technologies are not only commercial tools. They are also infrastructure and capital that demand public-interest governance. This includes stronger limits on private-sector data use and a clear framework for responsible AI development, deployment, and oversight.

Manitoba also holds tools within its jurisdiction. The province should modernize its frameworks for AI and data use across public services. This includes updating public and health sector data protection laws and laying the groundwork for future AI legislation. In the near term, Manitoba should establish policies on AI procurement and deployment, public-sector transparency, and proactive risk governance.

At the federal level, Manitoba should press for a comprehensive, interoperable framework based on the following principles:

- **Sovereignty by design:** Canadian control over data, infrastructure, and platform governance must be embedded at every layer. This includes jurisdictional control and protection from foreign interference.
- **Control by design:** AI and data systems should carry fiduciary duties. Developers and deployers must act transparently and with a duty of care to users.
- **Proactive governance:** Oversight must be ex ante, requiring pre-deployment impact assessments, audits, and the power to intervene when needed.
- **Independent oversight:** Regulators must be independent from departments with commercial mandates. Oversight bodies need the authority to act across sectors.
- **Protection of fundamental rights:** Privacy must be affirmed as a fundamental right, with special attention to children and vulnerable groups. Canadians must control how their personal data is used.
- **Alignment with global standards:** Canadian frameworks should align with international partners like the European Union's AI Act and GDPR. This ensures high standards and market access for Canadian firms.
- **Capacity and legitimacy:** Governments must invest in expertise and consultation to build trust in new rules. An independent observatory should monitor and report on digital governance trends.

Manitoba should reflect these principles in its federal advocacy while developing complementary provincial measures. Without coherent laws and standards, data/AI will continue to outpace the public interest. Manitoba has an opportunity to lead in shaping a modern and sovereign approach.

7. Updated analytical frameworks, transparency, and powers for FDI review and investment attraction.

Canada's current investment review processes were designed for a production-based economy and are no longer fit for purpose in an era defined by IP, data/AI, and strategic dual-use technologies. In the knowledge-based and data-driven economy, foreign direct investment is often extractive, targeting intangible assets like IP, data/AI, and high-growth firms, which flow easily across borders and generate both economic and security spillovers that traditional frameworks fail to capture. While the legacy approach to FDI focused on physical capital and tangible production, today's transactions involve assets whose strategic implications are far more complex. Without a modernised framework, these investments risk eroding Manitoba's future prosperity and, more broadly, Canada's sovereignty.

A modern analytical framework for investment is needed. It must integrate economic and security assessments and reflect the structural features of the intangible economy. IP and data/AI now function as public-good assets with complex spillovers that are not priced into commercial agreements. The risk is no longer determined by the size or nationality of the investor but by the nature of the asset itself and the broader implications of its transfer. Manitoba's engagement in this space must be grounded in sovereign value-added strategies that ensure control, benefit, and long-term value retention from the province's innovation assets.

Dual-use technologies are at the centre of this strategic shift. Canadian strengths in AI, quantum science, advanced manufacturing, and geospatial technologies are increasingly relevant not only for economic growth but, more recently, for Canada's 2% of GDP commitment to NATO. Manitoba is home to significant capabilities across several of these sectors, including research strengths in robotics, aerospace, cold-climate innovation, and remote operations. These technologies often originate in the civilian sector but are quickly adapted for defence applications, making their governance inherently cross-cutting. For Manitoba and Canada, retaining strategic control over dual-use innovation is essential to securing long-term prosperity and ensuring that the province's contributions to national capabilities are aligned, protected, and leveraged in the public interest.

We recommend that the Province of Manitoba advocate for alignment with the federal government in the following **areas of focus**, rooted in the strategic objective of retaining control over assets critical to economic prosperity and national security:

- **Broaden the scope of review** to include critical and strategic technologies, post secondary partnerships, licensing arrangements, and transactions involving valuable IP and data/AI. The nature of the asset, not just the type of investor, must determine whether a transaction serves the national interest.
- **Integrate economic and security assessments** by recognising that IP and data/AI have dual-use characteristics with both economic and national security implications. These spillovers must be evaluated as an integrated whole, not in isolated silos.
- **Align Canada's sensitive technology lists and risk factors** with those of key allies, particularly the United States, to reflect contemporary global standards and avoid regulatory arbitrage.
- **Legislate powers to unwind prior transactions,** including mergers, research partnerships, and joint ventures, if they are later found to compromise Canadian prosperity or sovereignty. This mirrors the reversal powers found in jurisdictions such as Australia.
- **Create a transparent, expert-led oversight body,** akin to the Committee on Foreign Investment in the United States (CFIUS), with the authority to implement and enforce investment screening policies, conduct risk-based reviews, and publish timely guidance.
- **Adopt a coherent federal dual-use policy framework** that recognises the bidirectional flow between commercial innovation and defence capability. Manitoba should advocate for reforms that reduce disincentives for dual-use development, modernise export controls, and ensure that provincial innovation ecosystems are positioned as trusted partners in secure technology supply chains.

These updates require deliberate and principled federal-provincial alignment. Manitoba must not only ensure its interests are protected under a reformed Investment Canada Act but also play an active role in shaping it. This includes securing sovereign value-added outcomes in sectors such as clean energy, critical minerals, advanced manufacturing, aerospace, and Manitoba-based data/AI innovation firms. Manitoba can lead by adopting provincially and advocating federally for governance that reflects the knowledge-based and data/AI-driven economy, with frameworks that defend the province's strategic assets and advance Canadian prosperity and sovereignty in the 21st century.

8. Comprehensive reorientation towards more sovereign value-add in all sectors.

To ensure long-term national security, economic resilience, and competitiveness, Canada must pursue a strategic shift that places sovereign value creation at the centre of economic policy. This requires moving beyond legacy models of resource extraction, manufacturing, and service delivery toward a high-value, innovation-led economy that spans all sectors.

Prosperity today is driven by the ownership and control of IP, data, and value-added applications. Canada's economic strategy must prioritize innovation and commercialization across digital technologies, biotechnology, agri-tech, critical minerals, clean energy, and Indigenous-led enterprises to ensure that benefits remain within the domestic economy. Federal alignment in these areas will create the conditions for innovators across provinces, including Manitoba, to thrive.

Models such as Intellectual Property Ontario, Quebec's Axelys, Innovate BC, and the federal Innovation Asset Collective provide a foundation for expanding commercialization capacity across jurisdictions. The federal government's announced procurement review presents an opportunity to realign public purchasing with national innovation goals. Supporting Canadian IP ownership and domestic innovation ecosystems should be a top priority.

Federal programs such as the Strategic Innovation Fund have supported commercialization and R&D but have disproportionately funded foreign multinationals. Public funding frameworks should be rebalanced to prioritize Canadian ownership, IP retention, and sovereign technology development. This will better position Manitoba firms to grow and capture long-term value.

Stronger national coordination is also needed to ensure Canada develops the workforce required to support domestic innovation at scale. Manitoba's ability to train, attract, and retain talent depends in part on how federal programs support skills development aligned with economic priorities.

Innovation policy must have capacity that embeds coordinated and ambitious strategies aimed not just at participating in global markets but leading in them. The federal government should also act as a convener, fostering collaboration across academia, industry, Indigenous and policy communities. Aligning national frameworks to support shared innovation and commercialization will accelerate inclusive economic growth. Governments across Canada must prioritize sovereign capacity, not just global integration, to secure prosperity in the knowledge-based economy.

9. Skills & Human Capital

Canada's long-term prosperity depends on its ability to cultivate and retain the talent required to support sovereign economic objectives. From clean energy to data/AI, and from advanced manufacturing to indigenous lead enterprise, each sector relies on a workforce that is skilled, adaptable, and aligned with national priorities. Yet Canada's talent strategy remains fragmented, reactive, and disconnected from structural economic realities.

Manitoba has an opportunity to lead in aligning talent development with sovereign value-add goals. But the transition underway, from a production-based economy to one led by intangibles, requires national coordination and investment. Traditional approaches that focus narrowly on credentials and supply gaps are no longer sufficient. Canada needs integrated frameworks that treat talent as a core input into economic strategy, one that is both ready to adapt to emergent needs *and* that anticipates and prepares for future needs.

Students are already feeling the effects of this disruption with entry level tech roles shrinking and confidence in traditional career paths declining. At the same time, productivity is rising even as fewer workers are needed to generate it, foundationally reorienting toward capitalism in this era of machine learning capital and redefining the composition of the workforce. This demands new thinking about how skills and human capital are developed, resourced, supported and distributed across the economy.

To this end, **Manitoba should advocate for a renewed federal approach that links skills development programs directly to strategic sectors** such as data/AI, critical minerals, digital health, and energy to name a few. This strategy should also support work integrated learning and vocational pathways aligned with regional economic plans, expand support for entrepreneurship and SMEs workforce scale up in rural and indigenous communities, and accelerate international recruitment for specialized roles while ensuring long term retention. It should recognize non-traditional skills and credentials, build regional report-back structures to guide policy, and modernized immigration streams to target strategic skills rather than arbitrary quotas.

The federal government should act as a convener across jurisdictions to develop a national talent strategy for economic sovereignty. This strategy must align education, immigration, and workforce development with industrial and innovation policy, and ensure that public investments in research and commercialization are matched by the necessary human capital capable of capturing long-term value.

Manitoba must also continue to build its own capacity. This includes **expanding partnerships between postsecondary institutions, industry, and Indigenous governments to design programs tailored to local advantage.** Just as physical and digital infrastructure are the foundations of a sovereign economy, so too is a workforce capable of sustaining it.

Manitoba and the world are navigating multiple structural shifts, including the rise of the knowledge-based economy, data-driven enterprise, machine-led knowledge, the energy and sustainability transition, demographic aging, and the evolving nature of work. Our responses must also be structural, across both the public and private sectors. They must be expert-informed, forward-looking, and coordinated.

RECOMMENDATION: Align federal and provincial policies, programs, and investments to support sovereign value-added strategies for economic growth and shared prosperity and national security.

A. Advocate that the federal government modernize its economic strategies and policy frameworks to enable effective alignment across jurisdictions specifically for new factors of production, and strategic sovereign economic levers essential to prosperity and security.

B. Manitoba should establish a structured annual federal-provincial summit, convening leaders, ministers, and business stakeholders to coordinate policies, review progress, and set priorities. The summit must be formalized with a clear agenda and produce a public summary of outcomes and next steps.

Sector Considerations

Context & Importance

Manitoba's economy is broad and diverse, with important contributions from knowledge-based industries, resource and production-based sectors, and people-oriented services. Each sector faces its own opportunities and challenges, but all are shaped by the same underlying conditions that determine whether firms can grow, compete, and capture value. As earlier sections of this report have shown, IP ownership, data/AI adoption, and workforce readiness are now essential enablers. Sector strategies must therefore be firm-centred while also ensuring that Manitoba captures the value-added spillovers and jobs that flow from innovation.

Current State

Consultations and surveys undertaken for this report highlighted both optimism and constraint. Many Manitoba firms are innovating and investing, but they continue to face challenges around capital, skills, and digital infrastructure. Firms identified opportunities in adopting digital tools, expanding into new markets, and commercializing IP, but they also pointed to barriers that risk slowing growth.

Several cross-cutting themes emerged. Knowledge-based firms emphasized the importance of protecting and leveraging their IP. Resource and production-based businesses identified the need for digital adoption and infrastructure to boost productivity. Service and people-oriented sectors focused on workforce readiness and the need for complementary policies in education and training. In all cases, firms underlined that innovation must connect to tangible supports that allow them to grow, retain ownership, and compete.

Combined Manitoba Sector Overview

Sector	Share of MB GDP (2023)	Opportunities	Barriers	Policy Levers (Based on Business Feedback)
Advanced Manufacturing	9.6%	Automation; smart manufacturing; supply chain integration	Capital constraints; small firm scale	Provide adoption supports for automation; strengthen export programs.
Agriculture	4.9%	Clean protein; agri-food innovation; export markets	Climate risk; succession gaps; input costs	Support agri-tech adoption; expand risk management tools for climate/input costs.
Aerospace	5.1%	Legacy firms, export potential, advanced manufacturing integration	Global competition, small scale, skills shortages	Reform procurement rules, use government as anchor customer; expand workforce training.
Biosciences / Life Sciences*	Subset of 12.6% (excludes health & agriculture)	Diagnostics, therapeutics, biomanufacturing, clean biotech exports	High regulatory risk; capital intensity; commercialization gap	Streamline regulatory approvals; provide commercialization funding and IP supports.
Construction	5.9%	Housing demand; infrastructure renewal	Workforce shortages; regulatory delays	Expand apprenticeships/ training; reform permitting processes.
Creative & Cultural Industries	3.8%	Cultural exports; digital media; tourism synergies	Precarious employment; volatile funding	Expand export programs and cultural infrastructure; stabilize funding supports.
Financial Services & Insurance	20.1%	Largest GDP share; fintech and green finance growth	Conservative risk appetite; tech disruption	Modernize regulation to support fintech and green finance.
Healthcare	9.8%	Digital health; bioscience linkages; aging population demand	Workforce burnout; fiscal pressures	Pilot digital health tools; expand recruitment strategies; integrate research.
ICT & Digital Technology	2.8%	AI adoption; SaaS scaling potential	Small base; talent attraction challenges	Deliver industry-designed AI/digital skills programs; simplify capital/tax credit access.
Legal	3.6%	Rising demand for ESG, IP, and compliance services	High service costs; limited SME access	Support legal-tech incubation; expand affordable IP/AI training.
Mining	1.9%	Critical minerals for energy transition	Permitting timelines; social license challenges	Streamline permitting; prioritize Indigenous participation in projects.
Natural Resources, Energy & Environment	10.0%	Hydro and clean energy; critical minerals	Market volatility; Indigenous engagement gaps	Advance strategic development with Indigenous equity partnerships.
Public Administration & Education	14.6%	Training pipeline; stable employment	Misalignment with private-sector needs	Modernize curricula; expand co-ops and internships.
Retail & Wholesale	10.4%	E-commerce expansion; local supply chain resilience	Thin margins; digital transition costs	Support digital adoption; improve small business financing access.
Tourism & Customer Service	2.9%	Post-pandemic rebound; Indigenous tourism	Seasonality; labour shortages	Promote tourism and Indigenous-led initiatives; invest in workforce and infrastructure.
Transportation	6.3%	Continental gateway; logistics hub potential	Infrastructure gaps; emissions transition	Invest in trade corridors; support cleaner freight technologies.

Knowledge and Innovation-Based Sectors

These include aerospace, biosciences, ICT, and advanced manufacturing are leading examples of knowledge and innovation-based sectors. They are some of Manitoba's most globally competitive sectors and are well positioned to thrive in the intangible economy. Their success, however, depends on ensuring firms can secure "freedom to operate" by protecting their IP and retaining control over the data and technologies they develop. Without this, Manitoba risks seeing local breakthroughs commercialized elsewhere.

Opportunities in this group include aerospace firms developing advanced components, biosciences firms translating research into therapies, and ICT firms with applications in both commercial and security domains. Growth in these industries will create new value-added roles, such as commercialization specialists and IP strategists, that expand Manitoba's innovation workforce. To support this, Manitoba needs programming that adapts to firms' levels of maturity, targeted investment, and procurement pathways that reward domestic innovation.

A further priority is to recognize the dual-use potential of many technologies emerging in these sectors. AI models, advanced materials, and cybersecurity tools can all serve both civilian and security applications. Ensuring ownership of these assets within Manitoba and Canada is essential, since losing control would not only weaken competitiveness but could also expose vulnerabilities in sovereignty and national security.

Resource and Production-Based Sectors

Agriculture, energy, mining, and transportation remain central to Manitoba's economy. They provide stability, exports, and jobs. Yet these sectors are also under pressure to adapt. Firms identified digital adoption, automation, and supply chain innovation as priorities. Precision agriculture, emissions monitoring, and advanced logistics are examples where AI and data can unlock significant productivity gains. Critical minerals also offer not only export opportunities but the chance to anchor new value-added processing and advanced manufacturing in Manitoba.

These opportunities come with risks. If Manitoba becomes dependent on foreign-owned infrastructure or loses IP linked to new production technologies, much of the value from its natural resources will accrue to firms outside the province. By embedding data/AI strategies and IP ownership into these sectors, Manitoba can generate new rents, capture spillovers domestically, and create high-value roles in fields such as geospatial analytics and sustainable energy systems.

Resource-based sectors are also at the centre of the energy transition and the global shift to low-carbon production. The province's clean power grid, freshwater resources, and mineral reserves provide a natural foundation, but realizing this advantage requires deliberate strategies to keep more value-added processing and IP development within Manitoba.

Service and People-Oriented Sectors

Manitoba's service sectors, including health care, education, retail, and hospitality, employ a large share of the population and are essential to community well-being. They are also being reshaped by data and digital technologies, from telehealth and AI-enabled diagnostics to workforce management and online commerce. Firms in these sectors emphasized the importance of workforce readiness, as digital adoption often depends on having the skills, willingness, and capacity to implement new tools.

Health care providers require governance frameworks that safeguard privacy while enabling innovation in diagnostics and treatment. Education must integrate IP and digital literacy into curricula, preparing students for value-added roles across the economy. Service firms that embrace digital adoption can become engines of productivity and job creation, but they require the same enabling conditions - secure data, IP ownership, and skilled talent - that underpin success in other sectors.

It is also important to recognize that these people-oriented sectors are not just economic contributors; they but form part of the province's social infrastructure. Innovation in health care and education strengthens both prosperity and quality of life, while also building resilience. Positioning service sectors within Manitoba's broader innovation strategy can therefore deliver spillovers in both economic and social terms, ensuring that growth contributes to long-term inclusivity and stability.

Case for Action

Manitoba's sectoral landscape is diverse, but the message from firms is consistent: success will depend on aligning sector-specific opportunities with system-wide enablers. Knowledge-based firms need secure ownership of IP, resource-based sectors need digital adoption frameworks that preserve sovereignty, and service industries need workforce strategies that ensure inclusivity and resilience. Major infrastructure projects and sectoral growth will create value-added roles, but only if supported by coordinated policies across government, post-secondary institutions, and industry.

It is with this in mind that we believe the government should work to create a continuous feedback loop between firms and policymakers to keep this vital conversation active, ensuring that government and industry remain aligned in advancing Manitoba's competitiveness and prosperity. We extend our sincere thanks to the Manitoba firms who participated in this process and provided the essential feedback on which these recommendations are built.

RECOMMENDATION: Establish a permanent public-private process to align policy and programs with the real-time needs of Manitoba's innovation ecosystem

A. Establish an ongoing consultation mechanism that enables and optimizes strategic behaviour between government and industry. It should support regular, structured dialogue between officials and firms to surface live intelligence on growth conditions and align government action with sector-specific needs.

B. Engage directly on key enablers of economic development, including workforce readiness, resource availability, access to capital, procurement opportunities, and strategic alignment in priority sectors to ensure government programs and policies remain responsive, targeted, and grounded in the lived experience of Manitoba firms.

Conclusion

“When you come to a fork in the road, take it” – Yogi Berra

Canada stands at a fork in the road. Over the past 40 years the global economy has undergone a structural transformation, shifting from a tangible, production-based system rooted in comparative advantage to an intangible, knowledge-based economy where prosperity flows from ownership, control, and the ability to leverage intangible assets for strategic advantage. In this new reality, value is not simply created by what is made, but by who owns and governs the systems that define the production of goods and services, innovation, and trade. The rules for economic prosperity have changed, and the challenge before us is to make sure those rules work for and not against Manitobans.

This report offers a blueprint for how Manitoba can meet this moment by taking the path that aligns its economic goals with the imperatives of a sovereign, value-added economy. It outlines how the province can modernize and expand infrastructure, build world-leading capabilities in IP generation and Data/AI ownership and control, equip its workforce for a data-driven future, and partner with its domestic firms and Indigenous communities in a model of inclusive growth. These actions are not about abstract shifts in policy, they are about protecting paycheques, creating career paths, and ensuring workers and communities share directly in the benefits of change. At the core of these recommendations is a belief in Manitoba’s capacity to lead. Its geography, resource base, and institutional strengths position it to be a national hub for trade, clean energy, critical minerals, advanced manufacturing, and digital infrastructure. Its leadership on Indigenous partnerships, its commitment to empowering domestic firms, and its willingness to pursue first-of-their-kind approaches to major projects make it a model not just for regional growth but for national renewal.

Provincial leadership cannot fully succeed without collaboration. Unlocking Manitoba’s full potential requires federal alignment, modernized institutions, and shared ambition. Canada must act decisively across jurisdictions, investing in infrastructure and innovation strategies that support domestic capacity and long-term value creation. Manitoba’s approach, rooted in partnership, control of strategic assets, and a commitment to value-added development, offers a path forward for building a stronger more sovereign Canada with Manitoba at the very heart.

The path ahead is clear. For Manitobans, this means building an economy that is prosperous and secure and delivers real, lasting growth in wages, workforce, and well-being. Canada can no longer rely on outdated economic models, fragmented policy frameworks, or foreign control over its economy. It must act deliberately across the federation and enable the provinces to build their economies to the benefit of all Canadians

Manitoba is ready.

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