



Commercial retrofit financing

Ottawa pilot, built to scale



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Ottawa commercial retrofit financing pilot

Team

This report was developed as part of the Commercial Retrofit Financing Pilot, a collaborative initiative led by Hydro Ottawa, with support from the Government of Canada through Environment and Climate Change Canada's Deep Retrofit Accelerator Initiative (DRAI) for the Ottawa Retrofit Accelerator (ORA). This pilot was delivered in collaboration with the Climate Smart Buildings Alliance (CSBA), with analytical and advisory support from Deloitte.



Environment and
Climate Change Canada

Environnement et
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Hydro Ottawa is the local electricity distributor serving Ottawa and the surrounding region. Through its energy efficiency programs, technical support, and close relationships with commercial building owners, Hydro Ottawa plays a frontline role in enabling building retrofits and supporting the transition to lower-carbon, more efficient buildings.



Climate Smart Buildings Alliance (CSBA) is a national, non-profit industry alliance focused on accelerating decarbonization in the commercial building sector. CSBA convenes owners, utilities, financiers, governments, and solution providers to address systemic barriers and advance practical, scalable pathways for deep energy retrofits across Canada.

Deloitte.

Deloitte supported the pilot through research, analysis, and facilitation, drawing on expertise in climate and sustainability, real estate, and the financial system to translate findings into actionable design principles to support scalable retrofit financing and delivery.

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Objectives



Reveal the current commercial retrofit landscape and urgency by outlining the scale of the challenge, key barriers owners face, and why coordinated action is needed to accelerate retrofits.



Elevate owner and ecosystem insights to ground the case for change in real-world financing, data, and implementation constraints experienced by building owners and market actors.



Present actionable, scalable opportunities that can reduce friction across the owner retrofit journey, with a focus on implementation-ready design principles and near-term pathways for market transformation.



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Executive summary



Executive summary

Commercial building owners are not short on ambition when it comes to retrofits. What they are short on is clarity – clarity on how to move from intent to action, how to structure the business case, how financing really works in practice, and how to navigate a system that was never designed to work as a whole. This pilot set out to address that gap.

The friction in real decisions

Owners consistently described how difficult it is to get to a retrofit “yes.” The process is shaped by fragmented data, unclear underwriting expectations, changing incentives, and capital decisions that often fail to align with mortgage terms, lease structures, or equipment end of life.

Many owners already had audits, feasibility studies, and technical advice, yet still struggled to translate those inputs into decisions that lenders, utilities, and internal investment committees could confidently support.



Executive summary

This pilot moved beyond high-level diagnosis and into the mechanics of real decision-making. Through direct engagement with building owners and ecosystem actors, the work surfaced practical financing and implementation challenges that frequently slow or stop projects. Owners identified options they did not previously realize were available, including:

Options identified by owners:

-  **Stacking incentives and tax credits** and exploring alternative financing pathways.
-  **Clearer insight** into what different financiers value and why.
-  **Connections to relevant banking,** financing, and advisory pathways aligned with their retrofit priorities, helping convert momentum into concrete next steps.



Executive summary

Core issue & priorities

What emerged is a clear picture of the core issue holding the market back: not a lack of tools or programs, but **the absence of a shared, decision-grade foundation** that works across data, financing, incentives, and delivery. Rather than proposing new tools in isolation, the pilot examined what already exists, where duplication occurs, and how effort can be better directed. The opportunities identified are practical and interconnected, centered on decision-grade data, fit-for-purpose financing, effective concierge support, clearer incentive navigation, and targeted capacity building.

Looking ahead, progress does not require building everything at once. The fastest path forward is to focus on the fundamentals, **standardizing what matters for decisions, and reducing unnecessary rework** so that capital, incentives, and support can move earlier and faster.

Market alignment

This also requires **nudging the retrofit marketplace toward sharing clearer, earlier signals, so banks can evaluate retrofit pipelines more confidently, utilities can plan demand-side management (DSM) programs and incentive timing more effectively, and owners can build business cases with greater certainty around incentive eligibility and financing products.**

With this foundation in place, more complex financing structures and concierge models can scale with confidence. In doing so, the journey to a retrofit “yes” becomes less about effort and more about alignment.

Unlock capital at scale and move to action

Retrofits need to move from one-off projects to repeatable, infrastructure-aligned capital pathways with early signals, quantified risk and stakeholder-specific actions.

Considerations to unlock capital at scale

Move retrofit decisions upstream

- ① Signal retrofit intent 3-5 years ahead so banks, utilities and governments can plan around future-state risk before capital is locked.

Convert uncertainty into priced risk

- ② Translate technical uncertainty into decision-ready metrics such as cashflow variability, credit risk and timeline risk.

Create repeatable capital pathways

- ③ Define what makes projects bank-ready, including the minimum decision-grade data that consistently supports approvals.

Treat retrofits as infrastructure renewal

- ④ Plan retrofits as inevitable re-investment across asset lifecycles, not isolated opt-in capital projects.

Near-term call to action by stakeholder group

Real estate owners

Pilot the retrofit data snapshot on 1-2 assets; use it as a single source of truth across incentives, financing and utilities.

Banks / financiers

Publish a minimum retrofit underwriting intake and test acceptance of a standardized snapshot.

Utilities

Enable concierge capabilities; use early retrofit intent to align planning, demand-side management and incentives.

Investors

Define what makes a retrofit-ready asset and apply it in portfolio screening or owner engagement.

Tenants

Engage early with owners on operating cost impacts, comfort, disruption, timing and lease alignment.

Government

Align incentive rules with owner retrofit data; identify where viable projects fail on timing or documentation.

Industry associations

Build awareness, convene actors and support shared frameworks based on pilot outcomes.

Integrated retrofit delivery roadmap | Potential next steps

Four opportunities were identified to respond to the market gap. Scale requires a repeatable owner journey: standardize intake, convert uncertainty into priced risk, and build delivery capacity through shared tools and governance.

Key opportunities identified

1. Finance and banking solutions

Expand banking capabilities by training frontline banking staff and publishing clear requirements for owners to access streamlined, integrated financing options for retrofits (to reduce data fragmentation and integrate into existing mortgage packages).

2. Retrofit data snapshot

Streamlining/standardizing the definition of a deep retrofit, and the criteria for success, to create certainty, clarity, confidence, and consensus among stakeholders, enhancing retrofit bankability and simplifying implementation.

3. Concierge-style retrofit implementation platform

Create an end-to-end integrated platform that simplifies the entire retrofit journey, from incentive discovery, to vendor/financier matchmaking, and to project execution.

4. Capacity building

Develop educational curriculum and workforce training that aligns with evolving and future building performance and decarbonization needs, adopting an integrated systems approach.

Timeline		
0-6 months Mobilize	6-24 months Build and pilot	2+ years Scale and mature
- Advocate for regulatory capital relief from OSFI - Align banks on basic, initial required information from owners - Develop training materials for bank frontline staff on retrofits and its applications - Evaluate scale of business in existing buildings for banks to consider mortgage financing products that cater to retrofit consolidation	- Publish clear expectations for retrofit-financing applications for ones undertaking energy retrofit studies to understand bank requirements and socialize with owner leads/consultants - Roll out owner-facing education tools - Conduct outreach to owners - During mortgage reviews, annually collect data relevant to retrofit needs	- Mature standardized data sets, valuation practices, and underwriting frameworks - Scale financing pathways for widespread adoption
- Review existing frameworks and identify challenges with current data and business case models - Define key questions that need to be answered and a decision-grade retrofit snapshot for screening	- Convene cross-industry working groups - Define success criteria for various financial players (CFOs, asset managers, banks, government), baseline standard and KPIs - Develop data framework	- Roll out framework, early adoption by select owners and financial institutions - Refine based on user experience - Full market rollout
- Establish governance model and assign owner of concierge service - Identify key stakeholders and engage them for buy-in - Design the program: Put forward action plan for the unified platform	- Design the platform - Conduct cross-government policy mapping - Develop funding agreement - Build and pilot the platform; test with early owner groups	- Scale across jurisdictions - Integrate additional programs - Continually refine eligibility rules and guidance
Identify emerging skill paths needed for the future retrofit and performance economy	- Frame out curriculum needs and competency requirements - Develop specialized curriculum for different roles (technicians, system integrators, operators)	- Full collaboration across government, industry, and educators - Integrate building performance education into broader economic and workforce planning

Integrated retrofit delivery roadmap | Potential next steps

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Develop educational curriculum and workforce training that aligns with evolving and future building performance and decarbonization needs, adopting an integrated systems approach.

Timeline	0-6 months Mobilize	6-24 months Build and pilot	2+ years Scale and mature
1. Intake and data collection 	- Define a decision-grade retrofit snapshot for screening. - Capture owner goals, timing, asset age and mortgage constraints. - Assess skill gaps and existing training feedback.	- Align data to bank, owner, utility and incentive needs. - Set KPIs for CFOs, asset managers, banks and government. - Collect retrofit data during mortgage reviews.	- Maintain shared datasets, governance and stewardship. - Refine for adoption, privacy and interoperability.
2. Technical retrofit option generation 	- Review existing frameworks and current model gaps. - Assess market opportunity for retrofit financing products. - Identify emerging skill paths for the retrofit economy.	- Model scenarios on savings, capex, carbon and asset value. - Sequence measures around end-of-life, capital and mortgage timing. - Build tiered curriculum from basic to specialized roles.	- Mature valuation and underwriting frameworks. - Embed performance education into workforce planning.
3. Incentive navigation 	- Map incentive requirements, documentation and policy gaps. - Clarify owner timing and feasibility before capital locks.	- Use standard data to surface incentives and funding. - Offer concierge support on documentation, timing and tax credits. - Find funding for accessible training.	- Add programs over time. - Refine eligibility and guidance as programs change.
4. Match-making and packaging 	- Identify key stakeholders, partners and project lead. - Align owners, lenders and providers on what's needed.	- Match owners to lenders, insurers, utilities and contractors. - Produce standardized, lender-ready packages. - Connect learners with accredited trainers.	- Scale partner ecosystem across jurisdictions. - Use comparable data to improve financing efficiency.
5. Implementation and feedback 	- Set governance, action plan and delivery KPIs. - Confirm product readiness, demand and market capacity.	- Pilot the platform with early owner groups. - Deliver via vetted partners, playbooks and outcome-based contracts. - Track outcomes against shared KPIs.	- Feed outcomes back to reduce perceived risk. - Scale rollout; refine tools, standards and training.

Pilot context



The pilot imperative: Mobilizing deep energy retrofits at scale while unlocking value

Owners are stuck in a reactive retrofit cycle, where fragmented financing, unclear data, and capital timing barriers prevent deeper, more cost-effective upgrades.



The market context

Current landscape

- As the third largest emitting sector, buildings are a substantial source of Canada's operational GHG emissions (18%)¹, with much of the stock:
 - Aging and fossil-fuel dependent
 - Approaching major equipment end-of-life cycles
- Owners are operating in a more constrained environment:
 - Rising operating and energy costs
 - Tighter capital availability and competing investment priorities
 - Post-pandemic occupancy and revenue uncertainty
 - Increasing regulatory and performance expectations

Why retrofits are not scaling today

- Owners experience the retrofit journey as fragmented and difficult to navigate
- Financing options are disconnected from how owners actually deploy capital and often misaligned with mortgage structures and capital planning cycles
- Incentives and programs vary by jurisdiction and change frequently, require significant effort to interpret, stack, and time correctly
- Data challenges persist, with no consistent, decision-grade dataset that works for owners and lenders
- Lack of standardized underwriting and valuation methodologies
- Technical and financial information is rarely presented in bank-ready terms



A shift in Retrofit decision-making is needed

Owner response

- Owners' retrofit decisions are often deferred until equipment failure, tenant disruption or reliability risks emerge
- Minimal investments in measures like heat pumps are the norm over deep retrofits (e.g. full envelope upgrades). When action is taken, it often results in like-for-like replacements, while higher-performing, more energy efficient upgrades become a missed opportunity

Owners increasingly need retrofit financing solutions that work within incentive windows, tenant flow-through or cost-sharing mechanisms, existing mortgage structures, and solutions that align with capital planning cycles, and clearly translate energy and carbon benefits into financial outcomes they can act on.

Why this pilot

The **Ottawa Commercial Retrofit Financing Pilot** was designed to:

- Identify gaps in the current ecosystem from the owner perspective
- Understand how the business case, the technical feasibility, the necessary stakeholder alignment can all come together towards getting to a "yes" towards a deeper retrofit implementation
- The pilot focused on commercial office buildings, though findings may apply more broadly to other building types.

The goal was not to create new tools in isolation, but to define:

- Practical, implementation-ready design principles
- Opportunities that reduce friction and support retrofit activity at scale

Retrofit financing landscape

- Retrofit financing options vary widely by structure, risk transfer, and return expectations.
- For many owners, securing capital that fits their investment criteria is the primary driver for pursuing retrofit financing.
- Alternative financiers and grant programs may accept longer paybacks or higher risk, or reduce capital costs entirely, enabling projects that would not otherwise meet typical owner return thresholds.
- This can allow individual building retrofits within a portfolio to move forward, even where traditional owner-led investment would not.

	 Financing type	 Who takes on risk
Direct & policy incentives	Grants / rebates	Government / utility
	Tax credits / deductions	Government
	Performance-based incentives	Government / utility
Concessional & structured finance	Low-interest loans	Lender / government
	Blended public-private finance	Shared
	Green bonds / climate bonds	Beneficiary / underwriter / investor
	Revolving credit facility	Lender / government
Risk-transfer & service models	ESCO / performance contracts	ESCO
	Energy-as-a-service (EaaS)	Service provider
	Shared savings / pay-for-performance	Shared
	Third-party leasing	Leaser / owner
	Aggregators / platform models	Platform / partners
	Green leasing / energy-aligned leases	Landlord + tenant/ asset owner and lessee
	On-bill financing / utility DSM	Owner / utility
Repayment-linked & innovative delivery	Crowdfunding / platforms	Investors / platform
	Insurance-backed guarantees	Guarantor, insurer and beneficiary
	Emerging digital finance platforms	Platform / investors

A practical, owner-led approach to retrofit enablement

The pilot differentiates itself by grounding opportunity design in direct owner feedback, while simultaneously engaging financiers, utilities, and industry actors to assess what already exists, what overlaps, and what remains unresolved.



Owner barrier identification

Surfaced the financing, data, and decision-making barriers preventing commercial office building owners from advancing into deeper retrofits, including how existing energy audits, feasibility studies, and condition reports are used in practice. Engaged with 5 Ottawa-based building owners to gather detailed retrofit insights.

Ecosystem response

Engaged ecosystem stakeholders to assess how existing market actors, programs, and capital providers respond to owner needs, and where misalignments persist.

Opportunity development

Translated owner and ecosystem insights into a focused set of practical, implementation-ready opportunity areas.

Owner validation

Pressure-tested opportunities against owner realities to confirm relevance, usability, and decision-readiness.

Industry discovery

Reviewed current tools and programs to identify industry gaps and ensure program opportunities are adding value without overlap.

Insight synthesis and reporting

Integrated findings across owners, ecosystem actors, and market analysis into a consolidated set of insights, design principles, and near-term pathways documented in this report.

Owner insights



Owner testimonials

Direct engagement with commercial owners revealed practical constraints, evolving expectations, and the pillars that need to be resolved to accelerate retrofit implementation.

Decision-making around retrofits

"Generally speaking, it's much easier to get approval to **change something people can see**, not something they can't."

"We use the building condition reports [and energy audits] more for **timing** [of the retrofit], rather than the technical parts of it."

"[Energy audit] measures are categorized as short term, medium term and long term. And they are categorized according to the budget, which for some of them is huge, and for others is **low-hanging fruit**. So, we started with the short-term ones, like retro-commissioning for example."

Financial Considerations

"We're looking at **double digit returns** to make sense of a project." "Everything is **driven by IRR** at the end of the day."

"What would tip the scales would be [...] **grants**, and [...] **financing at 0%**."

"Interesting opportunities are like **capital leases** [...] Instead of a CapEx, it becomes an **operational cost** and then it ends up being **recoverable back to the tenants**."

"[Bank] wouldn't acknowledge the value of a solar project because it wasn't part of the permanent structure of the building, whereas another bank saw the value."

"We know that these are projects we want to execute on. I think **leveraging the Investment Tax Credits (ITCs)** do make [...] the retrofits make more sense when you're doing it as part of the life cycle placements strategy."

Tenant Dynamics

"If you've got a tenant that has a **sustainability component to their governance**, then that's obviously going to drive us towards investigating [a deeper retrofit]."

"There's no real benefit unless it makes financial sense. To make sense of those upgrades the **tenants have to be willing to pay more money**."

Fragmentation Challenges

"It's **hard to keep up** with government subsidies and special financing options."

"We **rely on our service delivery partners to stay up-to-date** on financing and incentives."

"It's so **fragmented** that like every institution has their own [financing solutions] and there's no one stop shop where you can just go to one place and say like these are the best and this is what you do [...] **We don't have the bandwidth or capacity** to go out and figure those out."

What we heard from owners (1/5)

Ownership structure and decision authority materially shape retrofit outcomes, with portfolio and owner-operators better positioned to plan and finance upgrades than individually owned or passively managed assets.

1. Owner structure and services

Owner profile and ownership structure shape retrofit decisions.

- **Individually owned assets** are typically evaluated as standalone investments with separate mortgages and incentive eligibility, limiting portfolio-level planning. Properties were owned through varied investment structures—including limited partnerships, joint ventures, and syndications—often with 5–35 investors per property.
- **Corporate or portfolio owners** are structuring retrofit sequencing and access to financing differently. They are occasionally eligible for different tax incentives that other unincorporated owners do not have access to (e.g., Investment Tax Credits).

Decision-making power also varies by operating model.

- Owners that **directly manage buildings** (e.g., HVAC, maintenance, tenant services) have greater ability to plan and implement retrofits
- **Asset managers or passive owners**, focused primarily on capital stewardship for investors, often have limited authority to initiate upgrades beyond major capital events, as their main role is to preserve and manage investor capital.

Retrofit costs varied between \$1M and up to \$15M, with most owners wanting to start off with a \$1-2M retrofit range.

	Ownership	# of properties	Area of properties (in NCR)
Owner A	Private	20+	0.8M ft ²
Owner B	Publicly listed	98	14.4M ft ² (in ON)
Owner C	Private	40+	3M ft ²
Owner D	Private	35	1.3M ft ²
Owner E	Publicly listed	Campus-style	0.4M ft ²



Owner spotlight

Owner C operates through limited partnerships, joint ventures, and syndicated ownership structures, with each property typically involving 5–35 investors.

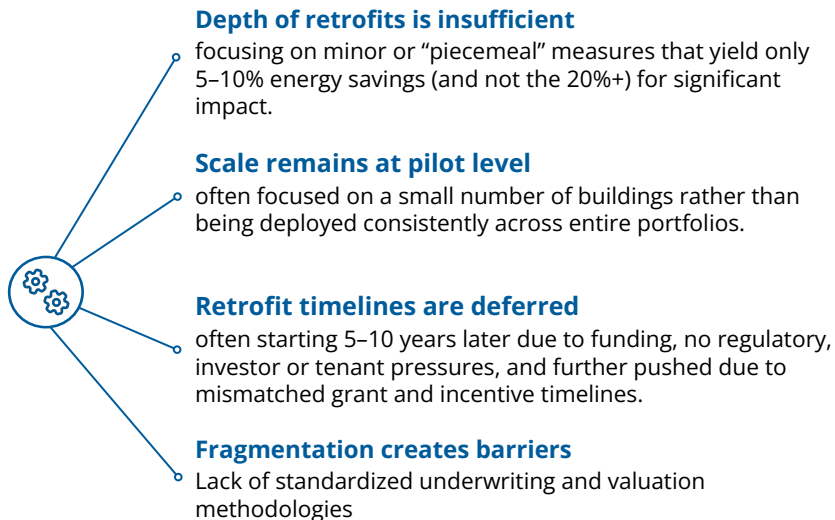
What we heard from owners (2/5)

Driven by financing fragmentation, limited external pressure, and competing capital priorities, owners report that retrofits are typically delayed, narrowly scoped, and affect few assets.



2. Key challenges of the retrofit industry

Retrofit action is constrained by insufficient depth, limited scale, delayed timelines, and fragmented delivery.



3. Stakeholders that directly influence scale, speed and depth of retrofits

Government regulations and incentives, along with tenant and investor expectations, directly shape the constraints and levers that influence owner retrofit decisions.



Government: Through regulations (energy steps codes, building performance standards) and incentives (grants, low-interest financing, CIB-aggregators)



Tenants: Because they control occupancy and lease length and can favour energy-efficient, cost-competitive buildings over higher-cost alternatives



Investors: By channeling capital towards strategic assets with deeper retrofits

What we heard from owners (3/5)

An owner's retrofit decision is shaped by multiple factors, including total cost of ownership, financial returns, and cash flow, and must also align with mortgage timing, incentive eligibility, equipment replacement cycles, and lease structures.



4. How owners structure the business case calculation to justify retrofits

Owners prioritize cash-flow-positive retrofits that work over the full equipment life and within tenant recovery constraints, rather than chasing upfront cost savings or future valuation gains.

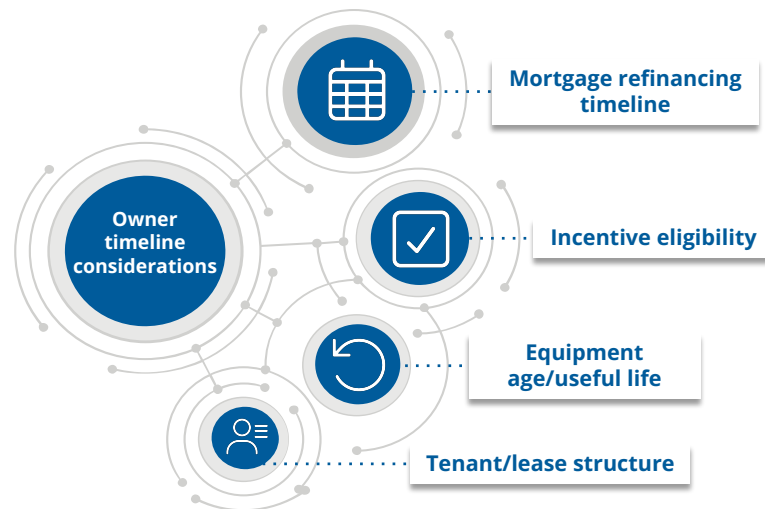
Business case considerations

- 1 Move away from sole focus on capital cost.
- 2 Owners assess the total cost of ownership over the expected life of the equipment, which determines whether a retrofit is financially neutral or advantageous compared to a like-for-like replacement.
- 3 Upgrades must deliver positive annual returns through tenant cost flow-through, while respecting caps on annual rent, since tenants see operational benefits.
- 4 Cash flow is prioritized over speculative property value increases because value gains are only realized upon sale.



5. What needs to align for owners to act on retrofits

Owners move forward with retrofits only when financing timing, incentive eligibility, equipment life cycles, and tenant lease structures align with their internal capital planning timeline.



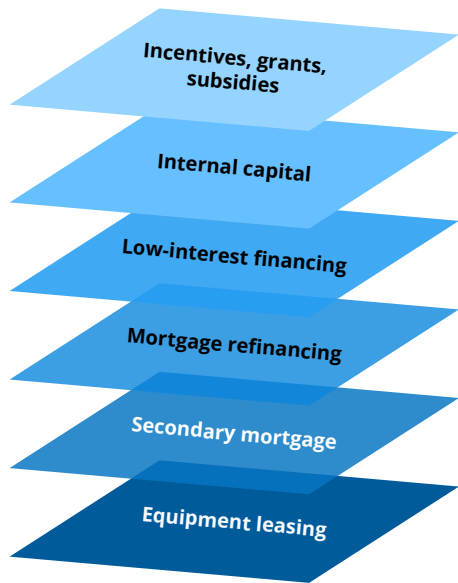
What we heard from owners (4/5)

Owners often reported that they undergo considerable effort to secure the optimal financing stack for retrofits, typically prioritizing grants and incentives, utilizing internal capital when available, and resorting to debt as a final option.



6. Owner's perspective on financing stack¹

Owners consistently described a tiered financing sequence, minimizing cost and risk before taking on debts.



- 1 Incentives, grants, subsidies:** Owners typically start by stacking all available incentives to reduce upfront costs. While stacking is often possible (e.g., combining investment tax credits with provincial incentives), not all owners were aware this could be done prior to the pilot.
- 2 Self financing (internal capital):** Owners use in-house funds where possible to retain flexibility. This is typically leveraged for smaller retrofit projects.
- 3 Low-interest financing:** Owners consider this when eligible, available, and relatively straightforward to access (e.g., Canada Infrastructure Bank - CIB). Not all mid-market owners or retrofit projects' capital costs are eligible.
- 4 Mortgage refinancing:** Pursued when retrofit timelines align with mortgage renewal and financing can be secured against the property, typically through the primary lender.
- 5 Secondary mortgage:** Used selectively, as some lenders are less willing to take a secondary position; this often drives owners back to their primary financier.
- 6 Equipment leasing or alternative financial products:** Can also be considered at prior steps, though often at higher (or varying) interest rates.

1. This sequence reflects common owner practices observed through the pilot and is not prescriptive or universal. Financing approaches vary by ownership structure, asset type, market conditions, and project specifics.

What we heard from owners (5/5)

Beyond cost of capital, retrofit financing structures influence balance sheet treatment, borrowing capacity, and future access to credit. Tools such as off-balance-sheet financing, mezzanine capital, and non-title security mechanisms allow owners to scale retrofits while balancing leverage, dilution, and risk exposure.



7. Debt versus equity, and other financing considerations

The type of financing influences the owners' access to funds and the extent of risks they are willing to take:

- Beyond interest rates and payback periods, retrofit financing structures materially affect an owner's borrowing capacity, balance sheet flexibility, and risk exposure. Different financiers can deliver distinct benefits depending on how capital is structured and secured, with implications that extend well beyond the retrofit project itself.
- Some financing approaches enable **off-balance-sheet treatment**, allowing assets or obligations to be structured without immediately recording corresponding liabilities on the primary balance sheet. When used appropriately, this can preserve key financial ratios—such as debt-to-equity—helping organizations maintain borrowing capacity and appear less leveraged to lenders and investors. For real estate owners, this can translate into easier access to future credit, more favourable loan terms, and improved financial optionality for subsequent capital programs.
- The **choice between debt and equity** is also foundational. Debt financing preserves ownership but requires predictable cash flows to service interest and principal. Equity financing reduces repayment pressure but dilutes ownership and investor returns.
- **Mezzanine financing**, which sits between senior debt and equity, is increasingly used to bridge financing gaps when traditional lenders reach exposure limits. While more expensive, mezzanine structures can reduce immediate equity dilution, offer flexible repayment, and—in some cases—be treated more favourably in leverage calculations.
- Finally, **security structures matter**. Instruments such as springing guarantees or contingent mortgages allow lenders to mitigate risk without immediately registering a charge on title. These mechanisms typically remain dormant unless specific triggers occur, preserving title flexibility for owners while still providing lender protection. In some cases, **personal guarantees** can be used in lieu of real-estate charges, relying on contractual obligations rather than property encumbrances.
- Collectively, these financing considerations directly influence an owner's ability to scale retrofit activity while managing balance sheet constraints, risk tolerance, and long-term capital strategy.

Direct response to owners needs: Opportunities to unlock commercial retrofits

These opportunities focus on the core enablers owners need to move from intent to action: decision-grade data, fit-for-purpose financing, effective concierge support, clear incentive navigation, and targeted capacity building. See [Appendix A](#) for detailed descriptions of the below opportunities.

Commercial owner-identified market needs

Owner A	- Low-interest, less restrictive financing. - Clear guidance on subsidies/investment tax credits eligibility. - Integrated retrofit delivery partners. - Support for feasibility studies and re-commissioning programs to optimize existing equipment.
Owner B	- Streamlined access to low-interest capital and grants for large retrofits. - Lease reforms to enable tenant cost-sharing. - Visibility into low-carbon district energy system rollout.
Owner C	- Centralized financing platform to reduce market fragmentation. - Outcome-based incentives (e.g., sliding-scale utility energy pricing). - Targeted technician education to drive bottom-up adoption.
Owner D	- Standardized valuation/recognition of retrofit benefits (for resale and tenant cost-sharing). - Grants or zero/low-interest financing, and financing support for office-to-residential conversions.
Owner E	- Innovative engineering solutions for 24/7 critical environments (labs, data centers to resolve for heat recovery, electrification, energy management) while meeting 2030 short-term decarbonization targets. - Clear access to subsidies and grants.

Key opportunities identified



1. Finance and banking solutions

Expand banking capabilities by training frontline banking staff and publishing clear requirements for owners to access streamlined, integrated financing options for retrofits (to reduce data fragmentation and integrate into existing mortgage packages).



2. Retrofit data snapshot

Streamlining/standardizing the definition of a deep retrofit, and the criteria for success, to create certainty, clarity, confidence, and consensus among stakeholders, enhancing retrofit bankability and simplifying implementation.



3. Concierge-style retrofit implementation platform

Create an end-to-end integrated platform that simplifies the entire retrofit journey, from incentive discovery, to vendor/financier matchmaking, and to project execution.



4. Capacity building

Develop educational curriculum and workforce training that aligns with evolving and future building performance and decarbonization needs, adopting an integrated systems approach.

**Opportunity
development**

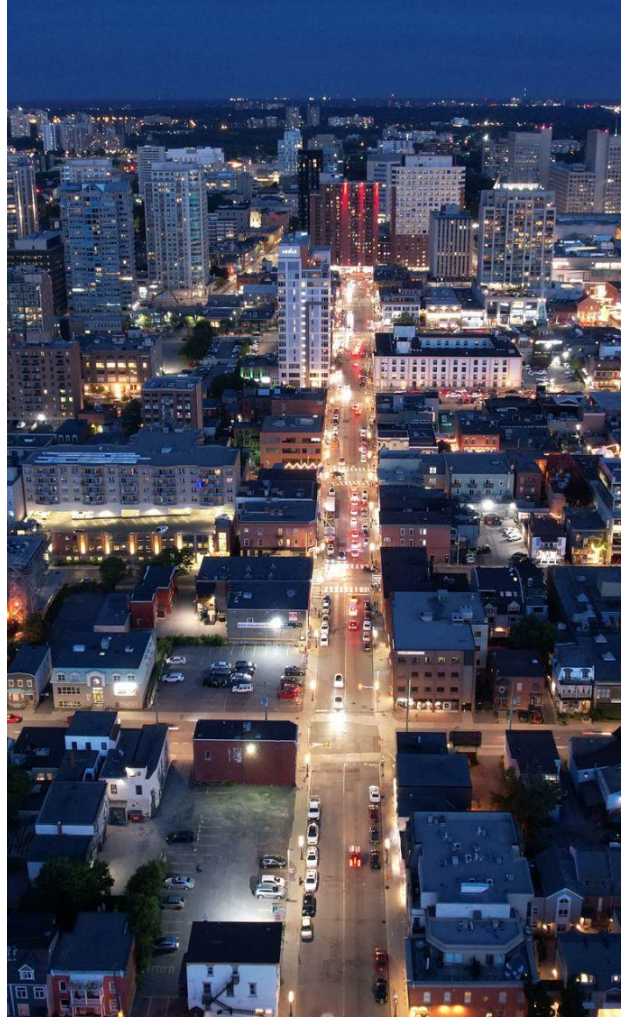


The retrofit path to a 'yes' is bumpy – These insights are about smoothing the road

The pilot combined targeted owner engagement with a parallel ecosystem scan to identify practical opportunities that can reduce financing, data, and implementation barriers to commercial building retrofits.

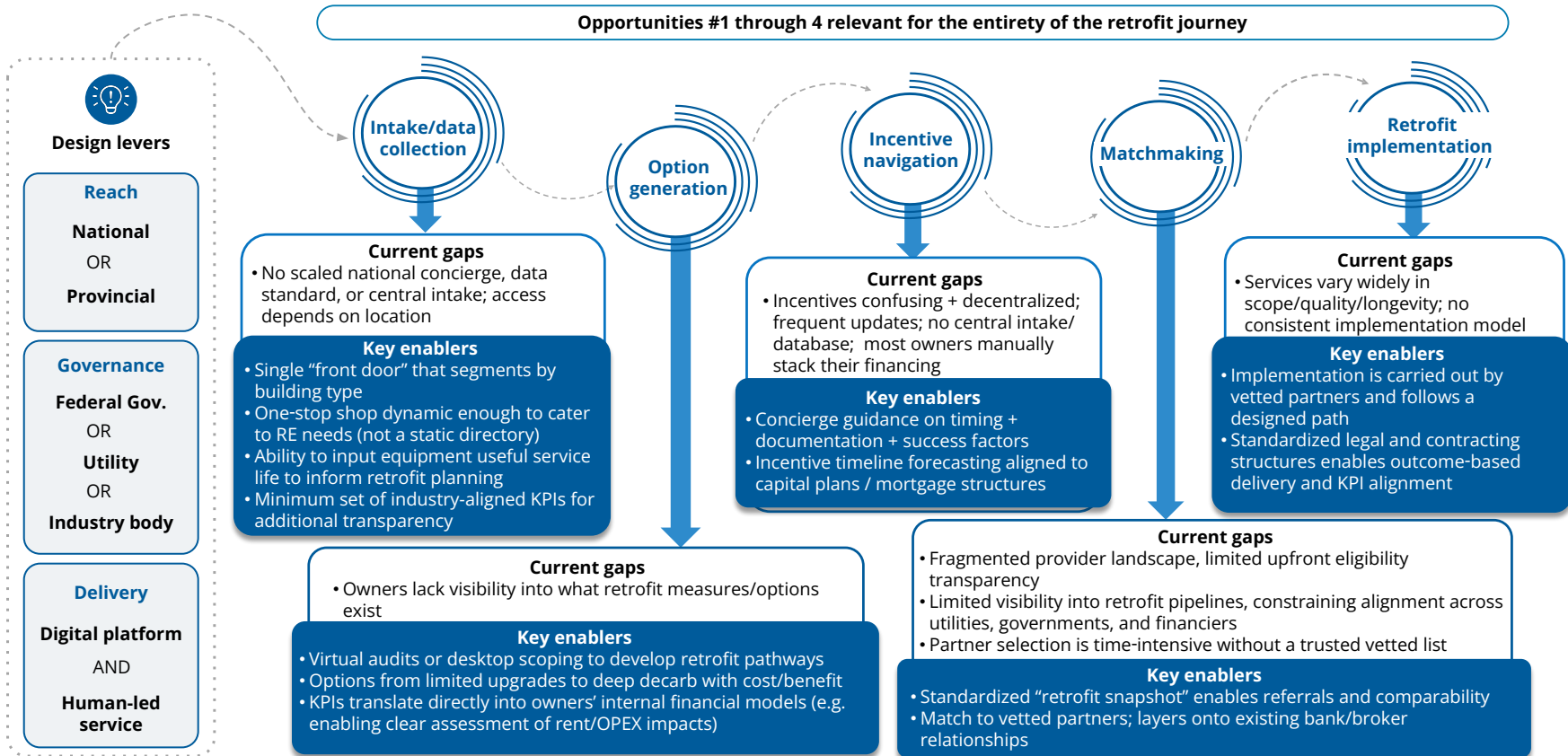
Today, most actors are planning with partial information. Banks evaluate retrofit opportunities deal-by-deal without visibility into future project pipelines, utility demand-side management (DSM) programs vary significantly across jurisdictions and can change on short notice. Enhancing information-sharing across the industry is a key piece to this puzzle.

The following four opportunities are interdependent by design. The report treats overlap as a strength, while assigning clear primary ownership to reduce duplication and improve coordination across the retrofit journey.



Closing gaps across the owner retrofit journey

Building owners face a fragmented retrofit journey, with gaps from initial data intake through implementation. The pilot's opportunities can help close these gaps and create a more streamlined, supported owner journey.



Many tools exist along the retrofit journey, but critical gaps limit scale

The following landscape scan demonstrates where existing tools help, and where gaps persist, across opportunities.

See Appendix B for further details. Overall, the retrofit data snapshot (opportunity #2) offers a low-effort foundation, while financing (#1) and concierge (#3) solutions will require higher effort to deploy retrofits at scale.

Organization ¹	Tools and Resources	Opportunity #			
		①	②	③	④ ²
Natural Resources Canada (NRCAN)	NRCAN Retrofit Hub				
	Deep Retrofit Accelerator Initiative (DRAI)				
	ENERGY STAR Portfolio Manager (developed by the US EPA)				
	Retrofit Toolkit (in development)				
Business Development Bank of Canada	Buildings Retrofit Savings Calculator				
Province of British Columbia	CleanBC Better building incentives guide and search tool				
City of Toronto	Better Buildings Partnership (BBP)				
	Net Zero Homes & Buildings program and retrofit guides				
Toronto 2030 District / District 2030	District 2030 Net Zero Pathways Tool				
The Atmospheric Fund (TAF)	The Case for Deep Retrofits				
	TAF's Retrofit Accelerator				
Halifax Climate Investment, Innovation and Impact Fund (HCi3)	HCi3 Fund – Retrofit Financing Resources				
Zero Emissions Innovation Centre (ZEIC)	Building to Electrification Coalition: BC Commercial Building Electrification Guide				
	Retrofit Financing: A Guide for Commercial Building Owners				
	Retrofit Accelerator				
Landlord BC and FRESCO	Business Case for Retrofits Tool (in development)				
Affine Climate	Banking on Buildings: Financing Solution				
Rank		2	1	3	4

Insights

② Retrofit data snapshot

Strong market coverage and existing tools make a common data framework low effort and high impact.

① Finance & banking solutions

Fewer tools require medium effort, with high upside if banks align underwriting standards for retrofits.

③ Concierge retrofit implementation platform

Promising potential but harder to scale due to multi-service workflows and diverse owner requirements, and regional/ programmatic differences.

Legend

① Finance and banking solutions

② Retrofit data snapshot

③ Concierge platform

④ Capacity building

Tools within the Opportunity scored above average for relevance

- The following is a non-exhaustive list of tools and resources available.
- Opportunity 4 (Capacity Building) expected to happen as a result of the development of Opportunities 1, 2 & 3.

Opportunity 1: Finance and banking solutions | Insights

Retrofit financing options remain fragmented and niche, with no single, comprehensive offering available today. Owners emphasized that any viable solution must align with how they actually finance projects in practice.

Industry insights

Retrofit financing exists, but fragmentation in lending practices, limited transparency, high upfront costs, and misaligned incentives continue to weaken financing certainty for owners.



Current state

- **Green and sustainability-linked lending** is available in the market, though it often appears fragmented and bespoke. Retrofit projects are commonly evaluated using conventional real-estate credit and collateral frameworks, rather than through dedicated retrofit financing products.
- **Building owners** frequently rely first on grants, rebates, tax credits, and internal capital, with external financing explored where additional capital is required.



Gaps

- **Retrofit lending expertise** is not always consistently embedded at the relationship or account-manager level where financing decisions are shaped, with **limited transparency** on underwriting criteria and variation across banks in how retrofit measures are valued (e.g., differing views on retrofit technologies, or no value attribution to retrofits).
- **Upfront project development costs** remain a barrier for some owners, particularly smaller or lower-resourced organizations.
- **Fragmented and time-bound** incentives/tax credits weaken financing certainty, as eligibility and expiry timelines are difficult to interpret.

Owner insights

Effective retrofit financing depends on clear bank signals, planning-aligned and stackable financing structures, and well-equipped account managers.



Key enablers for opportunity success

- **Bank signals** are needed to ensure value of retrofit measures are consistently recognized in lending decisions, with retrofit benefits included as lender-relevant metrics.
- **Account managers** that are well versed in understanding how different technologies and systems (e.g., HVAC) impact performance, thermal comfort, etc., in a way that can augment building value.
- **Cost-recovery feasibility** to estimate if owners can flow through costs via operations, leases, or asset strategies to its tenants.
- **Stackable solutions** that compliment equipment, lease and/or mortgage renewal timelines, and that maximize tax credit and incentive stacking prior to self-financing or seeking more debt.



Implementation considerations

- **Internal champions** play a critical coordination role, managing many individualized, relationship-based conversations. The cumulative effort required is substantial, highlighting the value of solutions that reduce repetition and coordination burden.
- Some **lower-cost financing channels** may be accessible only under specific lending or mortgage arrangements, which can constrain options and lead owners to explore alternative or secondary financing sources.

Opportunity 2: Retrofit data snapshot | Insights

The lack of common, decision-grade data standard is a major barrier to scaling commercial retrofits. A standardized, planning-aligned KPI set would improve comparability, reduce reporting burden, and accelerate decision-making.

Industry insights

While benchmarking and tracking tools are widespread, the lack of a standardized, lender-ready data framework continues to limit comparability, decision-readiness, and financing alignment.



Current state

- **Benchmarking tools for owners and investors** are well established, commonly used to track asset- and portfolio-level ESG, climate, and performance reporting.
- Retrofit accelerator programs track **pre-retrofit activities** through monitoring number/type of participating buildings, retrofit stage, geographic coverage, and potential savings.
- Incentive programs through utilities or government monitor **actual retrofit implementation** for technologies they subsidize but have little insight into decision drivers for drivers within organizations.



Gaps

- A **standardized, lender-ready retrofit package** does not appear to be widely adopted. There is limited evidence of a common set of metrics, requirements, or checklists that owners, consultants, and lenders can consistently rely on.
- **Energy consumption data access** remains fragmented. Requirements to grant owners' access to data vary widely across jurisdictions and privacy constraints restrict utilities from disclosing information broadly.
- **Inconsistent and non-lender-ready assumptions** across retrofit studies/incentive applications (i.e., differences in cost treatment, measure bundling, equipment-age accounting) limit comparability despite existing frameworks (e.g., ASHRAE 211).

Owner insights

Owners emphasized that decision-grade, planning-aligned data, supported by flexible KPIs, verification, and trusted governance, is essential to enable confident retrofit investment without increasing reporting burden.



Key enablers for opportunity success

- **Decision-grade data in a high-quality deliverable**, covering key metrics (i.e., baseline, cashflow, utility/GHG impacts, operating cost impacts, NOI, equipment age, lease structure, mortgage timeline).
- **Comprehensive, flexible KPI sets** that reflect varied owner/investor expectations (operations, finance, sustainability).
- **Planning-aligned inputs** to overlay timelines of incentives, mortgage renewal, equipment upgrade needs and tenant lease to translate directly into internal financial models.
- **Post-retrofit verification** to measure and attribute as-built savings to augment confidence in future retrofit investments.



Implementation considerations

- **Reporting burden** if data template is overly complex.
- **Progress is constrained by resources**, as individuals are relied upon to navigate extensive internal/external requirements. Trusted advisors can help mitigate this and provide more decision-ready data.
- Owners are willing to share limited, high-level data only if it is **tightly governed and access-controlled**; concerns about asset sales and visibility into replacement timelines remain a key barrier.

Opportunity 3: Concierge-style retrofit implementation platform | Insights

While concierge-style retrofit support exists today, it is unevenly accessible, and difficult to scale, highlighting the need for a coordinated technology-enabled platform and human-led service that simplifies incentives, financing, technical and contractual retrofit implementation support.

Industry insights

Current support is fragmented – tools and expertise exist, but lack a scaled, inclusive, and finance-integrated concierge model to support owners end-to-end.



Current state

- **A public retrofit hub** acts as a national, web-based information platform that aggregates retrofit tools, standards, funding programs, guidance, and potential connections with delivery partners, rather than offering direct concierge services.
- **Professional services firms** provide case-specific advisory and implementation support beyond audits, typically for well-resourced owners.
- **Regional retrofit accelerators** exist, specializing in support on pre-retrofit phases, with lower focus on financing and implementation support.



Gaps

- **No scaled regional/national concierge model;** support remains regional, program-specific, building-type specific, and reliant on grant funding.
- **Limited bank involvement** in concierge delivery, despite critical role in financing larger retrofit projects.

Owner insights

A successful concierge model depends on human-led, neutral, and trusted delivery that simplifies eligibility and incentive complexity while avoiding user experience (UX) overload and reinforcing existing owner relationships. A concierge model is only successful if it can bridge the technical and financial needs.



Key enablers for opportunity success

- **Human-led, technology-enabled** service offerings available for owners without in-house capacity or are not data-ready, to reduce burden on “internal champions”.
- **Operate as a national marketplace with local reality**, with a single and neutral national entry point while embedding local execution constraints.
- **Eligibility-driven matching** that immediately filters and yields incentives, financing, and technical partners discovery as curated results based on inputted project basics (e.g., contract type, financial constraints, jurisdiction).
- **Forward-looking incentive planning** shown across multiple years (owners noted incentives often expire before project approval and can change monthly). This also can support policy makers plan and scale incentives for the potential pipeline of known projects.



Implementation considerations

- Platform ownership should be neutral to avoid **bias** or **reliance on a single partner**.
- Owners must be **data-ready** with the required inputs to engage with a concierge platform.
- **UX overload** through availability of many programs with little tailoring can recreate further fragmentation. Also, government web standards may influence delivery flexibility, pointing to the potential benefit of an alternative delivery lead.
- Owners trust long-standing contacts who know their buildings well. A platform must earn **comparable trust** to encourage owners to engage alongside – or instead of – existing partners.

Opportunity 4: Capacity Building | Insights

Limited retrofit literacy across owners, lenders, and service providers highlights the needs for an interdisciplinary targeted and practical capacity building approach, with role-specific, decision-ready training and tools.

Industry insights

Capacity-building¹ efforts remain patchy, with no coordinated pathway to equip owners, operators, financiers, and delivery partners with the skills required for next-generation retrofit delivery.



Current state

- **Targeted training programs** support specific audiences but are limited.
- **Webinars and practical guides** from public and non-profit actors offer broad education on incentives, retrofit planning, and implementation considerations.

There's lots of retrofit-related education offered but mostly [for those] at the executive level. Education has to come in at the building tech level as well, bringing some of those real-life solutions that are happening in other places and making them tangible for frontline staff.

- Real estate owner's perspective



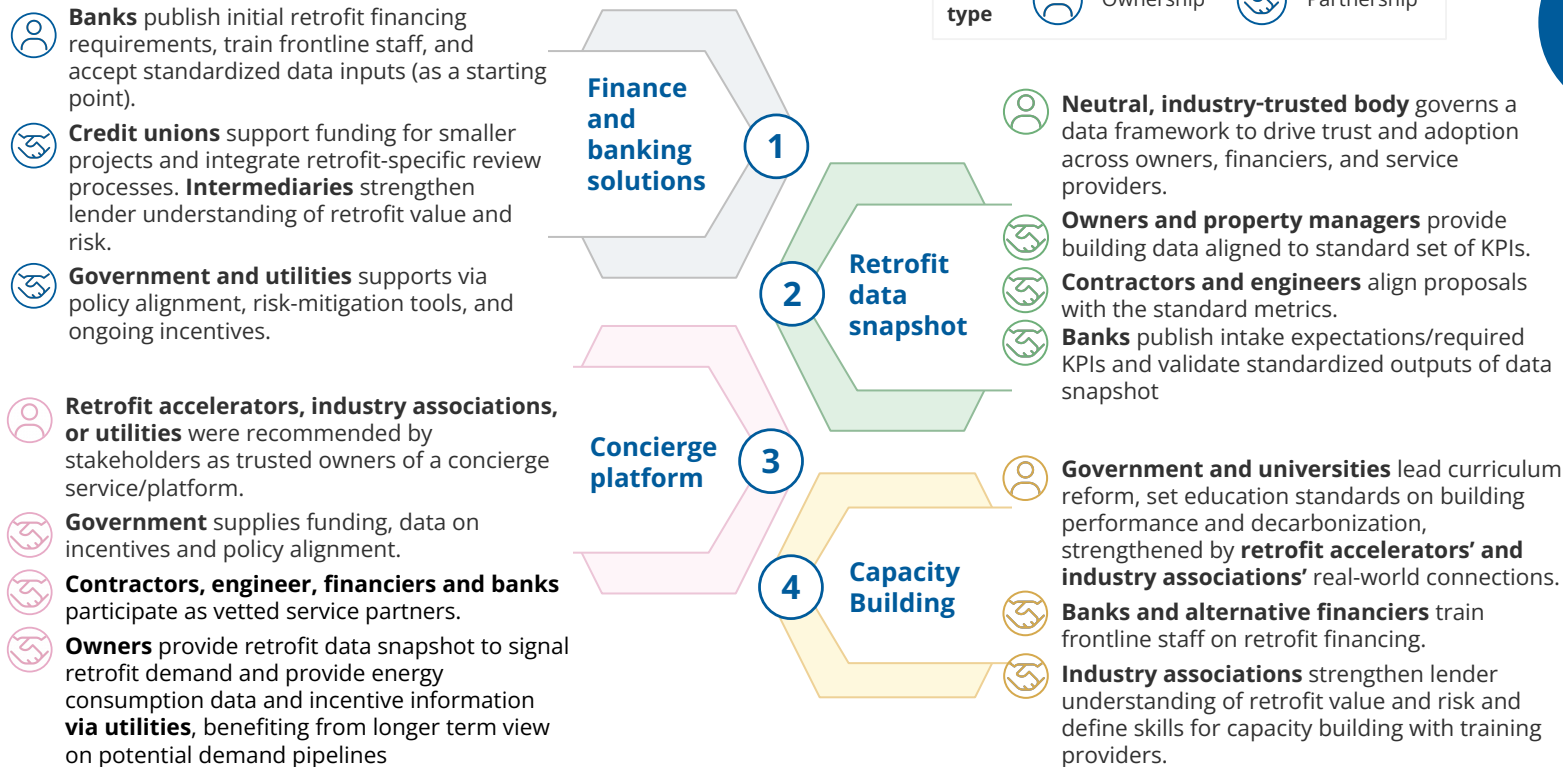
Gaps

- **No national, tiered training pathway** spanning owners, lenders, engineers, contractors and building managers across retrofit journey. Current curricula have not kept pace with the skills required for next-generation retrofit delivery.
- **Limited retrofit literacy** among bank staff, reinforcing conservative underwriting and risk aversion.
- **Asset managers default to incremental or like-for-like upgrades**, rather than electrification or deeper retrofits.
- **Uneven contractor and engineering training** in decarbonization, leading to variable quality and ambition of retrofit proposals.



Opportunities are people-enabled through system-wide and distinct roles

Across these opportunities, core roles recur among banks, government, utilities, industry associations, owners, and service providers, while responsibility and leadership differ by opportunity.



Common process considerations support delivery across opportunities (1/2)

Delivering an enhanced owner retrofit journey, spanning intake and data collection to implementation, relies on a set of shared process-related building blocks across opportunities.



1. Intake and data collection

- ① Define a **minimum, decision-grade intake**
- ② **dataset** (a “retrofit snapshot”) for consistent and comparable screening (e.g., baseline energy, asset age, capital plan timing, ownership structure, existing mortgage constraints)
- ③ Capture decision context needed for timing/feasibility (e.g., goals, capital plan timing, equipment end-of-life, existing system constraints) and segment by building type to tailor outputs (e.g., options for incentives, partners, financing) and capture project goals
- ④ Assess capability/skill gaps and catalogue existing training and user feedback on gaps



2. Technical retrofit option generation

- ① Generate retrofit scenarios that bundle decarbonization measures and model financial performance, asset value, and carbon impacts using a **unified model and common assumptions** for savings, capex, carbon scenarios. Financing scenarios should accommodate existing capital plans, mortgage constraints and portfolio attributes.
- ②
- ③ Use virtual or real audits or desktop scoping to **develop practical retrofit pathways**, sequencing measures around equipment end-of-life and capital timing, providing options (from limited upgrades to deep decarbonization), with cost/benefit analysis and financial metrics
- ④ Develop tiered curriculum (basic to specialized)



Process



Opportunity

① Finance and banking solutions

② Retrofit data snapshot

③ Concierge platform

④ Capacity building

Common process considerations support delivery across opportunities (2/2)

Delivering an enhanced owner retrofit journey, spanning intake and data collection to implementation, relies on a set of shared process-related building blocks across opportunities.



3. Incentive navigation

- ② Enable owners to enter standard data into a system that identifies applicable incentives, reflecting real-time availability/expiry, recognizing that programs change rapidly
- ③ Provide additional support to owners (i.e., through a concierge advisor) to help identify applicable incentives and investment tax credits and clarify timing, documentation, and factors for successful applications. Incentive timeline forecasting should align to owners' capital plans and mortgage structures
- ① Ensure financing options compliment how owners stack their financing (incentives first, external debt last)

Identify funding sources to make training accessible (e.g., (government skills programs, bank funded training, employer contributions)



4. Matchmaking

- ① Use standardized snapshots/datasets to match partners, enabling lenders, insurers, and contractors to use comparable datasets to streamline financing and proposal development. Provide stakeholder-specific views (i.e., high-level data for executives)
- ② Produce standardized, lender-ready packaging and, where possible, augment (not replace) existing bank/broker relationships
- ④ Connect learners to accredited trainers and intermediaries



5. Implementation

- ③ Deliver through vetted partners and follow a defined pathway; where useful, use standard contracting structures to enable outcome-based delivery and KPI alignment
- ① Track outcomes using shared KPIs (energy/GHG/ cost, etc.) and feed results back to refine assumptions and reduce perceived risk over time
- ② Provide practical training (e.g., (playbooks, checklists, vendor lists), and enablement tools for frontline staff. Track outcomes and scaling over time



Opportunity

- ① Finance and banking solutions
- ② Retrofit data snapshot
- ③ Concierge platform
- ④ Capacity building

Technology, tools and resources can enhance opportunity roll-out

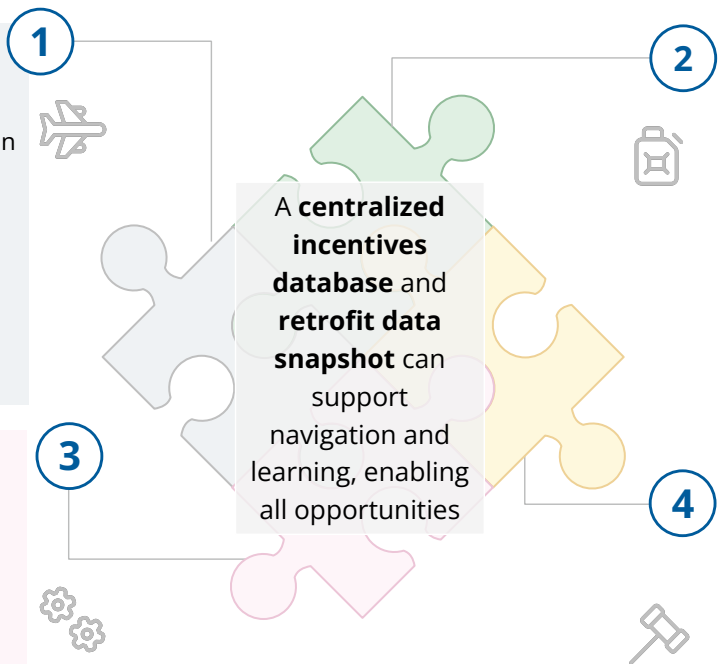
Technology enablers can strengthen the implementation of the opportunities by improving usability, consistency, and decision-readiness, without being prerequisites for action.

Finance and banking solutions

- Cashflow and scenario engine that models cashflow, tests compliance (e.g. building performance standards), penalties and/or carbon price/regulatory futures, and capex/phasing scenarios to augment option generation processes.
- A retrofit underwriting checklist to standardize lender/intermediary requirements and KPIs for bankability.

Concierge platform

- Centralized concierge portal with workflow engine, providing consistently up-to-date data, incentive/financing guidance, potential technical and financing partners, business case support, and tailored retrofit implementation pathways.
- AI-supported data consolidation, incentive mapping, and reporting automation (e.g. one-time information entry to apply for multiple incentive programs).
- Optional is to consider virtual audits in lieu of onsite audits as a first planning step.



Retrofit data snapshot

- KPI checklist and/or spreadsheet with built in output formula generation based on all the relevant decision-making KPIs to unify scenario modelling and standardized business case analyses.
- Optional: Automated extraction of building audit data to generate the key KPIs required for the retrofit data snapshot.

Capacity Building

- Training and certification platforms for retrofit finance and decarbonization.
- Central resource library with templates, checklists, underwriting guides, and curated toolkits.



Opportunity

①

Finance and banking solutions

②

Retrofit data snapshot

③

Concierge platform

④

Capacity building

What to do next?



Considerations to unlock capital at scale

System-level shifts are required to unlock retrofit capital at scale. Moving decisions earlier, translating uncertainty into priced risk, and shifting from one-off programs toward repeatable, infrastructure-aligned pathways can address why retrofits stall today and what must change to enable consistent, scalable investment.

1

Move retrofit decisions upstream, before capital is locked

Enable early-signal retrofit intent so **banks** underwrite future-state risk, not only as-built. If owners signal retrofit plans in 3-5 years, this can inform utility load forecasts, bank product design, and government incentive phasing.

2

Convert retrofit uncertainty into priced risk

Translate technical uncertainty of retrofit projects into **quantifiable metrics** (such as cashflow variability, credit risk, and timeline risk) that decision-makers can act on. Standardized risk evaluation can help viable projects clear internal approval and financing hurdles more predictably.

3

Shift from episodic programs to repeatable capital pathways

Move beyond one-off pilots by defining what **enables retrofit projects to attain financing** (i.e., what “bank-ready” means, identifying the minimum, decision-grade data that consistently moves approvals). A repeatable process reduces friction across the retrofit process, accelerates approvals and enables scale.

4

Treat retrofits as infrastructure renewal that unlocks value, not piecemeal projects

Most retrofits are still treated as one-off capital projects, with isolated business cases and approvals. That approach misaligns with how buildings actually operate. Buildings are long-lived infrastructure assets with predictable reinvestment cycles, staggered system replacements, and periodic refinancing and lease resets. Retrofits are not exceptional projects — they are inevitable reinvestments that must be planned and sequenced, not opted into.



What to do next?

Call to action for key stakeholders

Moving from insight to action, the table below outlines the near-term actions for each stakeholder group, highlighting both what to do next and why it matters.



Real estate owners

Banks / financiers

Utilities

Investors

Tenants

Government

Industry associations

Actionable next steps

Pilot a Retrofit Data Snapshot on 1–2 assets to test whether it reduces re-work across incentives, financing, and utilities; use it as a single source of truth internally.

Publish a minimum retrofit underwriting intake (what data is required, what is optional) and test acceptance of a standardized snapshot.

Enable concierge capabilities by working closely with regulators. Use early retrofit intent signals to **align with non-wire solutions, demand-side management (DSM)**, incentive planning and inform to distribution system planning.

Define and communicate what constitutes a “retrofit-ready asset” (data, timing, governance) and use it in portfolio screening or engagement with owners.

Engage early with owners to understand retrofit impacts (expected OPEX impact, comfort, disruption, timing) to support cost-flow-through discussions and lease alignment.

Ensure incentive rules align with the owner retrofit data to identify where otherwise viable projects systematically fail on timing or documentation.

Stay up to date on the outcomes of this pilot and help **build awareness across the ecosystem** by educating, convening, and supporting actors around shared frameworks.



Appendix A – Initial opportunity development

Opportunity 1: Finance and banking solutions

Build an owner-aligned retrofit financing pathway—coordinating roles across banks, government, utilities, industry, owners, and service providers through a shared intake-to-implementation process, with optional enablers like a retrofit data snapshot, incentive database, and training platforms.



Value proposition

- Easier access to capital and clearer loan requirements.
- Confidence in retrofit outcomes through standardized data and third-party validation.
- Reduced financial uncertainty tied to vacancy risk, future regulations, and return on investment.
- A simplified, more predictable process for technical, financial, and regulatory actors.
- Banks can better serve existing clients and grow their loan book.
- Opportunity for capital relief on green loans.
- This helps owners overcome major barriers to retrofits by **making financing clearer, more accessible, and lower-risk.**



Key features of opportunity

- Financing framework that includes standardized initial requirements for banks, **retrofit financing aligned to mortgage cycles, and clear guidance for owners on what to submit.**
- Standard intake data forms to repeat process to support **consistent asset valuations, including demonstrating on how new upgrades enhance existing building's financial value** (e.g., cashflow, net operating income (NOI), mortgage-ability, cushion in loan, valuation, capitalization rate, vacancy rate difference, tenant quality, loan profitability, asset classes etc.)
- Third-party verification and risk mitigation for performance and savings.
- Clear processes for lenders and owners to follow.



Industry role

- **Banks/financiers:** Adapt existing products (e.g. mortgages) for retrofits, set clear underwriting standards, train frontline staff on retrofit financing, use standardized data to enable green loans.
- **Valuation firms:** Incorporate retrofit risks and opportunities into valuations, share consistent methodologies.
- **Utilities, engineers/professional services, contractors:** Provide validated technical data, deliver retrofit solutions aligned to expectations, align data standards with requirements from banks and finance.
- **Government and regulators:** Enable capital relief and supportive policy and encourage data standardization and transparency (e.g., reduced security requirements for climate aligned loans).



Timeline

0 - 6 months

- Advocate for regulatory capital relief from OSFI
- Align banks on basic, initial required information from owners
- Develop training materials for bank frontline staff on retrofits and its applications
- Evaluate if there is enough business in existing buildings for banks to consider mortgage financing products that cater to retrofit consolidation

6 - 24 months

- Publish clear expectations for retrofit-financing applications for ones undertaking energy retrofit studies to understand bank requirements and socialize with owner leads/consultants
- Roll out owner-facing education tools
- Conduct outreach to owners
- During mortgage reviews, annually collect data relevant to retrofit needs

2+ years

- Mature standardized data sets, valuation practices, and underwriting frameworks
- Scale financing pathways for widespread adoption



Next steps

- Assess regulatory environment and capacity in the market to meet growing retrofit demand.
- Ensure banks have suitable green financing products.
- Close data gaps required for lender confidence.
- Address owner motivations and ensure the business case is well understood.
- Evaluate whether existing building systems and technologies can support the scale of change.

Opportunity 2: Retrofit data snapshot

Streamlining/standardizing the definition of a deep retrofit—and the criteria for success—to create certainty, clarity, confidence, standardize risk assessment and valuation, enhance retrofit bankability and simplify implementation.



Value proposition

- A unified, transparent data ecosystem that clearly defines the **value proposition and the critical KPIs** for deep energy retrofit projects outside of standard financial metrics.
- This provides owners get to a “yes” faster. It provides owners, lenders, insurers, contractors, and utilities with a **consistent basis for assessing project feasibility, cost, and expected performance**.
- Ecosystem consistency **builds market confidence, accelerates decision-making, and enables financing to scale** by allowing stakeholders to assess risk using comparable metrics.



Key features of opportunity

- A nationally aligned definition for deep retrofits that standardizes scope, baseline conditions, recommended measures, and success factors, paired with streamlined sustainability metrics and a core set of pre- and post-retrofit technical data to support underwriting and clearly demonstrate project value.
- Common, **industry-accepted performance metrics** for deep retrofits, including KPIs, energy-savings benchmarks, and ROI expectations.
- A **unified data framework enabling comparable project profiles, outcomes, and financial performance**, enabling banks, insurers, contractors, to evaluate opportunities consistently and compete for projects more efficiently.



Industry role

- **Owners and property managers:** Provide building data (utility history, system conditions, operational profiles) along standardized lines.
- **Technical bodies** (e.g., NRCAn, standards councils): Develop, govern, and periodically update the retrofit standard and data framework and define technical requirements, aligned to the sustainable finance taxonomy.
- **Banks and insurers:** Use standardized profiles to price risk, improve underwriting/approval efficiency.
- **Contractors, ESCOs and professional services firms, engineers:** Align proposals and performance guarantees to standard metrics, improving comparability and credibility towards more efficient execution.



Timeline



- Define key questions
- Review existing frameworks and identify challenges with current models
- Convene cross-industry working groups
- Define success criteria for various financial players (CFOs, asset managers, banks, government), baseline standard and KPIs
- Develop data framework
- Roll out framework, early adoption by select owners and financial institutions
- Refine based on user experience
- Full market rollout



Next steps

- Develop governance and stewardship model for standard updates.
- Address data privacy, anonymization, and interoperability across digital platforms.
- Integrate with available public datasets to avoid duplication.
- Consider incentives or regulatory nudges to encourage early adopters.

Opportunity 3: Concierge-style retrofit implementation platform

Create an end-to-end integrated platform that simplifies the entire retrofit journey, from incentive discovery, to vendor/financier matchmaking, and to project execution.



Value proposition

- By combining a **concierge-style financing and technical retrofit implementation support (including a unified subsidy application portal)**, owners receive clear guidance, actionable roadmaps, streamlined access to funding, and a single point of coordination across government departments, utilities, contractors, and financiers.
- This **reduces administrative burden, accelerates project timelines, and increases retrofit success rates**.



Key features of opportunity

- A **unified digital entry point** (e.g., one-stop centralized concierge-style application **portal**) where owners can browse financing programs and incentives, check eligibility, submit documentation, and track application status.
- **Integrated matchmaking/referral/funding pathways that connect owners to vetted partners** (financiers, utilities, engineers, contractors and technology providers) enabled by a standardized "retrofit snapshot" that provides a common data point of reference across the ecosystem.
- A **step-by-step retrofit roadmap journey** that outlines required actions/decisions, partners, financing, and risks.
- Allows **visibility into retrofit needs (e.g. aging equipment timelines)** allowing transparency for better utility planning and competitive market offerings by professional services and contractors.

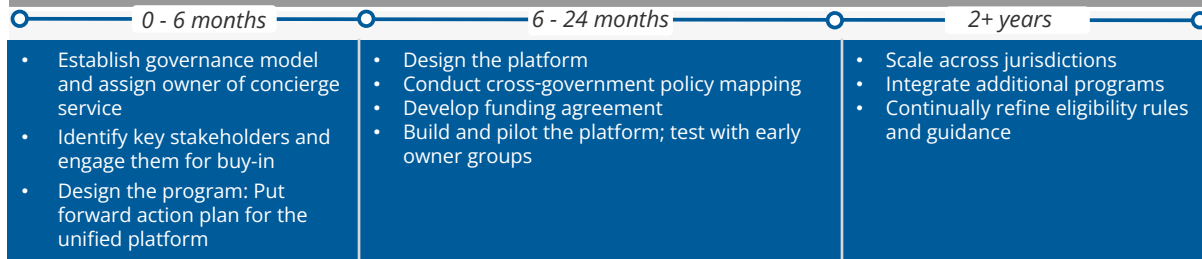


Industry role

- **Governments or utilities:** Serve as platform aggregators, policy harmonizers, and administrators of the unified system.
- **National industry bodies:** Potential co-governors or operators of the concierge service.
- **Contractors and professional services:** Offer vetted implementation services that can be accessed directly through the platform.
- **Banks and private partners:** Align financing products with incentives available through the integrated system.



Timeline

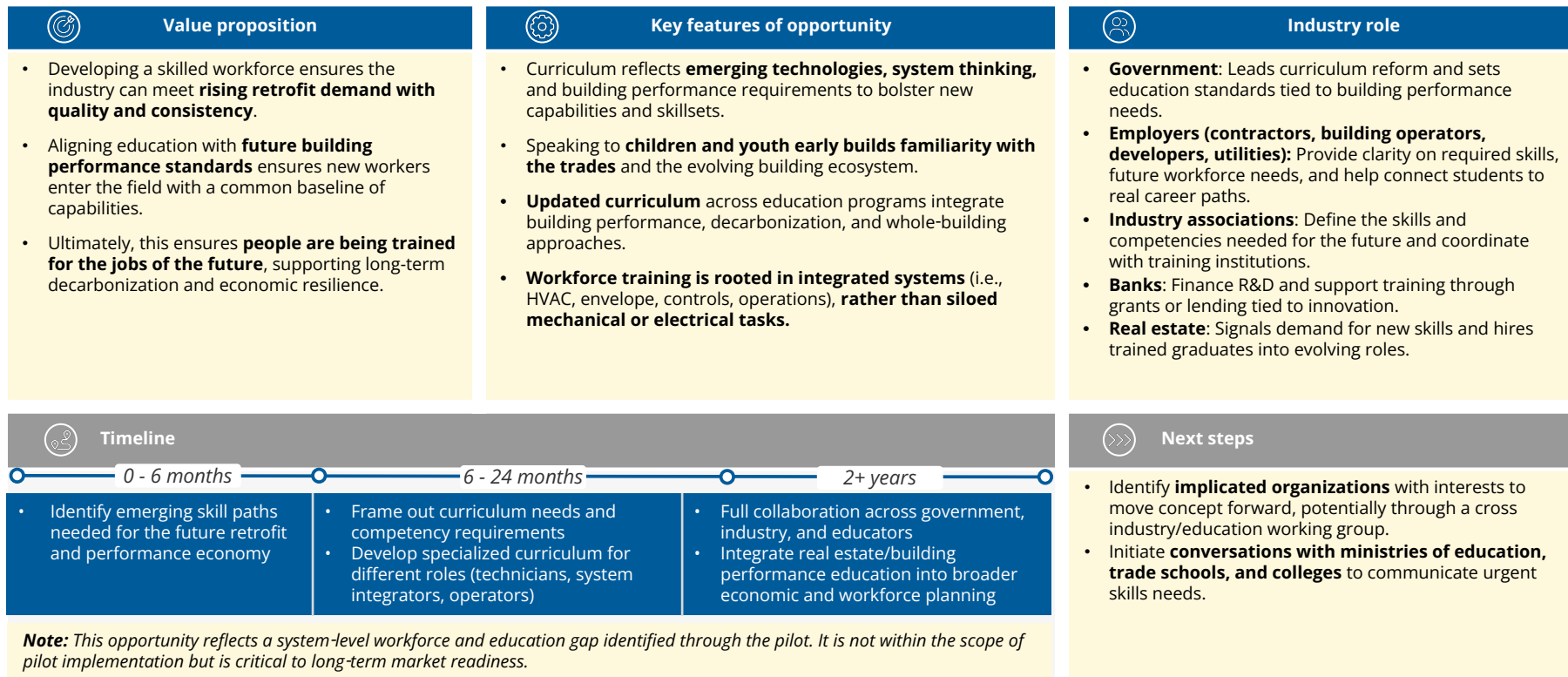


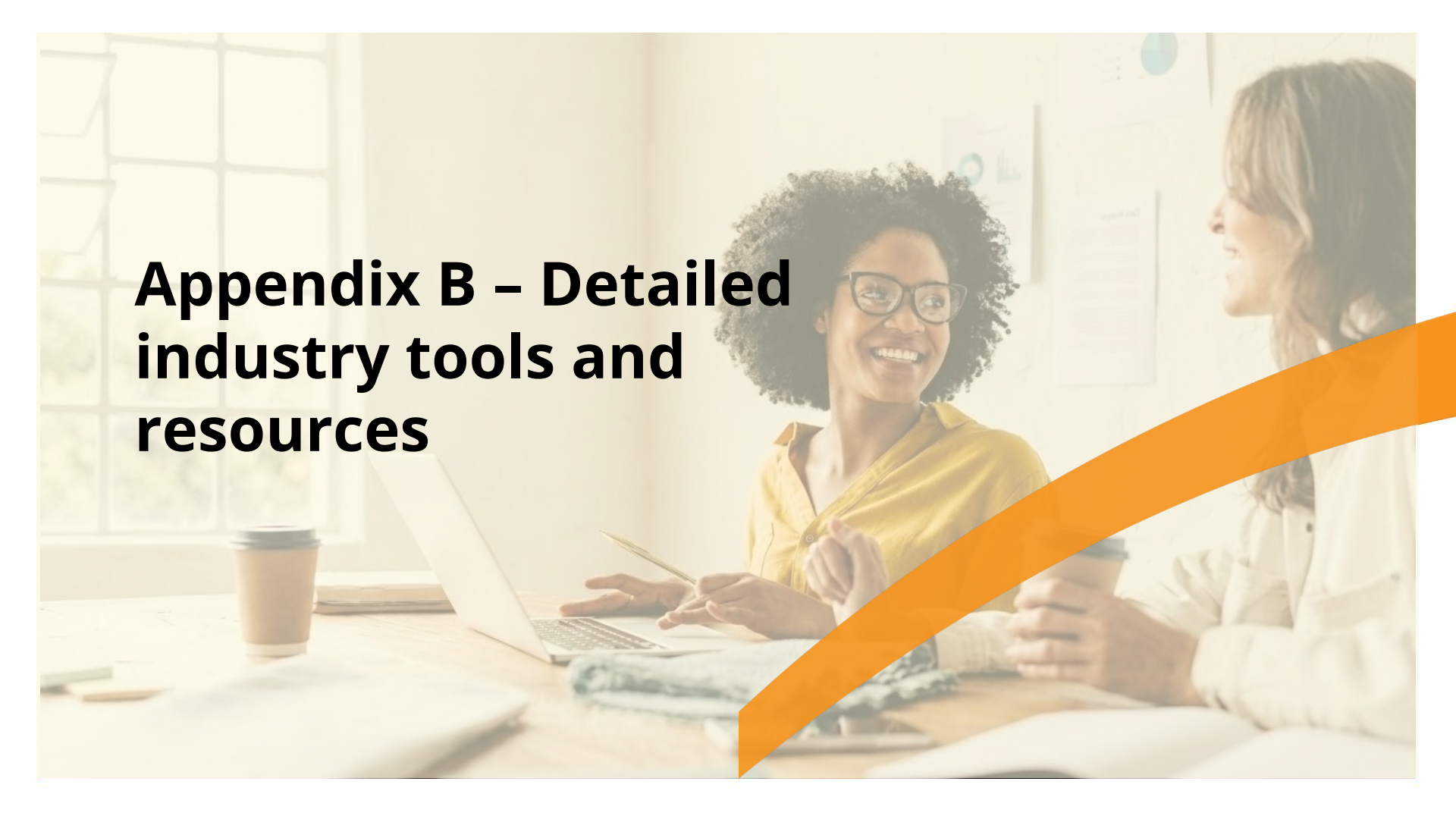
Next steps

- Clarify governance responsibilities and select project lead.
- Engage relevant stakeholders and develop action plan.
- Determine ongoing funding for concierge services, digital maintenance, and program administration.
- Figure out how to make this platform a more attractive solution than what is currently available and provide a "better than 0" outcome.

Opportunity 4: Capacity building

Develop educational curriculum and workforce training for financiers, banks, building managers and staff that aligns with evolving and future building performance and decarbonization needs, adopting an integrated systems approach.



A photograph of two women in a bright, modern office setting. The woman on the left, with dark curly hair and glasses, is wearing a yellow shirt and smiling while gesturing with her hands. The woman on the right, with long brown hair, is wearing a white shirt and looking towards the first woman. They are seated at a wooden desk with a laptop, a coffee cup, and some papers. A large orange diagonal graphic element is on the right side of the image.

Appendix B – Detailed industry tools and resources

Retrofit tools and resources (1/6)

The following summary presents the current landscape of retrofit tools and resources, based on desktop research and insights gathered from key stakeholder interviews and is not intended to be exhaustive.

Owner	Name of tool	Summary of tool capabilities
Natural Resources Canada (NRCan)	NRCan Retrofit Hub	A centralized national portal aggregating retrofit tools, datasets, guidance, funding pathways, standards, and case studies for large buildings (commercial, institutional, multi-unit residential buildings).
	Deep Retrofit Accelerator Initiative (DRAI)	A federal funding and market-transformation initiative supporting retrofit accelerators and capacity-building organizations across Canada, with a public directory of funded programs. This program includes 13 accelerators, some of which are featured here.
	ENERGY STAR Portfolio Manager (developed by the US EPA)	Canada's national building energy benchmarking platform, adapted and administered by NRCan for commercial and institutional buildings. It enables standardized tracking of energy, water, and GHG performance and supports ENERGY STAR certification eligibility.
	Energy Management Best Practices Guide for Commercial and Institutional Buildings	This guide outlines how commercial and institutional buildings can achieve sustained energy and cost savings by embedding continuous, organization-wide energy management into governance, operations, and decision-making
Canada Green Building Council (CAGBC)	Carbon Transition Planning Guide	A structured guide to help building owners develop carbon transition plans aligned with net-zero goals, regulatory expectations, and capital planning.
	Zero Carbon Building Standards	National performance and design standards defining zero-carbon buildings, recognized by Government of Canada Canadian Mortgage and Housing Corporation, Federation of Canadian Municipalities, and Business Development Bank of Canada.
	Investor Ready Energy Efficiency™ (IREE) Certification	A certification aligned with the Investor Confidence Project protocols that standardizes retrofit documentation, savings assumptions, and risk management to improve bankability and investor confidence.
	Full Disclosure: Real Estate Climate Leadership in Action	Report advocating standardized, phased building performance disclosure to provide a clear picture of buildings' overall energy use and GHG emissions.
	A Roadmap for Retrofits in Canada II	Market guidance on scaling retrofits (barriers, actions, enabling conditions) for industry, non-profit organizations and governments to build a world-leading retrofit economy by 2030

Retrofit tools and resources (2/6)

The following summary presents the current landscape of retrofit tools and resources, based on desktop research and insights gathered from key stakeholder interviews and is not intended to be exhaustive.

Owner	Name of tool	Summary of tool capabilities
Canada Green Building Council (CAGBC) cont'd	<u>Retrofits Now (Platform and Report)</u>	Retrofits Now is an initiative of CAGBC that shares market insights, research, and real-world case studies (drawing from real world examples from Purpose Building) to help Canadian building owners plan and scale deep, low-carbon retrofits.
	<u>Accelerating Deep Retrofits: A Year of Insights on Progress and Barriers</u>	This report provides lessons from Year one of the Purpose Retrofit Accelerator which shows that deep retrofits can deliver ~40% emissions reductions by 2030 at manageable incremental cost, but scaling impact will require cost transparency, aligned capital planning, and stronger market signals across finance and valuation.
City of Toronto	<u>Better Buildings Partnership (BBP)</u>	BBP provides technical guidance, financial incentives, and webinars to help building owners, operators and managers improve energy efficiency and decarbonize both existing and new buildings. Resources include best practices, funding options, and practical learning sessions.
	<u>STEP Program</u>	The STEP Program offers free support to owners and managers of multi-residential buildings (three or more storeys, built before 1990) to reduce operating costs and enhance residents' quality of life. It helps participants identify and implement improvements in energy, water, operations, safety, and community, benefiting over 400 buildings to date.
	<u>Net Zero Homes & Buildings program and retrofit guides</u>	The City offers programs, funding, and incentives to help homeowners and building owners improve energy efficiency and comfort. Support includes financing, rebates, eco-roof incentives, and solar resources for various building types.
	<u>Toronto Green Standard</u>	Sets mandatory and voluntary sustainability requirements for new developments, targeting energy, water, ecology, and waste. Higher-tier projects can receive financial incentives through the Development Charge Refund Program..
	<u>Deep Retrofit Challenge Communications Toolkit</u>	Toronto's Deep Retrofit Challenge Toolkit helps multi-unit residential and commercial building owners engage occupants and communities before, during, and after deep energy retrofits. It offers adaptable templates (project timeline, health pump infographic, retrofit co-benefits, e-newsletter template etc.) and best-practice guidance to support net-zero building emissions by 2040.

Retrofit tools and resources (3/6)

The following summary presents the current landscape of retrofit tools and resources, based on desktop research and insights gathered from key stakeholder interviews and is not intended to be exhaustive.

Owner	Name of tool	Summary of tool capabilities
Independent Electricity System Operator (IESO)	Save on Energy	The Retrofit Program offers up to 50% cost coverage for energy-efficient upgrades like solar, HVAC, lighting, and custom retrofits across various facility types. Incentives also target greenhouses, distributed energy resources, and industrial energy management systems..
Enbridge Gas	Retrofits & Custom Projects (incl. Commercial Custom Retrofit Program)	Provides incentives and expert support for energy-saving retrofit projects, covering up to 50% of costs. Upgrades include building automation, ventilation, boiler optimization, heat recovery, and more.
The Atmospheric Fund (TAF)	The Case for Deep Retrofits	A foundational report and framework outlining how to structure, justify, and communicate the business case for deep retrofits, including co-benefits.
	TAF's Retrofit Accelerator	TAF supports GTHA building owners with deep energy retrofits by providing technical guidance, resources, funding access, and collaborative support to reduce energy use and costs.
Hamilton Community Investment Corporation (HCi3)	HCi3 Fund – Retrofit Financing Resources	These are practical guides explaining how deep retrofit projects can be structured, financed, and de-risked for institutional and community-scale buildings. It also provides tools and resources for developing a compelling business case.
Acorn Canada	Core Principles of Successful Tenant Engagement During a Retrofit	The report outlines key principles to ensure meaningful tenant engagement in building retrofit projects, emphasizing that tenants must be treated as equal stakeholders throughout the process. It highlights the importance of ongoing communication, transparency, and regular engagement to understand tenant needs, minimize disruption, and improve project outcomes. The report also stresses building internal capacity; such as staff training and inclusive communication practices, to ensure engagement is effective, accessible, and sustained before, during, and after retrofits.

Retrofit tools and resources (4/6)

The following summary presents the current landscape of retrofit tools and resources, based on desktop research and insights gathered from key stakeholder interviews and is not intended to be exhaustive.

Owner	Name of tool	Summary of tool capabilities
Zero Emissions Innovation Centre – BC (ZEIC)	<u>Building to Electrification Coalition: BC Commercial Building Electrification Guide</u>	A technical and practical guide to electrifying commercial buildings, covering system selection, sequencing, costs, and implementation considerations.
	<u>Retrofit Accelerator</u>	A hands-on retrofit accelerator providing building-specific planning, technical support, incentive navigation, and financing guidance.
	<u>Retrofit Financing: A Guide for Commercial Building Owners</u>	This Guide helps commercial building owners understand and compare traditional and performance-based financing models for decarbonization, supporting informed, project-specific funding decisions.
Province of British Columbia	<u>CleanBC Better Building Program</u>	Initiative designed to support energy efficiency and greenhouse gas (GHG) reduction in British Columbia's building sector. The program provides resources, incentives, and support for building owners, operators, and industry professionals to undertake energy retrofit projects.
World Economic Forum (WEF)	<u>Tenant Pact</u>	Tenant Pact (an industry concept referenced in WEF real estate discussions) is a WEF-launched, tenant-led commitment to cut emissions from occupied buildings. It addresses the reality that tenants drive a significant share of operational emissions, making landlord-only net-zero strategies insufficient. The initiative signals to investors and lenders that major occupiers are willing to align leasing and operations with whole-building decarbonization.
Landlord BC (LLBC)	<u>Rental Apartment Retrofit Accelerator Pilot Program (RARA)</u>	RARA is led by LLBC with FRESCo and funded by the City of Vancouver, CleanBC, and BC Hydro, supports Vancouver market rental building owners with grants, incentives, and hands-on support to complete decarbonization-focused retrofits that also improve tenant comfort and minimize disruption.
Global Real Estate Sustainability Benchmark (GRESB)	<u>GRESB Real Estate Assessment</u>	The GRESB Real Estate Assessment is the global ESG benchmarking and reporting standard for real estate, used by listed companies, private funds, developers, and direct real estate investors.

Retrofit tools and resources (5/6)

The following summary presents the current landscape of retrofit tools and resources, based on desktop research and insights gathered from key stakeholder interviews and is not intended to be exhaustive.

Owner	Name of tool	Summary of tool capabilities
Building Decarbonization Alliance (BDA)	<u>Demand-Side Pathways Model (open-source scenario analysis platform)</u>	BDA-DSPM is an open, web-based, bottom-up building energy model to select stock, set scenarios, and inputs (costs/emissions), with expert access to code and the DSPM Data Library. It models energy, peak, and emissions by region/sector using transparent Canadian data; usability is improving and feedback is welcomed.
	<u>Deep Retrofit Accelerators in Canada: Five Opportunities to Increase Impact</u>	The report recommends five system actions: national retrofit data repository, understanding new financial offerings, validated virtual audits, stronger social procurement/mentorship, and cross-accelerator coordination. It concludes that coordinated, resource-sharing, and cross-sector collaboration can build an integrated, resilient retrofit ecosystem capable of meeting the scale of the challenge.
Building Owners and Managers Association (BOMA) Canada	<u>BOMA Enspire</u>	A national deep-retrofit enablement program for commercial real estate owners, combining analytics, audits, training, and performance optimization, to enhance their energy efficiency and transition to low carbon operations.
Affine Climate Solutions (Affine)	<u>Banking on Buildings: Financing Solution</u>	Banking on Buildings initiative, led by Affine, partners with lenders (BDC, BMO, Coast Capital, Vancity) to align real estate finance with low-carbon, climate-resilient performance. It builds tools and pilots to integrate building metrics into valuation and underwriting, improving risk pricing, enabling preferential terms, and accelerating climate-aligned upgrades.
Toronto 2030 District / District 2030	<u>District 2030 Net Zero Pathways Tool</u>	A methodology and pathways tool that models building-level and portfolio-level pathways to net zero, grounded in standardized assumptions.
BOMA British Columbia (BOMA BC)	<u>Decarb Accelerator Program</u>	A concierge-style program providing building-specific concierge support (audits, plans, business case, benchmarking, training, financing guidance) for commercial buildings in BC.

Retrofit tools and resources (6/6)

The following summary presents the current landscape of retrofit tools and resources, based on desktop research and insights gathered from key stakeholder interviews and is not intended to be exhaustive.

Owner	Name of tool	Summary of tool capabilities
BC Landlord and FRESKO	Business Case for Retrofits Tool (under development)	A business-case tool that helps commercial and multi-residential building owners and retrofit programs understand whether retrofit projects make financial sense. It translates high-level engineering and cost inputs into clear financial metrics, highlights non-energy benefits, and shows how incentives and financing can affect project viability, helping decision-makers compare options and move projects forward.
Business Development Bank of Canada (BDC)	Certified Green Building Loan	The BDC Certified Green Building Loan is a financing program that helps Canadian businesses buy, build, or renovate buildings to achieve recognized environmental certifications. It can cover up to 100% of project costs and may offer benefits like interest rate reductions once certification is achieved and access to green certification advisory support.
	Buildings Retrofit Savings Calculator	An online which helps businesses estimate potential cost savings, energy reductions, and emission cuts from building retrofit projects. Users are able to assess the financial and environmental benefits of energy efficiency improvements.
Canadian Imperial Bank of Commerce (CIBC)	Green Loans	CIBC supports green building projects through its green loans, focusing on green buildings that meet regional, national, or internationally recognized standards. These also includes financing for energy-efficient building upgrades and retrofits.
Real Property Association of Canada (REALPAC)	Decarbonizing Canada's Commercial Buildings: The Owner and Investor Perspective	The report highlights that Canada's commercial building sector faces significant barriers to decarbonization, including challenges related to capital, technology, energy systems, valuation, data, etc. It emphasizes that these barriers make low-carbon investments difficult. To address this, the report provides recommendations and calls for stronger collaboration across government, industry, utilities, and financial institutions to accelerate progress

Please note that in addition to these public resources and tools, specific entities like SOFIAC, Efficiency Capital, other CIB aggregators, major banks, equipment leasing companies and other Original Equipment Manufacturers (OEMs) all have various financing and investment tools and resources that enable retrofits at scale.



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