



Integrated policies for affordable and Net Zero Housing

A policy framework for NSW to mainstream Modern Methods of Construction

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October 2025

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We pay respect to Elders both past and present, acknowledging them as the traditional custodians of knowledge for these lands. We celebrate the diversity of Aboriginal peoples and their ongoing cultures and connections to the lands and waters of NSW.



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This paper was made possible through a APPI Policy Challenge Grant. This annual grant program supports academics who seek to tackle the greatest public policy challenges facing Australia.

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Acknowledgements

Thank you to colleagues from the Western Sydney University, Australian Public Policy Institute, and our partners (*The Property Council of Australia, Green Building Council of Australia, Thrive Construct, Shelter NSW, WSP Australia, Business Western Sydney, Faith Housing Australia, Housing All Australians, PowerHousing Australia, Boxareno Modular Constructions, Burwood Council, Mirvac, Social Futures, Astrolabe Group and MiTek*) for sharing insights throughout the project.

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Recommended citation: Ehsan Noroozinejad Farsangi, "Integrated policies for affordable and Net Zero housing", APPI Policy Insights Paper (2025).



Executive summary

Australia's construction sector is currently facing significant challenges: there are too few homes, and new homes are too costly to build.¹ At the same time, emissions from how we design and build homes need to fall sharply to meet Net Zero targets. Modern Methods of Construction (MMC), including prefabricated and modular systems as well as 3D printing in certain contexts, offer a practical way to build well-located homes faster, improve quality, and reduce energy bills and emissions.²

This research project engaged stakeholders from across government, industry, community housing, non-government organisations (NGOs), and other researchers to identify opportunities for NSW to better support the mainstream rollout of MMC. Findings highlighted several policy opportunities that NSW can leverage to support MMC's wider adoption.

The NSW Government has made progress in supporting the adoption of MMC through the launch of a Housing Pattern Book. The new pattern book rollout includes a ten-day fast-track approval for standard designs,³ program delivery with an MMC supplier list,⁴ and modular showcase homes.⁵ However, there is still substantial progress that needs to be made in order to meet housing supply needs in Australia.

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This paper presents a **practical NSW-led housing program** that aligns with national settings, and incorporates successful approaches from the United Kingdom, Sweden, Canada, Germany, New Zealand, and the United States.

To go one step further and achieve scale, this paper outlines opportunities for governments to move from guidance to adoption at the program level: fast-track national manufacturer certification with NSW pilots and mutual recognition with other jurisdictions; publish lender/insurer acceptance guidance; release further pattern book designs and enable program approvals for certified systems; set MMC/Pre-Manufactured Value (PMV) targets in public procurement; and establish a milestone-based facility with transparent performance monitoring to lock in speed, quality and public confidence.

If these actions are taken together, NSW can expect shorter times from approval to keys-in-hand, more predictable costs, fewer defects, lower bills and reduced emissions. In addition, regional manufacturing would be expected to grow on the back of reliable orders. Most importantly, thousands more social and affordable homes can be delivered each year, making MMC a trusted, mainstream way to build across NSW and, in time, the rest of Australia.

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NSW (and other states) could adopt an **“MMC at Scale” policy program** built around pillars that align with existing Australian standards and codes and consider selectively adapting the most successful elements from other countries.



Policy opportunities

The NSW Government should consider the following opportunities to scale MMC adoption to increase housing supply and Net Zero objectives:

- 1 Make approvals predictable for MMC**
Embed MMC in planning instruments and practice notes, release more pattern books of Building Sustainability Index (BASIX) and National Construction Code (NCC) compliant designs, and issue short acceptance notes for councils on factory quality assurance and installation. A simple, public performance snapshot would build confidence and shorten decisions.
- 2 Build assurance lenders, insurers and councils can rely on**
Recognise a nationally accredited manufacturer certification in NSW guidance so that certified systems are easier to approve, value and insure. Publish concise lender/insurer/valuer notes on durability, repairability and valuation. For novel methods, set a clear acceptance route using materials tests, structural and fire assessments and validated design rules.
- 3 Use procurement to create a dependable pipeline**
Act as a market-maker by setting PMV expectations in social and essential worker housing and awarding multiyear frameworks that pre-qualify suppliers. Give community housing providers a simple call-off route at a known price and performance standard. Encourage regionally distributed factories and assembly hubs linked to public land releases to anchor jobs.
- 4 Align finance and approvals to reward delivery speed**
Create a Rapid Delivery Facility that releases capital at factory completion, installation and occupancy, bringing supply forward and lowering risk. Offer council incentives for faster MMC pathways, supported by embedded advisers and a single approvals navigator that maps planning, building approval and utility connections to reduce avoidable delay.
- 5 Grow skills, capability and public trust**
Establish an MMC Skills Compact with TAFE and universities for microcredentials in Design for Manufacture and Assembly, factory quality assurance, logistics, installation and services interfaces, with pathways for traditional trades. Build public trust through demonstration precincts showing live performance data. Partner with community and Indigenous organisations to embed local jobs, training and design priorities.



The case for industrialised housing in NSW

Australia is currently experiencing both a housing and climate crisis. This is resulting in increased demand for affordable housing at scale and speed that also supports Net Zero goals. Under the National Housing Accord, governments and industry have agreed to build 1.2 million well-located homes over five years, from mid-2024 to 2029, an ambitious objective that requires new ways of working.⁶ This is in the context of cost-of-living pressures affecting Australian households, as well as Net Zero targets announced in September 2025 of a 62-70% reduction in emissions, which includes sector-specific plans for the built environment and electricity and energy.⁷

Homes, therefore, need to be cheaper to run and cleaner to build, to ease cost-of-living pressures, keep people safe during heatwaves and cold snaps, and help meet NSW and national emissions goals while minimising construction impacts on neighbours. Homes that maintain their temperature with very little energy mean families pay less each quarter and stay comfortable during extreme weather. This requires good insulation and windows, draft-free construction, and efficient heating, cooling, and hot water systems. Reducing waste and rework, cutting down truck movements, lowering noise and dust on site, and choosing materials with lower embodied carbon, along with better recycling and reuse, can lessen the environmental footprint of construction. Increasing the resilience and durability of homes means lower maintenance costs and better performance over time.

New South Wales (NSW) has begun to reshape supply in a range of ways. This includes the Housing State Environmental Planning Policies (SEPP, commenced November 2021),⁸ including the Transport Oriented Development program (commenced May 2024) and Low- and Mid-Rise Housing reforms (commenced July 2024),⁹ which expands housing density in certain locations. To make homes more environmentally sustainable, NSW's Sustainable Buildings SEPPs and the Building Sustainability Index (BASIX)'s uplift to 7-star Nationwide House Energy Rating Scheme (NatHERS, effective from October 2023),¹⁰ aim to raise performance expectations and reduce bills and emissions for households.

Modern Methods of Construction (MMC), including prefabrication, modular systems, and 3D printing, align with this agenda but go one step further by delivering repeatable quality and verifiable performance that meets the National Construction Code pathways.

What do we mean by **MMC in Australia**?

Australia's regulatory framework recognises prefabricated and modular systems through the National Construction Code (NCC)¹¹ and Australian Building Codes Board (ABCB) guidance. The ABCB's Prefabricated, Modular and Off-site Construction Handbook clarifies definitions, quality assurance and pathways for compliance, and is intended to build a common language across industry and regulators. This roadmap adopts those definitions and aligns proposed actions with the ABCB's direction.

To support planning, procurement and finance, we also reference the UK MMC Definition Framework (seven categories, from Category 1 volumetric to Category 7 site-led process improvements)¹² as a consistent taxonomy for policy, mapping each category to Australian rules to avoid duplication.



The Building Ministers have asked the ABCB to make compliance more straightforward for off-site construction, and a new national (voluntary) manufacturer certification scheme for MMC is under consideration.¹³ While these are necessary, they will not be sufficient to increase MMC uptake across NSW and Australia.

Internationally, there are examples of what “mainstream” MMC looks like that Australia could learn from. The UK’s MMC Definition Framework provides a shared taxonomy for government, lenders, and industry, while the Buildoffsite Property Assurance Scheme¹⁴ has helped normalise mortgages for off-site homes, offering durability and quality guarantees. Canada is utilising federal programs, such as the Housing Accelerator Fund, to support faster delivery, including highly prefabricated projects. Meanwhile, the United States is building public confidence through the Innovative Housing Showcase, featuring real homes on the National Mall. These are practical models Australia can adapt, not reinvent.

For NSW, the opportunity lies in connecting these threads: utilising state planning reforms and a pattern book approach to make approvals predictable; deploying program procurement with clear MMC/PMV expectations to create a reliable order book; and establishing certification and lender guidance to ensure homes are easy to insure and finance. The government has already demonstrated the role of the NSW Pattern Book in expediting approvals. MMC turns that idea into high-quality homes delivered quickly and consistently, including in regional manufacturing hubs.

The bottom line is that Australia needs more homes that are built faster and have lower running costs and emissions. MMC is a practical approach to achieving this, aligned with current regulations, backed by clear assurance, and proven overseas. The following sections translate this context into specific policy moves that can deliver results within months, not years.

Why MMC now? Outcomes for affordability, speed and emissions

MMC is timely because it addresses three pressing challenges at once: affordability, speed, and emissions. By shifting a significant proportion of construction activity into factories, MMC reduce delays, creates predictable processes, and enables higher-quality, lower-cost housing that meets environmental and social goals.¹⁵

Shifting much of the housing build into factories removes weather delays and eases labour bottlenecks, while site works and factory production proceed in parallel to shorten construction cycles. Early NSW pilots, especially in social housing, can make the pace visible, showing that predictable, repeatable processes deliver keys to tenants sooner.

Standardisation and repeatable details reduce rework and waste; used across a program, they unlock economies of scale. Quality rises too: factory conditions reduce defects and make delivery more consistent. Moving higher-risk tasks off-site improves safety and opens up more accessible jobs.

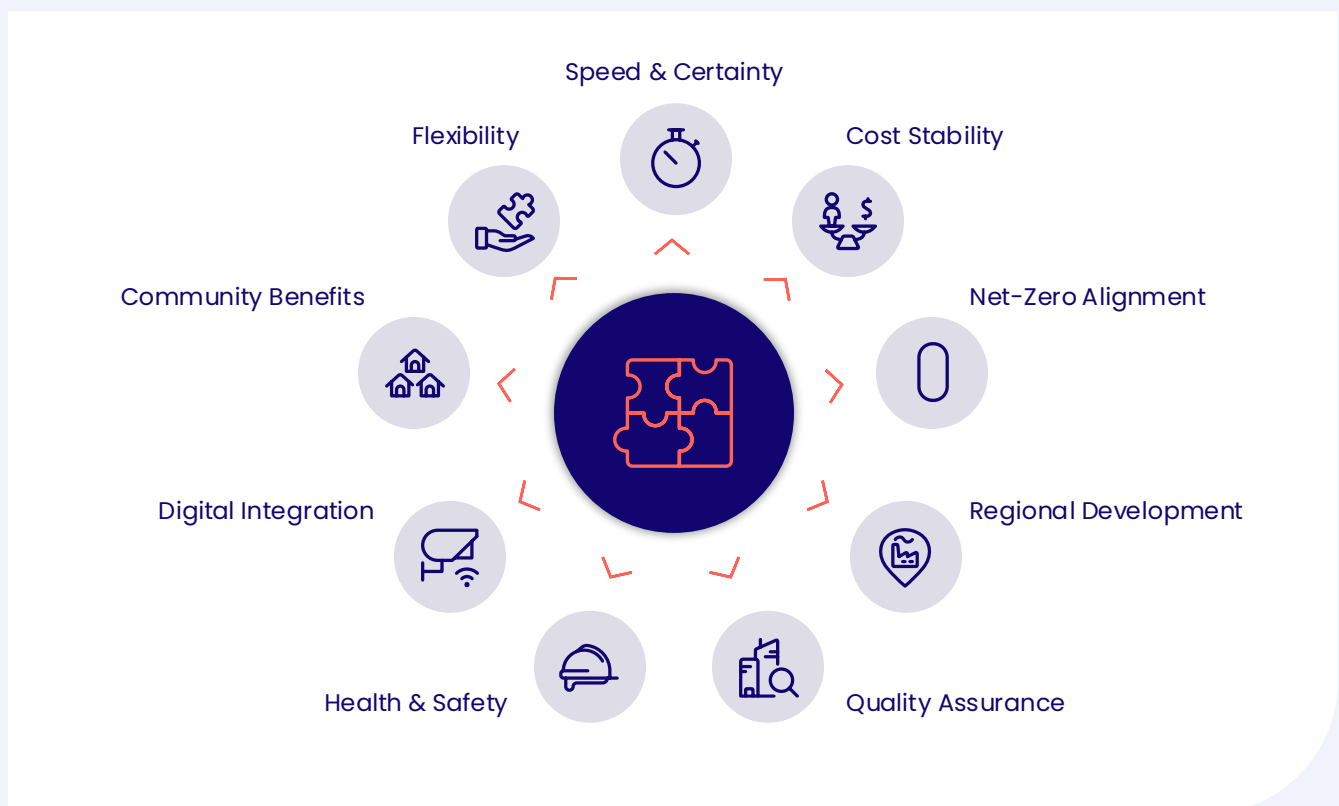
MMC also aligns with the way NSW wants homes to perform. Consistent designs and factory quality assurance make it easier to achieve and verify high thermal performance and airtightness, supporting 7-star NatHERS¹⁶ and Whole-of-Home targets, which enable households to pay less for heating and cooling.



Off-site production can lower embodied carbon through smarter material use and logistics, and it reduces waste at the source. Digital integration strengthens the entire process: MMC integrates naturally with building information modelling (BIM) and simple digital twins, enabling planners and delivery teams to identify clashes early, forecast costs more accurately, and monitor performance throughout the building's life. Faster on-site assembly brings community benefits, with shorter disruption, less noise, less dust, and fewer delays, as well as earlier delivery of much-needed housing.¹⁷

Regional development is part of the story: factories and assembly hubs can anchor local jobs while serving metropolitan demand, a pattern seen in Canadian modular programs, spreading the economic benefits beyond city centres. Finally, modular components support flexibility over time: they make future adaptation and retrofits simpler, allow households to reconfigure as needs change, and make technology upgrades straightforward, building resilience into the housing system as standards, technologies and family circumstances evolve.

Figure 1 | The multifaceted benefits of MMC



Source: Authors



An expanded evidence base for MMC

Purpose and scope

By combining surveys, interviews and international input, we built a shared evidence base that explains what holds MMC back and how it could be unlocked in NSW. We set out to understand what it would take to use MMC to deliver affordable, low-emissions homes at scale in NSW and, by extension, across Australia. The research explored three questions: where MMC is today in practice and perception; what is holding back wider use across planning, finance, assurance and delivery; and what practical policy settings could unlock faster, more reliable programs.

Rather than testing a single technology, the focus was on the conditions that make MMC work, including predictable approvals, confident finance and insurance, investable supply chains, and designs that are repeatable and high-performing.

To answer these questions, we spoke with the individuals who make the system function, including state and local government officials, consent authorities, community housing providers, private developers and builders, manufacturers, lenders and insurers, NGOs, and researchers. We also drew on international expert interviews to ground the discussion in proven practice. Bringing industry and government into the same conversation was intentional: it surfaced where expectations diverged (for example, evidence requirements for approvals or underwriting), highlighted where incentives currently misalign, and identified the common language and data needed to build confidence across the whole chain from factory to front door.

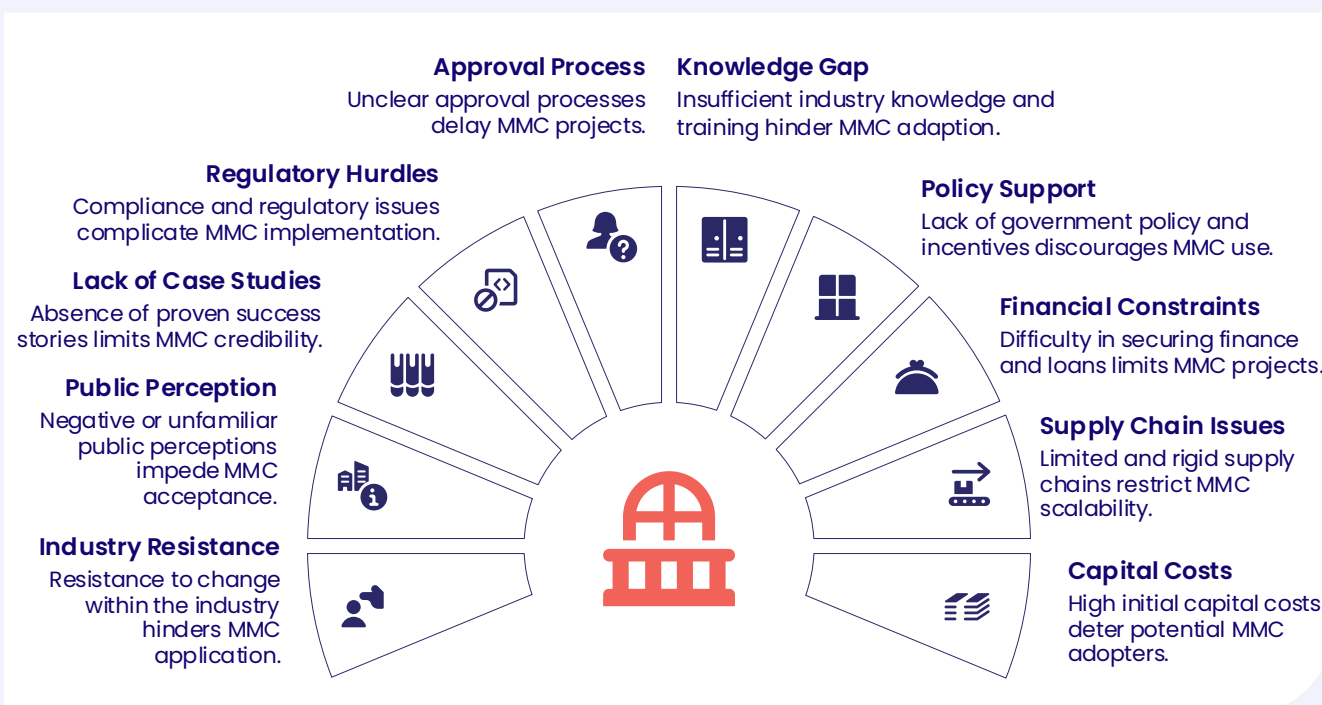
The survey quantified attitudes, experience, familiarity, acceptance, perceived benefits, barriers, readiness, and priorities for action, while interviews added context on how those views play out in real-world projects. Importantly, the stakeholders engaged included micro to very large organisations, which facilitates the interpretation of capacity, risk appetite, and readiness. Together, they provide a shared evidence base for policy choices: not a wish list from one side of the market, but a cross-sector picture of what would make MMC easier to approve, finance, insure and deliver consistently, and at the pace NSW now needs.



Survey findings

Respondents were broadly familiar with MMC, with 70 per cent reporting high familiarity. Sentiments regarding MMC are mixed, with 46 per cent reporting predominantly positive perceptions as opposed to 37 per cent negative. Perceptions of current market acceptance of MMC are subdued, with just 12 per cent rating high acceptance, noting that adoption is slowed by risk concerns and cultural resistance rather than technical limits.

Figure 2 | Respondent feedback on barriers to MMC adoption



Source: Authors

Policy levers

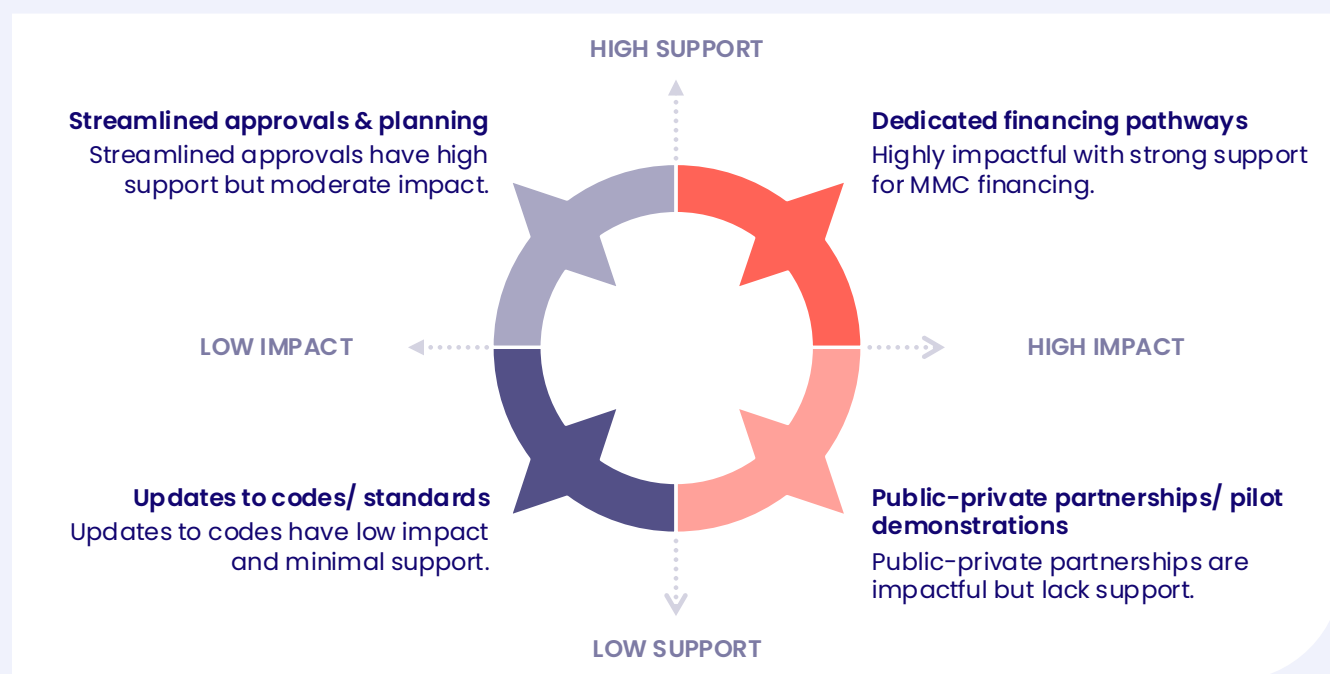
When respondents assessed ten policy actions, the highest-rated lever was dedicated financing pathways, such as concessional loans or grants for MMC (almost nine in ten responses are positive). Streamlined approvals and planning followed closely (over four-fifths are positive), alongside the use of MMC quotas or targets in government-funded housing.

Public-private pilot demonstrations also scored strongly (three in four responses are positive), as did investment in research and innovation (70.8 per cent positive). Government subsidies and consumer awareness campaigns attracted two-thirds positive responses (about two-thirds are positive), while stronger Net Zero targets and targeted industry training each sat in the low sixties (a clear majority are positive). Updates to codes and standards drew positive responses from roughly three in five.



Taken together, the evidence suggests that enabling levers, finance, and approvals will accelerate outcomes, supported by procurement targets, visible pilots, training, and effective communications.

Figure 3 | Impact and Support of Policy Levers



Source: Authors

Affordability mechanics and “what benefit matters”

Stakeholders view MMC as central to today’s cost and delivery pressures. Around 80 per cent say MMC is important for affordability, and over 80 per cent see strong potential to cut emissions. The implication is that MMC aligns with NSW’s housing and sustainability agenda: repeatable, fabric-first designs can help meet energy standards and reduce bills, while industrialised production cuts waste and can lower embodied carbon.

However, just over half of respondents cite high upfront cost as a barrier; more than two in five rate it negatively. This indicates that cost performance varies with product standardisation and pipeline certainty.

Respondents expect MMC to improve project economics when it is delivered as repeatable product platforms rather than one-off bespoke builds. Most respondents expect costs and timelines to come down.

In open responses and single-choice questions about the most compelling affordability benefits, selections cluster around faster time-to-occupancy, greater cost predictability and lower rework and waste, with many noting that the combined effect matters most. For policy and procurement, this indicates that the outcomes to track and reward are those that buyers and funders value: time to occupancy, cost stability, defect reduction, and lower household energy bills.

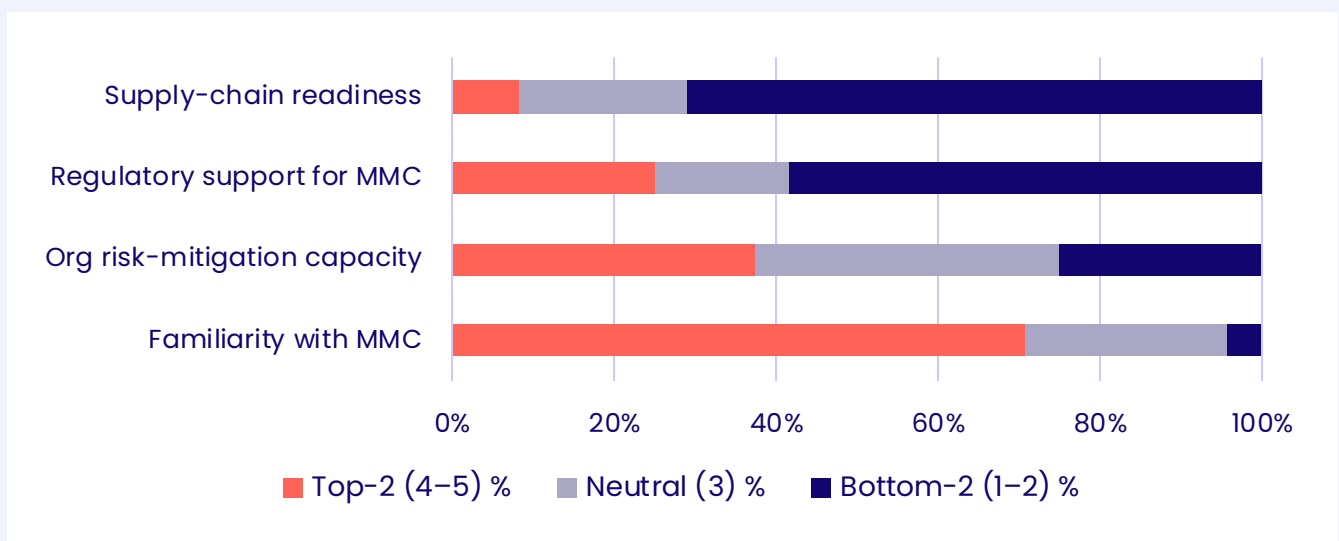


Skills, supply chain and readiness

Stakeholders see skills as pivotal in both factory and site contexts. Two-thirds rate skills availability as necessary, highlighting the importance of quality assurance, design for manufacture and assembly, and logistics in factories, as well as on-site assembly and service integration. About two-thirds see a clear link to Net Zero and circularity, highlighting better thermal performance, airtightness, consistent detailing and less waste.

By contrast, NSW supply-chain readiness scores skew strongly negative, with limited positive assessments and a notable undecided remainder. This combination argues for a coordinated package, multiyear procurement frameworks that create predictable demand, a factory capacity fund to derisk investment, regional manufacturing and assembly hubs to anchor jobs, and an MMC Skills Compact to build the workforce needed to deliver at scale.

Figure 4 | Readiness and capability snapshot based on the conducted survey



Source: Authors

Approvals and regulation clarity

Only one-quarter of respondents consider the current codes and regulations to be supportive of MMC. Interviewees describe uncertainty about evidence requirements and a lack of a clear “green lane” for industrialised delivery. The evidence points to practical opportunities: publish technical acceptance notes that outline evidence of suitability for certified systems; release pattern book typologies aligned with Deemed-to-Satisfy pathways; and enable program-level approvals that verify certified systems once, with straightforward site-specific checks thereafter. The goal is to make approvals predictable so that MMC is treated as business as usual.



Adoption and timeframe for wider use

There is a clear appetite for adopting MMC, but an uneven capacity to manage risk. Over the next five years, about two-thirds intend to adopt. Confidence in risk mitigation is split: 37 per cent feel confident, with a similar share neutral or not confident. Over one-third report direct involvement with MMC, with the remainder indicating limited or no experience.

When respondents assessed barriers across ten statements, the strongest signals were cultural and institutional rather than purely technical. Industry resistance to change drew the highest level of agreement, at 80 per cent.

Expectations about when MMC will be widely used mirror the frictions above. Only one quarter foresee widespread use in the near future, and more than half expect a longer timeframe. Respondents themselves point to the accelerators: dedicated finance, streamlined approvals and program procurement. Clear timelines and the inclusion of MMC in delivery targets for public programs can help shift expectations and accelerate adoption.

Financial incentives

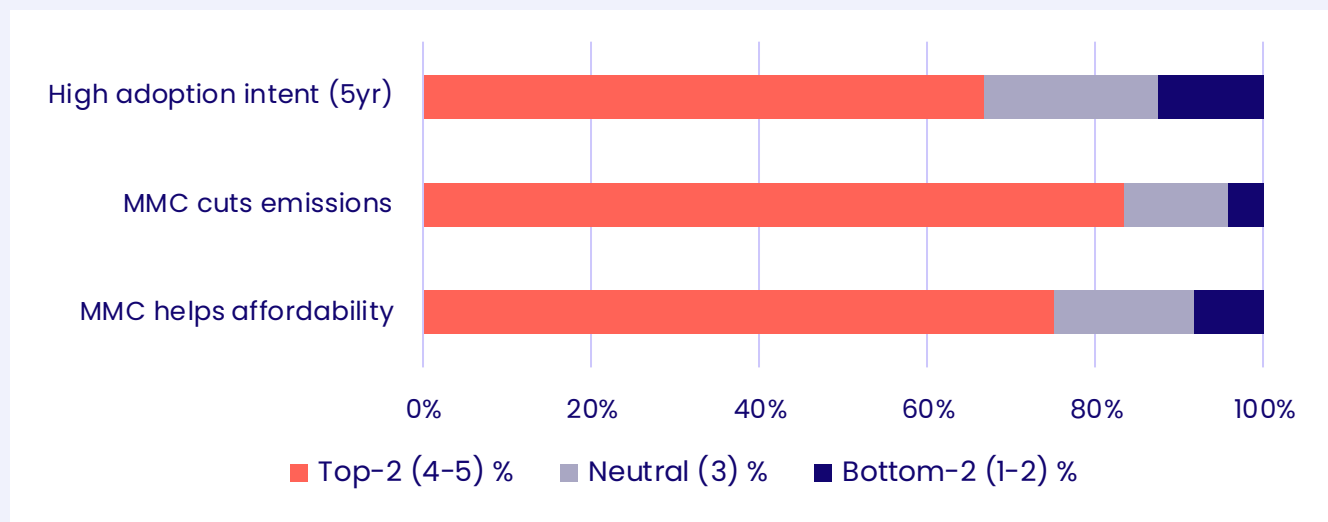
When asked to select the most effective financial incentives, respondents most often chose concessional finance and grants, followed by tax offsets and fast-track approvals linked to MMC. This sits neatly alongside the lever ratings: finance and approvals are seen as the core enablers, with tax measures as complementary tools rather than substitutes. In practice, this suggests designing concessional pathways tied to verified milestones, such as factory completion, installation, and occupancy, while linking planning incentives to certified systems and pattern-book designs.

Environmental benefits

When forced to pick a single environmental priority, respondents chose operational energy savings and reduced construction waste most frequently, followed by lower embodied carbon and improved airtightness and comfort. That ranking supports a fabric-first approach with repeatable details and standard testing protocols in both factory and on-site. Procurement frameworks can embed simple, verifiable requirements, such as airtightness tests and as-built thermal checks, and publish the results so that households, councils, and lenders can see the benefits in the open.

Fig. 5 indicates that most respondents believe MMC delivers value now. Around 75 per cent agree it helps affordability, and over 80 per cent agree it cuts emissions; only a tenth of respondents disagree on either point. Adoption intent is also strong, about two-thirds plan to use MMC within five years, though roughly one-third are still undecided.

Figure 5 | Value-to-action bridge



Source: Authors

Collaboration and leadership

The shift to MMC is a team effort. A clear majority, about three in five of respondents consider cross-sector collaboration as necessary, with the public sector identified as the principal lead, followed by lenders and insurers, developers and builders, and local councils. In practice, this suggests that the NSW Government could act as a market-maker, aligning procurement and approvals, while the Commonwealth focuses on assurance and finance settings that reduce risk for lenders and insurers. Industry, community housing providers, and councils could then deliver against a more transparent and predictable framework.

Cross-cutting insights

Simple cross-tabs help explain the pattern of responses. Familiarity with MMC and stated adoption interest are positively related; individuals who are more familiar with MMC are more likely to plan to use it. Perceived industry acceptance also correlates with adoption intent: when respondents believe acceptance is higher, they are more inclined to adopt. Perceived regulatory support is negatively related to rating “regulatory hurdles” as a top barrier; where respondents see clearer support, they are less likely to elevate regulation as an obstacle.

Adoption interest and expectations about the timeframe to wider use move together, with higher intent associated with faster expected diffusion. Respondents convinced by MMC’s emissions potential are not persuaded that stricter rules alone will motivate uptake, consistent with the broader preference for enabling levers such as finance and approvals. Larger organisations report slightly lower supply-chain readiness and interest in adoption than smaller ones, which may reflect legacy processes or risk governance.



Takeaways

- The top two barriers are cultural and perceptual (industry resistance; public perception). This is why visible, data-rich pilots and program-level procurement matter; they build confidence and familiarity.
- Approvals/regulatory clarity feature prominently calling for pattern book and program approvals directly target these pain points.
- Skills and finance are rated similarly, reinforcing the need for an MMC Skills Compact and lender/insurer guidance anchored in manufacturer certification.
- Interestingly, “high upfront cost” draws the most polarised opinions. This suggests heterogeneity of the current MMC offers. Some respondents see cost advantages already (e.g., standard products), while others encounter bespoke MMC costs.
- Financing and approvals surface as the top two levers. This validates our proposed MMC Rapid Delivery Facility and pattern book/program approvals.
- Public procurement targets are widely supported, consistent with UK practice and our recommendation to set MMC/PMV inclusion thresholds.
- Training and consumer awareness rate well, but stakeholders believe money and rules should move first to unlock supply.

Would stricter sustainability rules motivate adoption?

Views lean strongly toward ‘no,’ with limited support for ‘yes’ and a notable undecided group.

Interpretation

Respondents prefer enabling levers (finance, approvals, procurement) over a compliance-only push. This doesn’t mean rules are unimportant, only that carrots are more persuasive than sticks at this stage.



International playbook: what to adapt (not reinvent)

NSW does not need to start from scratch. Across the UK,¹⁸ Canada,¹⁹ the United States,²⁰ Germany,²¹ New Zealand,²² and Sweden,²³ governments have already developed practical ways to make industrialised housing easier to approve, finance, insure and deliver. Those models give us ready-made building blocks, clear definitions and code-aligned standards, lender-ready certification and visible quality marks, pattern book designs and program approvals, multiyear procurement frameworks and milestone-based finance, and public demonstrations that build trust.

This “international playbook” shows what works at scale.²⁴ Our task is to replicate the functional pieces, customise them to Australia’s codes and markets, and stitch them together for NSW so delivery can move quickly from pilots to reliable pipelines.

The **United Kingdom** began by defining the field: its MMC Definition Framework gives procurers, lenders and manufacturers a common language, while lender-ready assurance (notably the Buildoffsite Property Assurance Scheme) links factory process control and durability to mainstream mortgageability. More recently, in 2025, the British Standards institution introduced a new specification (PAS 8700) that has simplified overlapping schemes by acting as a unifying, technology-neutral reference from procurement through manufacture and assembly. Together, these steps turn confusion into clarity and reduce friction in approvals and finance.

Sweden shows the end-state when this approach matures. Over decades, the industry has moved from bespoke builds to product platforms: a small family of standardised, mostly timber systems designed once, manufactured in controlled conditions and assembled quickly on site. Municipal housing companies use national framework agreements (Kombohus) so councils can call off pre-agreed designs at transparent prices, creating a rolling order book that underwrites factory investment. Assurance is visible rather than novel: the regular building rules apply, with the P-mark quality label providing type-testing and factory audits. The result is predictable cost, time, and quality, as well as public familiarity that treats factory buildings as normal.

Canada’s strength is code-linked standardisation. CSA A277 certifies factories for prefabricated buildings, modules and panels; CSA Z250 and Z252 guide delivery and approvals. Crucially, A277 is referenced in the National Building Code and mandated in several provinces, so authorities accept certified work without re-inspection of concealed elements. Cities like Toronto use this to streamline permitting. Canada has recently coupled standards with capital: Build Canada Homes is a new federal agency with C\$13 billion and an initial plan for 4,000 factory-built homes on federal land, pairing public land and finance with off-site delivery at speed.

The **United States** provides a coherent technical suite that plugs into familiar codes. ICC/MBI 1200 and 1205 set out design, fabrication, assembly, inspection and regulatory compliance; ICC/MBI 1210 covers services and energy; ICC G6 guides advanced panelisation. Adoption is state-led and uneven, but where states and cities reference these standards, alongside federal use, permitting becomes more consistent, and lenders and insurers gain a clearer basis to underwrite off-site delivery.

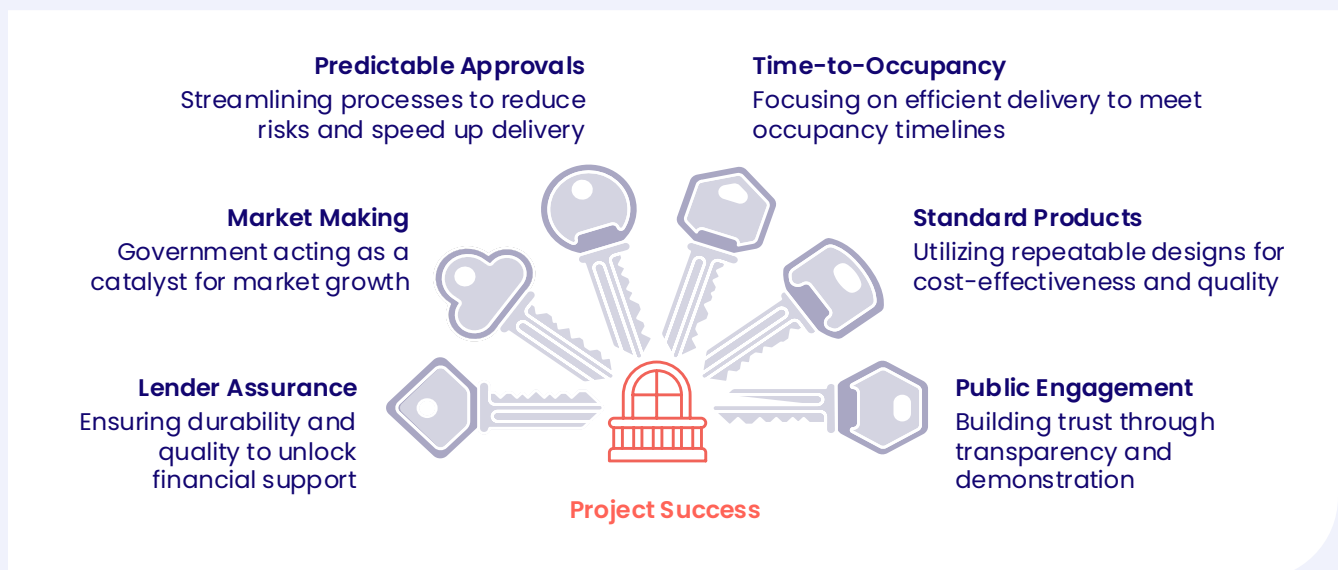


Germany layers simple, visible quality marks above legal baselines to build market trust. Beyond CE/Ü compliance, the Reichs-Ausschuss für Lieferbedingungen (RAL) mark certifies timber elements and assembly quality, while the QDF seal adds more demanding criteria across energy, ecology and construction technology, backed by frequent factory and site audits. Buyers, lenders and insurers use these badges as shorthand for durability and performance, and the industry maintains high-discipline processes to retain them.

New Zealand designed a dedicated manufacturer certification, BuiltReady, to translate factory control into regulatory assurance for frames, panels and volumetric modules, using the Joint Accreditation System of Australia and New Zealand accredited auditors. Uptake has been limited where multiple schemes coexist and council practice is not fully aligned, the lesson being to keep one clear pathway and integrate it tightly with local approvals.

Taken together, these international examples offer building blocks NSW can replicate and customise: a shared MMC language; code-aligned factory certification that authorities recognise; concise, lender-ready assurance; pattern-book designs and program approvals; multi-year frameworks that create a dependable order book; milestone finance that pays for occupancy; and visible quality marks and demonstrations that build public confidence.

Figure 6 | International expert insights



Source: Authors



What this evidence means for policy

International experts offered six consistent messages that align with the findings above. Assurance must be lender-ready, with certification tied to durability, quality control, and repairability so that mainstream mortgages and insurance are straightforward. Buying at scale and programmatically matters.

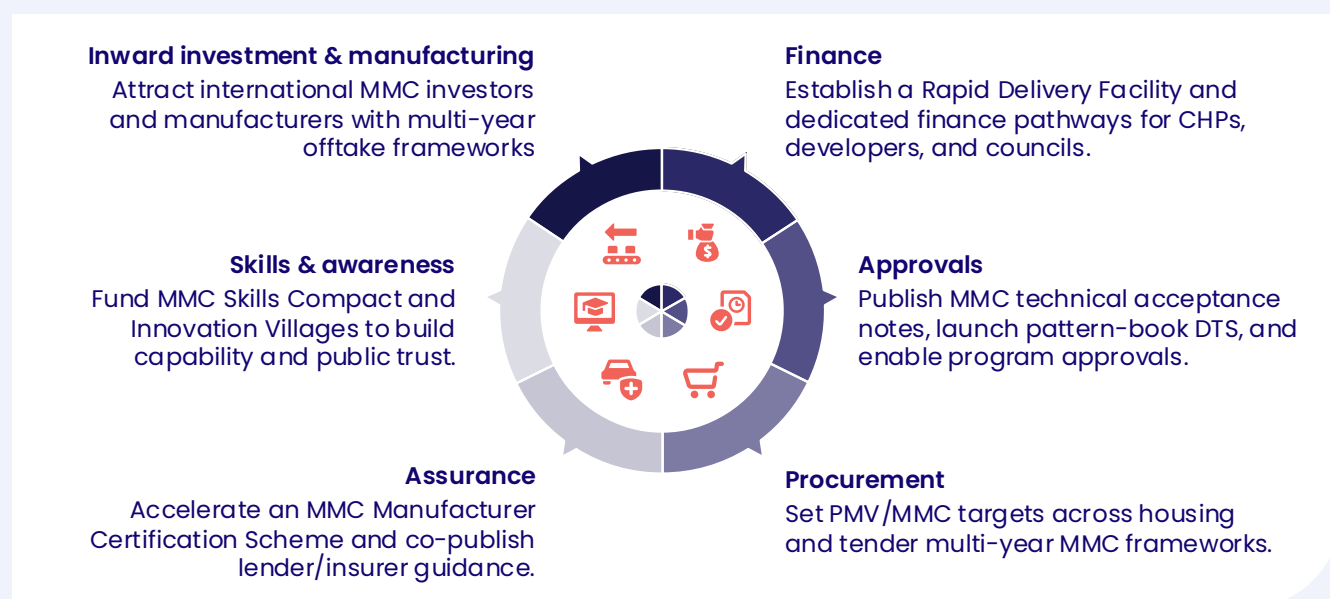
The government can set clear expectations and underwrite demand through frameworks and multiyear offtake. Approvals need to be predictable, using pattern book designs and program approvals to reduce bespoke risk. Finance should reward speed rather than inputs, releasing funds against milestones that bring forward occupancy. Standard products, parts kits, and repeatable details outperform endless bespoke solutions in terms of cost and quality. Finally, the public needs to see results: demonstration precincts and post-occupancy data build social licence.

The evidence identifies a set of opportunities for the government to explore and test in combination. On finance, a rapid-delivery facility, leveraging state resources and Commonwealth programs, can release funds against verified milestones and offer dedicated pathways for community housing providers, developers and councils.

On approvals, technical acceptance notes, and pattern book designs for common typologies, as well as program approvals, can facilitate faster and more predictable decision-making. Procurement can act as the market-maker by setting expectations for PMV in social and essential-worker housing and awarding multiyear frameworks that underwrite factory investment. Assurance can be strengthened by accelerating progress toward a manufacturer certification scheme and co-publishing, making mortgageability a routine process.

Skills and public confidence can be built through an MMC Skills Compact and “innovation villages” that demonstrate performance in the open. Finally, inward investment can be attracted by offering multiyear offtake and site-readiness to proven international manufacturers

Figure 7 | Policy levers for action



Source: Authors



A policy agenda for NSW: a practical sequence and options

NSW can move from isolated pilots to a reliable pipeline of factory-built homes by treating industrialised delivery as a program, not a one-off project. The sequence is simple. First, rules and evidence would need to be made clear so consent authorities, lenders and insurers can say “yes” with confidence. Second, predictable demand would need to be created so manufacturers can invest, and councils can rely on faster, cleaner delivery. Third, finance and skills would need to be aligned so projects move quickly from factory to front door. None of this requires inventing a new regime; it means using familiar NSW and national settings in a more deliberate way, drawing on what has worked in comparable countries and adapting it to local conditions.

1 Make approvals predictable for MMC

A sensible starting point is to make approvals predictable. NSW can publish a small set of pattern book designs; duplexes, terraces, and three- to six-storey walk-ups, that already meet BASIX and National Construction Code requirements, as well as accessibility and fire separation. Consent then becomes a matter of confirming that the site is suitable and the design is applied correctly, rather than re-proving the same compliance questions for each project. To support this, the NSW Government can issue short, practical acceptance notes that interpret Australian Building Codes Board guidance for NSW, setting out what counts as evidence of suitability for factory-made elements: what quality records to show from the factory, how traceability is handled, and what installation certificates are required. Where an MMC system is certified and a pattern book design is used, councils would have a clear checklist from application to decision. For systems that are genuinely novel, including 3D-printed components,²⁵ the same pathway can be used, with explicit routes to demonstrate compliance through materials testing, structural and fire assessments and validated design rules.

2 Build assurance lenders, insurers and councils can rely on

The national work on a manufacturer certification scheme can be translated into everyday NSW practice by signalling that certified factories and systems will be recognised in approvals, procurement, valuation and insurance. In plain terms, if a manufacturer can demonstrate documented process control, factory quality assurance, durability, and repairability, and have this confirmed (by an accredited auditor, consent authorities, valuers, and insurers), they should be able to rely on that assurance rather than re-auditing each project from scratch. Co-publishing a short guidance note with lenders and valuers would make the bridge explicit, linking certification to mortgageability and valuation, so households and community housing providers are not penalised for choosing MMC. Publishing a simple performance dashboard, including time to occupancy, cost variance, defect rectification, and energy outcomes, would let the public and the market see how certified systems perform in the field.



3 Use procurement to create a dependable pipeline

Demand then needs to be made visible and reliable. The government can play a market-making role by setting clear expectations for the share of value delivered off-site in social and essential worker housing, and by awarding multiyear frameworks that pre-qualify several suppliers in categories such as volumetric modular, panelised, hybrid, and, where appropriate, printed systems. Framework contracts would give community housing providers and agencies a straightforward way to “call off” work from pre-agreed designs and prices. At the same time, manufacturers would have line-of-sight to an order book large enough to justify investment in plant, people and process. To ensure benefits reach both regions and cities, the state can couple these frameworks with incentives for factories and assembly hubs outside metropolitan areas, tied to the pipelines of community housing providers and land releases.

4 Align finance and approvals to reward delivery speed

Finance should reward speed and verified performance. A rapid delivery facility, drawing on state resources and Commonwealth programs where appropriate, could release capital at practical milestones: factory completion, installation and occupancy. This shifts attention from inputs to results, brings supply forward and lowers carrying costs. Councils can be supported to move quickly through targeted incentive payments for those that adopt MMC-friendly local rules and achieve accelerated approvals. A single, public approvals navigator, mapping planning pathways, building approvals, utilities and compliance sign-off, would help applicants avoid common bottlenecks.

5 Grow skills, capability and public trust

Skills, industry development and public confidence knit the package together. An MMC Skills Compact, co-developed with TAFE and higher education providers, can offer microcredentials in Design for Manufacture and Assembly, factory quality assurance, logistics, installation and services interfaces, while creating simple pathways for traditional trades to transition into factory and assembly roles. Demonstration precincts, where councils, lenders and the public can walk through completed homes, see live performance data and talk to residents, help normalise modern methods and make benefits visible beyond technical documents. Partnerships with Indigenous organisations and community groups can ensure that local employment, training and design priorities are built into delivery from the outset.

The same architecture can accommodate innovation without creating a parallel system. If a new product or process emerges, the question is always the same: can it show, in a straightforward way, that it meets the outcomes the code requires, and can a council, lender and insurer understand and trust that evidence? By anchoring innovation in documented testing, audited factory control, straightforward installation rules, and keeping pattern book designs open to incremental updates, NSW can remain open to better solutions while maintaining a familiar path to approval and finance.



Each element above is an option, not a prescription. NSW can test them in combinations and scale what works. For example, a cluster of sites could pilot the full package, certified manufacturer, pattern book design, program-level approval, framework procurement and milestone finance. In contrast, a second cluster tests the approvals and assurance settings with a broader set of suppliers. Lessons from these pilots can be incorporated into guidance, certification, and procurement documents, allowing the experience to improve over time. In parallel, the state can invite proven international manufacturers to partner with local firms under the frameworks, with requirements for technology transfer, local content and regional jobs, ensuring that inward investment builds domestic capability rather than displacing it.

Two principles help keep the agenda clear. First, keep MMC within the rules that everyone already uses, such as NCC, BASIX, the Sustainable Buildings SEPP, and standard evidence pathways, so that councils, financiers, and insurers are not asked to learn a new language. Second, make performance visible and routine. When the time to occupancy, cost certainty, defects and energy bills are measured and published, confidence grows and arguments about perception give way to evidence. Taken together, these options provide NSW with a practical procedure to utilise modern methods more widely: clarify the rules, recognise certification, create a dependable order book, pay for results, and build the skills and trust that keep the system moving.

Figure 8 | Proposed MMC adoption framework for NSW



Source: Authors



Sector-specific actions

MMC works as a system: no single entity can make them routine on its own. Approval settings, finance and insurance confidence, factory investment, local capability, and public trust all move together. The sector-specific actions below demonstrate how each actor can leverage familiar levers within existing mandates to make decisions faster and more predictably, while creating dependable demand that enables manufacturers to invest.

NSW Government: The state can simplify approvals by updating SEPP guidance to explicitly reference MMC and pattern book typologies. That provides consent authorities, applicants, and manufacturers with a shared playbook. Funding demonstration precincts makes performance visible to councils, lenders and the public, turning perceptions into evidence. Embedding MMC in government land releases and precinct programs creates a steady order book that derisks factory investment and anchors jobs in the regions. These are pragmatic steps that would signal “this is business as usual” rather than a special program.

Commonwealth Government: National consistency reduces friction for lenders, insurers and interstate builders. Backing a single manufacturer certification pathway, developed with the ABCB and Standards partners, would help everyone recognise what “good” looks like, regardless of jurisdiction. Financing tools such as the Housing Australia Future Fund can then reward projects that reach occupancy sooner and meet Net Zero metrics, aligning capital with verified outcomes rather than inputs. Encouraging states to link procurement to PMV targets would spread predictable demand across the country, allowing the same suppliers to scale.

Councils and consent authorities: Local assessment is where confidence is won or lost. Adopting MMC checklists and short training modules, and nominating MMC “champions” within assessment teams, would allow case officers to recognise reliable evidence quickly. Using pattern book designs reduces bespoke risk and makes decisions more consistent. Council incentive payments tied to faster MMC decisions can support resourcing and signal that early adopters will be backed. The result is fewer iterations, clearer advice to applicants and earlier housing delivery for communities.

Lenders, insurers and valuers: Mortgageability and insurability are critical to normalising MMC. Co-developing durability and quality acceptance criteria, linked to the certification pathway, means underwriters and valuers can assess risk consistently without retesting each project. Publishing concise product-level guidance provides front-line credit and valuation teams with a straightforward resource, enabling certified homes to be treated as routine. This removes a significant source of uncertainty for community housing providers, developers and households.

Industry and community housing providers: Supply follows confidence. Forming alliances to aggregate demand would enable manufacturers to plan staffing and materials against a known pipeline rather than one-off tenders. Investing in digital quality assurance and traceability would show councils and insurers exactly how components were made and installed. Partnering with TAFE and higher education providers on the Skills Compact would allow factory, logistics, and site assembly teams to have the capabilities that MMC relies on. These moves enhance productivity and reduce defects, while creating new opportunities for local employment.



Why **alignment** matters

Each action on its own helps; taken together, they change the rhythm of delivery. Clear state guidance and pattern book make approvals predictable; national certification gives lenders, insurers and valuers confidence; multiyear procurement and land releases create a dependable order book; milestone-based finance brings supply forward; council capacity and incentives keep decisions moving; and industry investment in quality assurance and skills turns intent into homes. The hand-offs between agencies become smoother, and projects move from factory floor to front door with fewer surprises, for government, industry and communities alike.



Conclusion

MMC are not a cure-all; they are a practical way to deliver more homes, with greater predictability and lower emissions, when the system around them works smoothly. Our NSW-focused research, supported by interviews, a cross-sector survey and lessons from the United Kingdom, Canada, the United States, Germany, New Zealand and Sweden, points to a simple idea: MMC becomes easier to use when rules are clear, evidence is trusted, demand is visible, and finance rewards timely delivery.

There are several pathways that NSW and partners could explore. One approach is to translate existing NCC/ABCBC settings into everyday practice through clear pattern book designs and concise acceptance notes, enabling councils to make quicker and more consistent decisions. Another approach is to progress a national manufacturer certification, as recognised in NSW guidance, with simple lender/insurer notes on durability, repairability, and valuation. These steps would not change the rules; they would make the current pathways easier to navigate.

Procurement and finance can reinforce that clarity. NSW might consider multiyear framework agreements and transparent PMV expectations to create a dependable order book, alongside milestone-based funding that releases capital at factory completion, installation and occupancy. In parallel, an MMC Skills Compact with TAFE and universities, as well as visible “innovation village” precincts with simple public dashboards on time, cost, quality, and energy outcomes, could help build capability and community confidence.

As a whole, these are practical options, tested overseas and adaptable to local conditions, that could move MMC from one-off projects to reliable programs. By piloting, learning and scaling what works, NSW can add well-located homes faster, cut running costs and emissions, and support regional jobs, while keeping the path from factory floor to front door straightforward for government, industry and communities.

Annex A: Survey-derived insights and actions

This matrix translates the survey's headline signals into policy moves. It pairs each insight with concise evidence and a corresponding action so decision-makers can prioritise near-term reforms across approvals, finance, procurement, assurance, skills and market confidence.

Policy matrix

Area / Insight	Survey evidence (mean score value)*	Why it matters	Policy action
MMC value for affordability	4.04	MMC is widely seen as a practical lever for reducing costs/time.	Adopt pattern-book typologies and program approvals to convert value perceptions into delivered dwellings.
MMC potential to cut emissions	4.25	Strong belief that MMC supports net-zero through repeatable, fabric-first delivery.	Tie procurement to BASIX/NCC performance; publish factory/site quality assurance and energy outcomes.
Adoption intent (5 years)	3.88	High stated intent creates a window for policy to catalyse market shift.	Stand up Rapid Delivery Facility and multiyear MMC frameworks with PMV targets.
Organisational risk-mitigation capacity	3.33	Capability is uneven; without support, adoption may stall.	Issue lender/insurer acceptance guidance; provide MMC approvals navigator & templates.
Perceived regulatory support	2.50	Perception of limited 'green-lane' settings suppresses uptake.	Publish MMC technical acceptance notes; enable program approvals for certified systems.
Skills significance	3.58	Skills are pivotal across factory quality assurance, logistics and on-site assembly.	Fund an MMC Skills Compact with TAFE/HE and incentivise on-the-job training.
Expected cost/time reduction	3.88	Stakeholders expect material efficiency gains if MMC is enabled.	Bundle approvals reform with pooled offtake to realise speed and cost certainty.
MMC-Net-Zero linkage importance	3.62	Sustainability benefits are a core motivator for policy change.	Prioritise low-carbon materials and embodied-carbon reporting in MMC tenders.
Stricter sustainability rules motivate?	2.38	Compliance-only approaches are unlikely to drive adoption now.	Use enabling levers first: finance, approvals, procurement; phase regulatory ratchets later.
Supply-chain readiness	2.21	Perceived readiness is low; factories need demand certainty.	Award multiyear frameworks; seed regional hubs; publish rolling pipelines.
Familiarity with MMC	3.96	Base literacy is good; targeted training can translate awareness into capability.	Scale site visits and demonstration precincts with live dashboards.
Industry acceptance (today)	2.46	Perceived acceptance is low; confidence barriers remain.	Use certification + lender/valuer guidance and visible pilots to normalise MMC.
Public sentiment	3.29	Public views are mixed; communication and design quality matter.	Showcase exemplar projects and publish simple performance fact sheets.

* Results are reported as percentages from a 1–5 Likert scale, where 1 = strongly disagree and 5 = strongly agree.



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