

ATLANTIC OFF-SITE HOUSING INNOVATION PROJECT: DEVELOPMENT OF AN INNOVATIVE ROADMAP TO BUILD HOUSING IN ATLANTIC CANADA

Atlantic Canada is experiencing sustained housing supply pressures. While off-site construction (OSC) is not a universal solution to the region's housing challenges, it has the potential to contribute meaningfully to increased housing delivery.

The Scope of the Problem

Atlantic Canada's housing supply pressures have been driven by population growth, labour shortages, rising construction costs, and regulatory and delivery constraints. Without innovative solutions, these housing pressures are expected to continue.

OSC may not be the one-size-fits-all solution to the region's housing challenges, but it has the potential to deliver housing delivery demands if supported by appropriate policy, financing, procurement, workforce, and logistics systems. Despite growing interest across governments and industry, the adoption and scaling of **OSC in Atlantic Canada remains constrained by system-level barriers rather than construction capability.**

A research project, lead by the Off-site Construction Research Centre was undertaken to develop the Atlantic Off-Site

Housing Innovation Roadmap, which identified barriers to OSC in the region, and outlines practical, regionally appropriate actions to support the effective use of OSC within the housing delivery system, informed by the Modern Methods of Construction (MMC) framework. The project responds to the need for coordinated, evidence-based guidance to support decision making across Atlantic Canada.

The Methodology

The roadmap was informed by a multi-stage research and engagement process that included **policy and by-law reviews across all four Atlantic provinces, interviews with private and public sector stakeholders, and regional workshops in each Atlantic province engaging over 235 participants.** This approach ensured that findings reflect both regulatory context, and on-the-ground delivery experience.

The findings confirm that OSC is

technically permissible across Atlantic Canada, with CSA A277 factory certification recognized in all provinces. However, inconsistent municipal implementation, duplicated inspections, fragmented approval processes, and misalignment between factory-based workflows and conventional procurement, financing, and insurance practices continue to increase project risk and limit scalability. Additional constraints include workforce availability and OSC-specific skills gaps, as well as transportation and logistics challenges related to oversized-load permitting and seasonal restrictions. At the same time, the research indicates that the region has existing manufacturing capacity and industry interest that could be better activated through clearer approval pathways, more predictable demand, and coordinated action.



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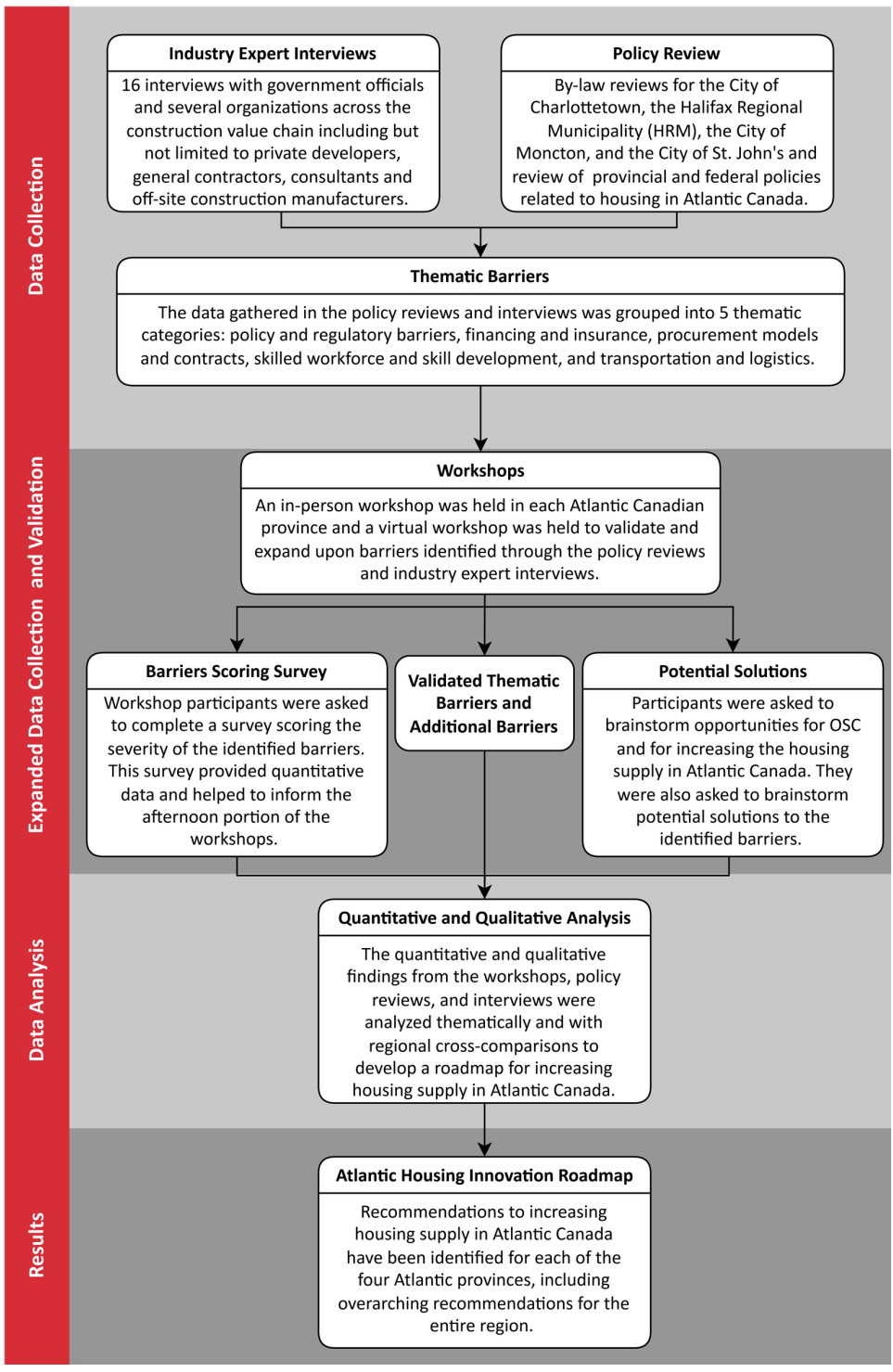


Figure 1: Overview of roadmap methodology

The Outcomes

Regional workshops held across Atlantic Canada highlighted a consistent set of barriers affecting the adoption and scaling OSC. Participants from industry, government, and related organizations identified challenges based on their direct

experience within provincial and municipal housing delivery systems. The barriers were then organized using unique identifiers and thematic sub-categories.

In response, the roadmap sets out a coordinated, phased framework of initiatives to address identified barriers, organized across **five focus areas** identified during engagement initiatives.

Focus Areas

-  **Policy and regulatory systems**, aimed at improving consistency, clarity, and efficiency in approvals and inspections
-  **Financing and insurance**, addressing cash-flow, risk, and valuation challenges specific to OSC.
-  **Procurement models and contracts**, focused on enabling earlier manufacturer involvement and aligning contracts with factory-based delivery.
-  **Skilled workforce and skills development**, supporting training pathways and year-round employment in factory and site settings.
-  **Transportation and logistics**, targeting planning, permitting, and damage-reduction challenges associated with modular delivery.

The Opportunities

To support prioritization, initiatives were grouped based on their relative impact and ease of implementation, creating four categories to prioritize initiative execution. **Priority Actions** (high impact, easier to implement) should be prioritized, while **Strategic Investments** (high impact, medium-difficult to implement) warrant dedicated planning and resources. **Targeted Improvements** (low-medium impact, easier to implement) can be addressed incrementally, and **Potential Considerations** (low-medium impact, medium-difficult to implement) should be visited as capacity allows.

To expand upon the initiatives developed, other key features were identified for each barrier-initiative pair. These features were used to create **dashboard layouts to explain each barrier and corresponding initiative.**

To support implementation and monitoring, the **initiatives were translated into a series of structured dashboards.** These dashboards provide an overview of each barrier and corresponding initiative using the additional features developed.

The dashboards are included in an interactive interface that enables users to filter and navigate the full set of dashboards based on the category, sub-category, province

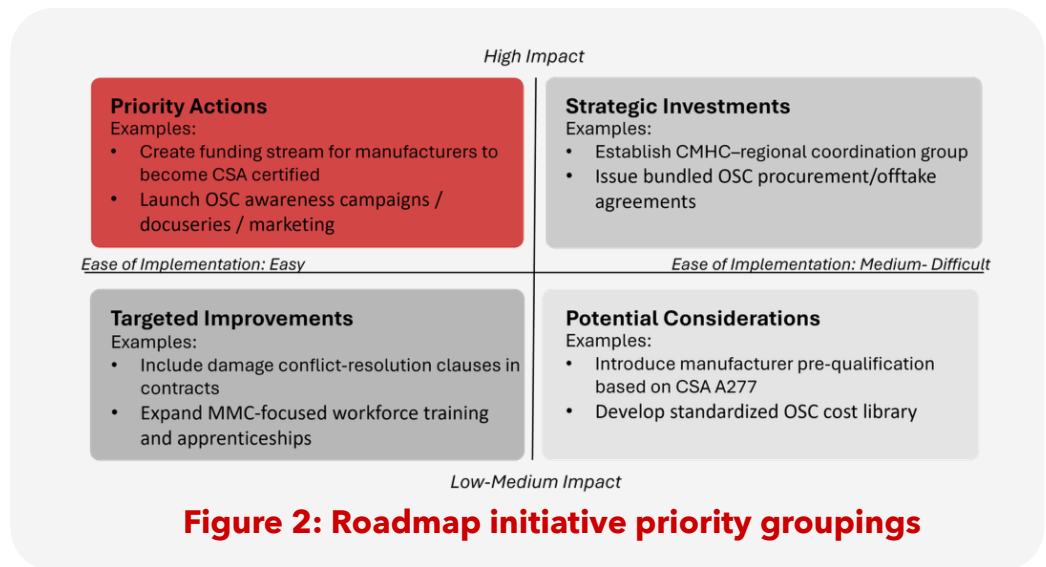


Figure 2: Roadmap initiative priority groupings

or workshop location, and contributor/owner type. This intends to facilitate locating relevant information for specific users. The interactive web app can be accessed here: <https://atlantic-roadmap-7cam.onrender.com>.

The web app also contains a tab titled Initiative Tracking which is used to track the implementation of initiatives across Atlantic Canada. There are separate

columns for each province since some initiatives are provincially independent while others are collaborative efforts for the Atlantic region.

The table displays the state of each initiative: Pending, in progress, or completed/in action. When available, additional notes about metrics used to update this data are also displayed in the table.

F11	Financing and insurance	Location(s) Identified: NS, NB
Barrier(s): <ul style="list-style-type: none"> • Bonding challenges for small manufacturers (NS, NB). • Small manufacturers face bonding challenges that limit their ability to participate in projects. 		Contributors: <ul style="list-style-type: none"> Manufacturers, Finance & Insurance/Business Services
Initiative: Introduce MMC manufacturer pre-qualification based on CSA A277 certification.		Metrics: <ul style="list-style-type: none"> • Number of modular tenders allowing pre-qualified suppliers without full bonding • Increase in bid participation • Reduced project cancellations due to lack of bonded bidders
Expected Timeline*: Year 3	Prerequisite Initiatives: <ul style="list-style-type: none"> • Define modular-specific qualification criteria • Review manufacturer QA, capacity, and safety documentation 	
Scope: Provincial	Owners: <ul style="list-style-type: none"> • Provincial Government 	
Ease of implementation: Medium		
Impact (out of 10) 8		

*Following the establishment of the Atlantic Off-site Housing Innovation Network.

Figure 3: Initiative dashboard example

Phased Implementation

To implement the initiatives identified, a phased approach is recommended. The initiatives were then grouped into provincially independent and collaborative implementation across the region.

The initiatives identified as provincially independent (Figure 4) are beneficial across all provinces to address common barriers identified. However, it is more efficient for provinces to undertake these initiatives independently and share lessons learned with their peer provinces.

The initiatives identified as collaborative across the region (Figure 5) should be undertaken by a network at the regional level and require inter-provincial insight, collaboration and regional cooperation to successfully implement.

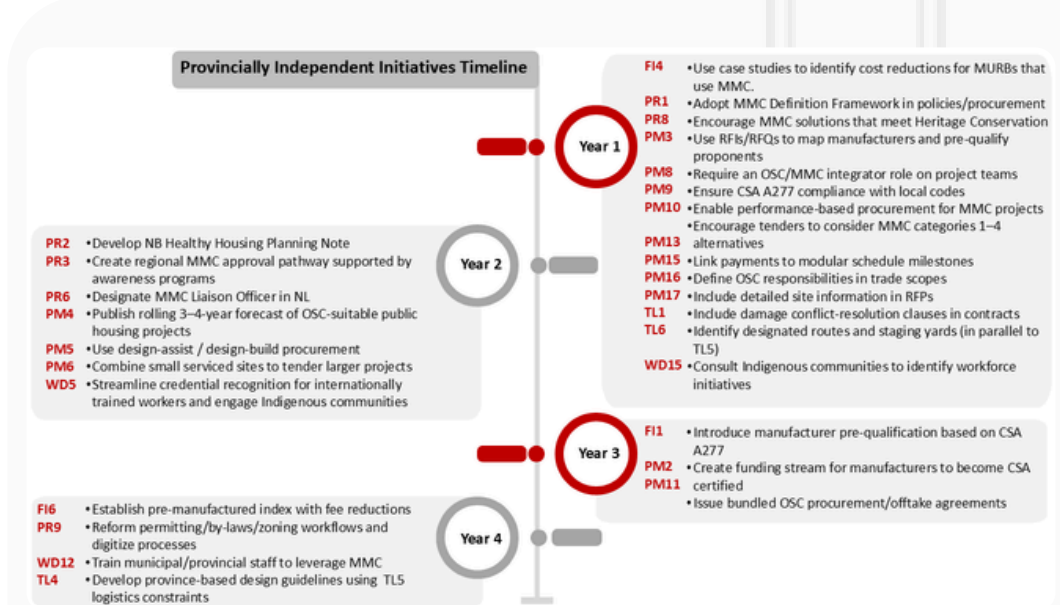


Figure 4: Provincially independent initiatives timeline

The challenges identified highlight the need for a coordinated, **system-level response**. The Atlantic Off-Site Housing Innovation Roadmap would directly respond to the barriers identified through the policy review, interviews, and workshops. **The roadmap does not promote OSC as a universal solution;** instead, it identifies targeted initiatives designed to remove the specific constraints observed in the results.

The roadmap is **structured to support phased decision-making**, enabling jurisdictions and organizations to prioritize near-term actions that reduce immediate delivery risk while laying the groundwork for medium- and long-term capacity building. Its design recognizes that Atlantic Canada’s housing ecosystem is multi-jurisdictional and capacity constrained.

The accompanying implementation dashboard provides a mechanism to track progress, identify gaps, and support accountability. Together, the roadmap and dashboard are intended to function as a framework that can evolve as policies change, capacity grows, and new evidence emerges, supporting continuous improvement in how off-site construction contributes to housing supply in Atlantic Canada.

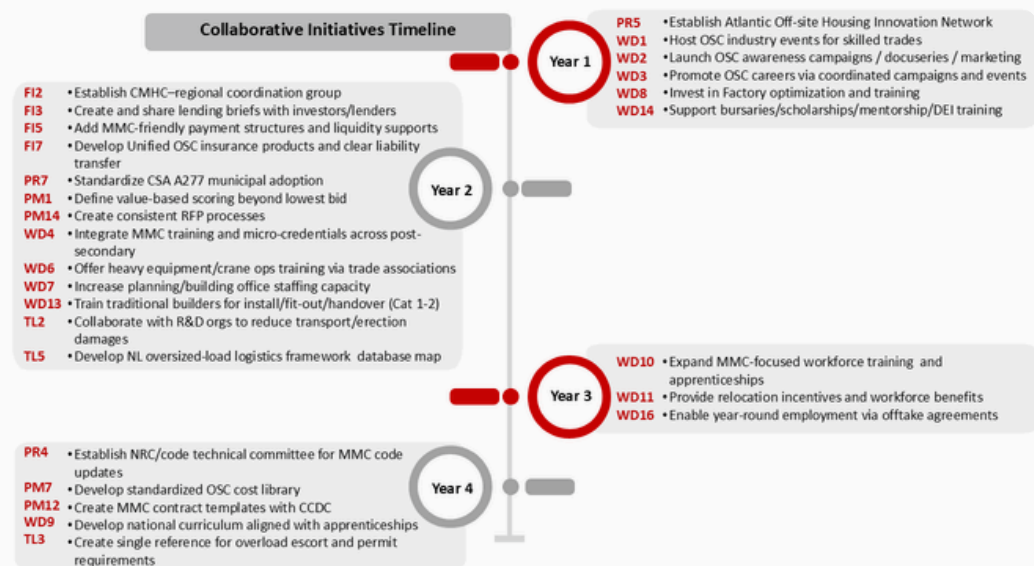


Figure 5: Collaborative implementation roadmap initiatives

Moving Forward

The results of this project indicate that no single organization or level of government can implement the roadmap independently. Regulatory responsibilities are spread across different authorities, procurement decisions are distributed across multiple bodies, and industry capacity spans provincial boundaries. Advancing OSC is also linked to broader system considerations, including sustainability outcomes and enabling infrastructure. Wrap around infrastructure must be carefully considered when planning for increasing housing supply. Coordinated action is therefore required across these areas to support effective housing delivery. Thus, the report recommends establishing an Atlantic Off-Site Housing Innovation Network to support roadmap implementation.

The network should be a collaborative body with a mandate to advance OSC housing solutions across Atlantic Canada.

The Network would be structured to ensure balanced representation across industry, government, and academic/training institutions from all four Atlantic provinces.

Representation should include, but is not limited to, industry and professional associations (including representatives from all phases of the housing development life cycle), provincial and municipal governments, housing authorities and non-profit housing providers, Indigenous community representatives, research and training institutions, and financial and insurance experts.

Conclusion

This study confirms that off-site construction has the potential to

contribute to increasing housing delivery in Atlantic Canada, but its adoption is constrained by system-level barriers rather than technical feasibility.

Rather than prescribing a single approach, the roadmap is designed as an adaptive implementation framework that can be applied incrementally across jurisdictions. A phased implementation plan and accompanying dashboard provide a mechanism to track progress, support accountability, and refine priorities over time.

Collectively, the Atlantic Off-Site Housing Innovation Roadmap provides a practical foundation for governments, housing authorities, and industry partners to strengthen coordination, reduce delivery risk, and support the appropriate scaling of off-site construction as part of a broader strategy to increase housing supply in Atlantic Canada.

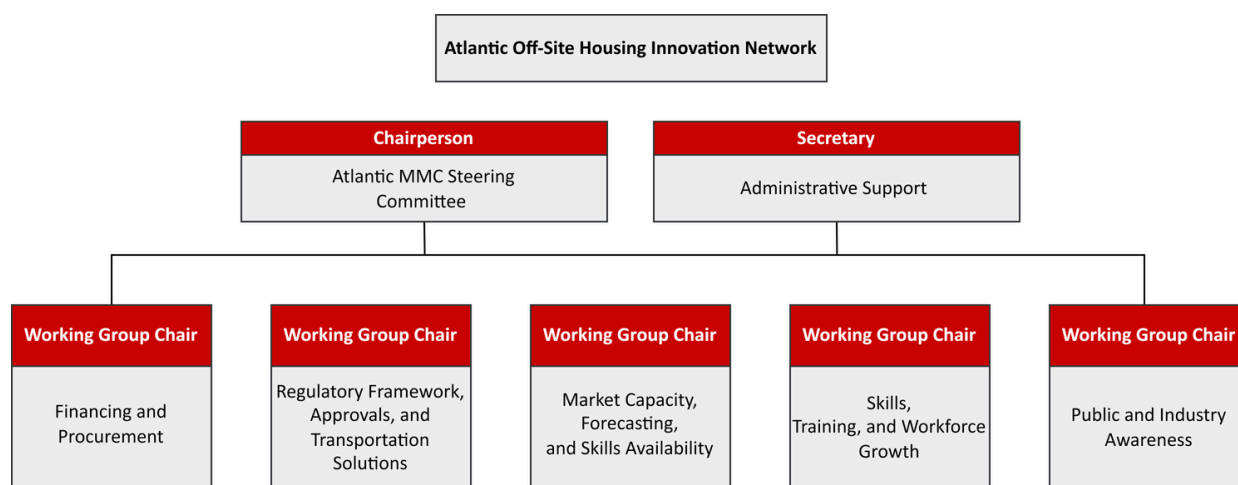


Figure 6: Overview of network's proposed governance structure and working groups