



Digital & Innovation Bonds (DIBs): Financing Canada's Future-Ready Communities

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This study was commissioned by the Centre for Civic Engagement. The CCE is a non-partisan Canadian charity dedicated to conducting original research on public policy issues related to Canadian prosperity, productivity, and national flourishing. The CCE's research informs an active program of policy seminars, events, conferences, and lectures all aimed at providing the policy making community with actionable insights that encourage informed decision making on issues that matter to Canadians.

Executive Summary

Canada's living standards are stalling. For almost a decade, GDP per capita has barely grown, while Canadians face steadily rising costs for housing, food, and energy. Despite strong population growth, productivity per worker has flatlined, leaving households squeezed and governments struggling to fund long-term investments.

Municipalities — the governments closest to citizens — sit at the centre of this challenge. They manage the infrastructure that underpins everyday life: transit, utilities, broadband access, community centres, libraries, and public buildings. They are also where innovation takes shape, from digital permitting platforms that cut red tape, to smart energy systems that lower costs, to cultural and innovation hubs that nurture entrepreneurship. Yet municipalities remain trapped in a fiscal straitjacket. With only 8–10 percent of national revenue authority, they depend on regressive property taxes and unpredictable transfers, leaving them unable to finance the transformative projects that could lift productivity and living standards.

Digital & Innovation Bonds (DIBs) provide a solution. Designed as federally enabled, tax-incentivized, outcome-linked bonds, DIBs would allow municipalities, regional districts, Indigenous governments, and utilities to access long-term capital for future-ready projects. These projects include:

- Broadband expansion and digital platforms to connect citizens and businesses.
- Smart grids, building retrofits, and climate-resilient infrastructure.
- Modernized transit and zero-emission fleets.
- Civic innovation hubs, cultural-tech centres, and maker spaces.

Unlike traditional grants or loans, DIBs tie investor returns to verified outcomes such as service efficiency, energy savings, digital adoption, or GDP-per-capita growth. This ensures value for money, accountability, and investor confidence.

Annual issuance of \$2–3 billion in DIBs would cost the federal government only about \$50 million per year in tax incentives and outcome payments, while mobilizing \$10–15 billion over five years. The payoff: a 0.2–0.5% boost in GDP per capita annually, equal to \$3–7 billion in new income each year, along with greener, smarter, and more innovative communities.

The model builds on Canadian precedents. Toronto's award-winning Social Debenture Program has raised over \$650 million since 2020 for housing and transit, while the Community Bond model pioneered by the Centre for Social Innovation mobilized local citizens to finance innovation hubs. DIBs scale these successes nationally, backed by federal credibility, provincial delivery, and local participation.

Recommendation: The Government of Canada should legislate and launch a Digital & Innovation Bond program, piloted with 3–5 provinces and a mix of urban, rural, and Indigenous governments within two years, followed by a national rollout by Year 5.

The Challenge: Canada's Innovation and Productivity Deficit

Stagnation in Living Standards

Between 2015 and 2024, Canada's GDP per capita barely grew. While the economy added jobs and welcomed immigrants, productivity per worker stagnated, and Canadians worked harder without seeing wages rise. Countries like the United States, Germany, and South Korea surged ahead by investing in digital infrastructure, clean energy, and municipal innovation. Canada, by contrast, underinvested in the very foundations that drive long-term growth. Without decisive action, the gap will widen, wages will stagnate, and competitiveness will erode.

Municipalities on the Frontline

Municipalities are responsible for the infrastructure and services that shape everyday productivity: roads and transit, broadband and utilities, public buildings, and service delivery platforms. They are also first movers in experimenting with new ideas — from digital permitting platforms to smart waste systems. Yet their ability to invest is sharply constrained:

- They depend heavily on property taxes, which are regressive and politically unpopular.
- Transfers from provinces are unpredictable and often tied to short-term political priorities.
- Federal funding focuses on mega-projects in large cities, leaving rural and smaller municipalities behind.

The result is chronic underinvestment in projects that could raise productivity and living standards.

Why High-Impact Projects Go Unfunded

Many of the projects with the greatest long-term benefit generate broad social returns but limited direct cash flow. Examples include:

- A digital permitting platform saves time for citizens and businesses, but the efficiency gains are spread across multiple departments.
- A smart building retrofit lowers emissions and energy costs, but the financial payoff is dispersed over decades.
- An innovation hub creates jobs and entrepreneurial activity, but the benefits flow broadly to the regional economy, not just the municipality's ledger.

From a public policy perspective, these are high-return investments. From a private investment perspective, they appear risky and unattractive. The mismatch leaves transformative projects unfunded.

Why Municipalities Matter

Engines of Productivity and Innovation

Municipalities are the “first mile” of productivity. They determine whether citizens and businesses experience efficient, affordable, and sustainable infrastructure. They also serve as laboratories of innovation, piloting digital platforms, green retrofits, and new models of service delivery. These experiments, when scaled, shape the competitiveness of the entire Canadian economy.

Fiscal Mismatch

Municipalities generate only 8–10 percent of total government revenue but deliver an outsized share of services. Unlike federal and provincial governments, they have narrow taxing authority and face sharp political resistance to raising property taxes or user fees. They remain dependent on transfers, which are episodic and uncertain. This mismatch locks municipalities out of transformative investments, even when the long-term payoff is undeniable.

Lessons from Abroad and at Home

Other jurisdictions have shown that national governments can empower local innovation:

- The U.S. Build America Bonds program financed \$181 billion in local projects during the 2009 recession.
- European cities use green bonds to modernize transit and retrofit buildings.
- Toronto has issued over \$650 million in Social Debentures since 2020, consistently oversubscribed.
- The Centre for Social Innovation in Toronto mobilized millions through Community Bonds, proving everyday Canadians are willing to invest directly in their communities.

The lesson is clear: municipalities can be powerful engines of innovation if given the right financing tools.

Policy Gap: Public Good, Private Risk

Why Projects Stagnate

Many of the projects with the greatest potential to raise Canada's productivity create broad public benefits but do not generate the steady revenue streams investors typically require. This makes private capital cautious, while municipalities are constrained by limited taxing authority and political resistance to new debt. Senior governments, meanwhile, rely on fragmented grant programs that rarely cover long-term needs. The result is chronic underinvestment in the very projects that could make Canada's economy more innovative, inclusive, and globally competitive.

The Bottleneck

This mismatch creates three reinforcing problems:

1. Municipalities cannot raise taxes or debt without backlash.
2. Provincial and federal transfers are fragmented and inadequate.
3. Private investors stay sidelined, as benefits do not map neatly onto cash flows.
Without a new financing instrument, Canada will remain trapped in this cycle.

Criteria for a Solution

A new tool must:

- Align public and private incentives by linking returns to outcomes rather than narrow revenues.
- Share risk across federal, provincial, municipal, Indigenous, and investor partners.
- Ensure equity so that rural, remote, and Indigenous communities can access capital on equal terms.
- Support a wide range of projects, from broadband to cultural-tech hubs.

Digital & Innovation Bonds meet these criteria.

The Solution – Digital & Innovation Bonds (DIBs)

Instrument Design

DIBs are federally authorized, tax-incentivized bonds with 10–15-year maturities and a partial federal guarantee. Annual issuance of \$2–3 billion would cost the federal government only about \$50 million per year. Investor returns are linked not only to repayment schedules but also to verified outcomes, such as GDP-per-capita growth, digital adoption rates, or service cost reductions. This ensures that public dollars flow only when projects succeed, protecting taxpayers and rewarding innovation.

Jurisdictional Design

Because provinces hold authority over municipalities, utilities, and key infrastructure sectors, DIBs would be delivered through federal–provincial agreements. The federal government legislates the framework, provides the partial guarantee, and manages the outcome fund. Provinces designate eligible sponsors and co-manage project selection. Municipalities, Regional Districts, Indigenous governments, and utilities sponsor projects and deliver results. This structure respects Canada’s constitutional framework while providing municipalities with direct access to capital.

Eligible Projects

DIBs would fund a broad range of future-ready infrastructure, including:

- **Connectivity & Digital Platforms:** last-mile broadband, e-government platforms, digital permitting.
- **Energy & Buildings:** smart grids, retrofits of schools and libraries, district energy systems.
- **Transit & Mobility:** digital fare systems, zero-emission fleets, on-demand rural transit.
- **Innovation Hubs & Cultural-Tech Centres:** civic technology labs, maker spaces, agri-hubs, cultural-innovation facilities.
- **Resilience & Climate Adaptation:** wildfire-smoke retrofits, stormwater monitoring, climate-resilient community centres.

Financing Structure

DIBs use a blended capital stack to attract both institutional and community investors:

- **Senior tranche:** purchased by pension funds and banks, backed by partial federal guarantee.
- **Subordinated tranche:** provincial or municipal sponsor contribution, ensuring “skin in the game.”
- **Community tranche:** optional Community Bonds, allowing residents to invest directly in projects.
- **Outcome top-up:** performance-based payments from the federal outcome fund, triggered only when independent evaluators verify success.

This layered structure balances risk, attracts institutional demand, and enables community participation.

Implementation Plan

Federal Enabling Legislation (Year 1)

The program begins with Parliament passing a Digital & Innovation Bonds Act. The Act would:

- Authorize issuance of outcome-linked, federally supported bonds (initial cap: \$3 billion annually).
- Establish a Productivity & Innovation Fund to cover outcome-based performance payments.
- Mandate transparency through third-party evaluations and open public dashboards.
- Guarantee direct Indigenous access to the program, regardless of provincial participation.
- Require federal-provincial agreements to govern delivery in areas like energy, transit, and municipal services.

Provincial Agreements (Years 1–2)

Because provinces oversee municipalities and utilities, agreements are central. Each agreement sets out:

- Eligible sponsors (municipalities, regional districts, utilities, Indigenous governments, provincial agencies).
- Priority sectors (e.g., broadband, smart grids, climate resilience, innovation hubs).
- Cost-sharing rules between province, municipality, and the federal outcome fund.
- Equity provisions reserving a portion of funding for rural and Indigenous projects.
- Evaluation standards to ensure consistent and credible reporting across jurisdictions.

Eligible Sponsors

Within this framework, the following entities can apply to issue DIBs:

- Municipalities and regional districts for projects like building retrofits or digital platforms.
- Provincial agencies and Crown corporations for energy and transit modernization.
- Indigenous governments and development corporations for broadband, clean energy, or cultural hubs.
- Utilities for sector-specific upgrades such as smart grids or EV charging.
- Non-profit consortia for community-driven innovation or cultural-technology centres.

Delivery Channels

The program would accommodate Canada's diversity:

- **Provincial-led portfolios:** e.g., a province-wide smart grid modernization project.
- **Municipal-led projects:** e.g., a mid-sized city digitizing its permitting systems.
- **Utility-led projects:** e.g., a power distributor deploying smart meters.
- **Indigenous-led projects:** e.g., broadband expansion or cultural-innovation centres.
- **Regional consortia:** small towns pooling retrofits or innovation hubs into a single issuance.

Timeline

- **Year 1:** Legislation passed; outcome fund established; model agreement published; Advisory Panel appointed.
- **Year 2:** First agreement signed with 3–5 provinces; pilot portfolios launched across urban, rural, and Indigenous communities; public dashboard launched.
- **Years 3–5:** National rollout, annual issuance of \$2–3 billion, outcome-based repayments, annual reports published.
- **By Year 5:** At least \$10 billion mobilized, documented 0.2–0.5% lift in GDP per capita, measurable improvements in energy efficiency, digital adoption, and service modernization.

Financials & Cost Estimates

Program Scale

- **Annual issuance:** \$2–3 billion.
- **Time horizon:** 10–15 years per bond.
- **Federal cost:** ~\$50 million/year, mainly from tax incentives and outcome payments.
- **National impact:** \$10–15 billion mobilized in first five years, producing \$3–7 billion in annual national income gains.

Capital Stack and Risk Sharing

- **Senior tranche (70–80%):** purchased by institutional investors, partially federally guaranteed.
- **Subordinated tranche (10–15%):** provided by provinces or municipalities, ensuring aligned incentives.
- **Community tranche (5–10%):** retail investors participate through local Community Bonds.
- **Outcome top-up:** released from the federal Productivity & Innovation Fund only upon verified success.

Cost–Benefit Snapshot

ITEM	ESTIMATE	NOTES
Annual issuance	\$2–3B	New investment in innovation & infrastructure
Federal fiscal cost	~\$50M/year	Tax credits + performance top-ups
GDP per capita impact	+0.2–0.5% annually	Equivalent to \$3–7B in new income
Federal ROI	\$1 → \$60–140 GDP	Strong leverage from modest cost

Pilot Portfolio (Year 2)

A \$500M pilot portfolio across 3–5 provinces could include:

- \$150M for rural and Indigenous broadband.
- \$120M for retrofits of schools and community centres.
- \$100M for innovation hubs and cultural–tech centres.
- \$80M for smart grid modernization.
- \$50M for digital permitting platforms.

Expected results: 150,000 households connected, 75 public facilities retrofitted, 5 innovation hubs launched, peak electricity demand cut by up to 15%, and average permitting timelines reduced by 40%.

Risk Management & Accountability

Investor Risk and Federal Safeguards

- The federal government provides only a partial guarantee, ensuring investors share risk.
- Provincial and municipal sponsors contribute capital, aligning incentives.
- Community bond tranches allow residents to share directly in outcomes.

Outcome-Linked Repayments

Federal payments flow only if outcomes are verified. Examples include:

- **Productivity:** higher local GDP per capita or SME digital adoption.
- **Efficiency:** shorter permitting timelines, reduced service costs.
- **Energy:** reduced consumption and emissions.
- **Equity:** expanded broadband access, Indigenous procurement shares.

If outcomes fall short, investors absorb losses.

Independent Verification

- Third-party evaluators (universities, engineering firms, auditors) certify results.
- Annual reports published on a national public dashboard.
- Standardized metrics prevent gaming of results.
- Clawbacks apply in cases of misreporting.

Bundling and Diversification

- Small projects bundled to reduce risk and attract institutional investors.
- Examples: five towns pool retrofits, or regional broadband aggregated into one issuance.

Political and Market Risk Mitigation

- **Cross-partisan appeal:** fiscal prudence for conservatives, climate and equity outcomes for progressives, autonomy for municipalities.
- **Investor appetite:** proven by Toronto's Social Debentures and CSI's Community Bonds.
- **Federal-provincial agreements:** define roles clearly and reduce jurisdictional conflict.

Political & Stakeholder Alignment

Cross-Partisan Appeal

- **Conservatives:** market-based, modest federal cost, outcome-linked accountability.
- **Progressives:** financing for green retrofits, Indigenous inclusion, and social innovation.
- **Municipal champions:** autonomy from grant cycles, local priority setting.

Municipal Governments

The Federation of Canadian Municipalities has long called for sustainable financing tools. DIBs:

- Unlock capital for projects beyond municipal tax capacity.
- Pool small municipalities into credible portfolios.
- Link outcomes to local priorities such as digital services or innovation hubs.

Provincial Governments

Provinces benefit from:

- Shared responsibility without bearing full risk.
- Agreements that clarify accountability.
- Flexibility to align projects with provincial goals.

Indigenous Governments

Indigenous governments gain direct access to financing for broadband, clean energy, cultural hubs, and climate-resilient infrastructure. The Advisory Panel ensures Indigenous voices are embedded in governance.

Investors and Financial Institutions

- Institutional investors gain a new ESG-aligned asset class.
- Retail investors gain access through Community Bonds.
- Impact investors value rigorous measurement and transparent reporting.

Civil Society and Public Support

- Environmental NGOs support green retrofits and resilience.
- Business groups benefit from reduced red tape and stronger local ecosystems.
- Citizens see visible benefits — faster services, greener buildings, new community spaces.

Comparative Advantage vs. Other Proposals

The Hunter Prize surfaced many bold ideas, but all face one barrier: financing. DIBs provide the platform to fund them.

- **Moonshot Zones** need capital for local infrastructure — DIBs provide it.
- **Productivity Commissions** generate insight — DIBs deliver implementation.
- **AI Deployment strategies** require digital and broadband foundations — DIBs finance those foundations.

Why DIBs Stand Out

1. **Pragmatic and scalable:** Built on proven Canadian models, pilot-ready within two years.
2. **Fiscally prudent:** \$50M federal cost leverages \$2–3B annually, with outcome-based safeguards.
3. **Inclusive:** Explicitly includes rural and Indigenous communities and allows local citizens to invest.
4. **Politically durable:** Broad coalition of support, transparent governance, outcome-driven accountability.

Conclusion

After nearly a decade of stagnant GDP per capita and rising costs, Canadians are seeking a solution that restores growth and opportunity without massive new taxes or deficits.

Digital & Innovation Bonds provide that solution. By combining federal credibility, provincial delivery, municipal innovation, Indigenous leadership, and investor capital, DIBs create a financing platform that:

- Mobilizes \$2–3 billion annually for productivity-enhancing projects.
- Costs the federal government just ~\$50 million per year.
- Funds broadband, smart grids, retrofits, digital platforms, and innovation hubs.
- Ensures rural, Indigenous, and smaller municipalities access the same capital as large cities.
- Builds political and social durability by appealing across partisan and stakeholder lines.

Most importantly, DIBs deliver tangible improvements: faster digital services, greener public buildings, connected communities, new spaces for innovation, and better opportunities for young Canadians. These are the building blocks of rising living standards.

With DIBs, Canada can break free of stagnation and enter a new era of productivity, innovation, and shared prosperity.

Amanda Shatzko is a BC elected leader, MFA board director, and PhD scholar recognized for advancing creative economic development and driving future-focused innovation in public leadership, governance, and policy.

The Hunter Prize for Public Policy aims to shake up Canadian policymaking by marshalling fresh ideas, energy, and voices to take on a clearly-defined “wicked problem” and improve the economic and social well-being of Canadians.