



Enabling Volumetric Modular Construction in Australia's Build-to-Rent Sector:

International Policy and Governance Recommendations

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Cover Image: Ten Degrees, London, by Simon Toplis

Location	Asset Type	Funder & Operator
London Borough of Croydon	BTR	Greystar & Henderson Park
Modules	Levels	Developer & Main Contractor
1,400 (546 homes)	44 storeys & 38 storeys	Tide Construction
Completion	Architect	Modular Manufacturer
2020	HTA Design	Vision Volumetric

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Image 2: College Road

Location London Borough of Croydon	Asset Type Co-living & affordable housing
Modules 1,725 (937 units)	Levels 50 storeys & 35 storeys
Completion 2023	Developer & Manufacturer Tide & Vision
Architect HTA Design	Owner Oaktree Capital Management & Outpost Management

Executive Summary

1. Australia’s Housing Crisis

Australia’s housing system is in crisis. More than 1.26 million households faced financial housing stress in 2024-25, while climate related increases in housing costs are intensifying this vulnerability. Within the broader housing shortage, rental stress is particularly acute: more than two in five (43%) low-income renters faced rental stress in 2024–25, and up to 3.2 million people are now at risk of losing their home from a single shock like a rent rise or job loss.

At the same time, the construction industry is constrained by labour shortages (19,900 vacant positions in May 2026) and rising delivery costs (roughly 80% increase over the last decade for apartments from \$2,500 per square meter in 2014/15 to \$4,500 per square meter in 2024/25¹). These conditions place the June 2029, 5-year Australian Housing Accord target of 1.2 million new homes out of reach. Twenty-one months into the Accord (to March 2026), 308,000 new homes had been completed, 26% of the national target and 33% approved; the Council now expects the 1.2 million target to be reached in the December quarter 2030.²

Apartment development has worn the bulk of the impact of construction cost growth, at 73% since COVID³. Apartment approvals are running 46% below their 2016 peak nationally (58% below in NSW)⁴, but the real problem is converting DAs to project starts: in NSW only 48% of the apartments approved for development in the last two years have been approved for construction, against 100% of detached houses⁵. BTR has fared even worse, approvals more than doubled between 2022 and 2024 to a record 12,706 apartments⁶, yet today 64%⁷ of approved projects are yet to secure funding⁸, due to the burden of high cost increases and the tax load.

2. Why Conventional Delivery Cannot Close the Gap

Australia’s housing crisis urgently demands innovation in housing delivery. Rental housing is a significant component of this crisis, as a growing share of households rely on the private rental sector for housing. Around one third of Australian households rent their homes, while rental affordability has deteriorated significantly, with rents for new leases requiring 33% of household income in the March quarter 2026⁹.

However, Australia’s build-to-sell model is primarily oriented towards home ownership rather than rental supply, with rental housing delivered mainly through fragmented small-scale investors. Conventional construction is also increasingly constrained by its dependence on weather, labour intensity and rising costs. Medium and high-rise apartments account for a growing share of new housing supply, but the build-to-sell model depends on pre-sales that have been difficult to achieve in the volatile economic conditions since COVID-19. Constrained construction capacity further limits the pace and scale of apartment delivery.

¹ National Housing Supply and Affordability Council, State of the Housing System 2026.
² National Housing Supply and Affordability Council, Quarterly Report: August 2026.
³ Australian Bureau of Statistics, “Building Activity, Australia.” March quarter 2026. Average value of work commenced per apartment, FY2019 to the 12 months to March 2026.
⁴ Australian Bureau of Statistics, “Building Approvals, Australia.” Apartment approvals, 2016 peak to the latest 12 months. Accessed 24 September 2026.
⁵ NSW Department of Planning, Housing and Infrastructure, “Housing Supply Dashboard.” 24 months to June 2026.
⁶ Urbis, Rental Intelligence & Apartment Database, September 2026
⁷ Urbis, Apartment Essentials Dashboard. BTR Rental Intelligence Dashboard (August 2026).
⁸ Urbis, Rental Intelligence & Apartment Database, September 2026
⁹ National Housing Supply and Affordability Council, State of the Housing System 2026.

3. The VMC-BTR Housing Delivery Model

Aiming to develop an innovative approach to addressing the two significant challenges in housing delivery, **this study proposes an integrated Volumetric Modular Construction–BTR (VMC-BTR) model as a scalable solution.**

BTR is a purpose-built rental housing model defined by long-term single ownership, professional management, and dwellings designed specifically for rental use. Internationally, the concept is used broadly and includes different forms of purpose-built rental housing, including institutional multifamily housing, professionally managed apartment communities, and other large-scale rental developments.

BTR sits within the broader ‘Living’ real estate sector, which JLL forecasts will see a further \$1.4 trillion in global investment transactions over the next five years, and represents significant potential for further growth in Australia¹⁰.

More established BTR markets demonstrate the potential for the sector to operate at scale. BTR accounts for approximately 5% of the housing market in the UK and 12% in the US, compared with just 0.2% in Australia¹¹. While home ownership remains an important aspiration in Australia, the scale of rental demand highlights the need to expand the supply and diversity of rental housing. **International experience also demonstrates that a more established BTR sector can coexist with relatively high levels of home ownership, with home ownership rates in the UK and United States remaining comparable to Australia’s.**

BTR has the potential to deliver dwellings at scale and contribute to Australia’s Housing Accord targets: Australia’s BTR market has reached 18,310 operational units, with a further 10,583 under construction (Q2 2026)¹². However, despite strong interest from global capital, BTR commencements have stalled since 2023/24, with only one project commencing construction in 2026 among projects with development approval achieved in 2025. The average time between BTR approval and construction commencement has also increased to more than 30 months, and there is a pipeline of 26,210 homes that could be activated¹³. This indicates that Australia’s BTR delivery is also constrained by construction capacity, particularly the ability to translate approved projects into construction and completed dwellings at the required scale and speed.

VMC, a form of Modern Methods of Construction (MMC), is an industrialised construction method in which three-dimensional, pre-finished modules are manufactured off-site and stacked on-site. VMC’s advantages (25–50% faster programmes, labour independence, cost predictability, quality assurance and lower site disruption) can be activated through BTR’s scale and standardisation. At the same time, the growing gap between BTR approvals and construction commencement highlights the need for

innovative construction practices that can improve delivery efficiency and accelerate the conversion of approved projects into completed dwellings. VMC offers a potentially complementary construction solution to BTR, aligning the scale and standardisation of BTR with the industrialised production capabilities of modular construction. Yet MMC (including VMC) accounts for 5% of Australian construction activity¹⁴, versus approximately 80% of new detached houses in Sweden, around 40% of Japanese apartments being factory-built, and 24% of new-build residential projects in the UK¹⁵.

The innovative VMC–BTR model is constrained by housing delivery governance frameworks. Taxation, finance, planning and certification frameworks have largely been designed around conventional construction and home ownership, creating institutional barriers to the adoption of innovative delivery models. Existing research has primarily focused on barriers during the construction phase; however, this study shows that governance gaps can emerge earlier, at the pre-project stage, when developers, investors and financiers assess whether to pursue VMC, BTR, or an integrated VMC–BTR model in the first place.

4. Policy Gaps and International Precedents

Six governance gaps were identified across the project lifecycle, each mapped against international precedents.

Governance gap	Australian position	International precedent
Taxation	GST on construction is unrecoverable; no incentive for productivity-enhancing delivery	UK VAT zero-rating (1994); Canada’s 100% GST/HST rebate for purpose-built rental (2023)
Finance	Lenders apply risk premiums to VMC’s limited track record and BTR’s back-ended returns	UK Private Rented Sector Guarantee Scheme; Canada’s Apartment Construction Loan Program
MMC/VMC incentives	Commonwealth funding (\$120 million, 2026–27) still early-stage; state programs largely target social housing	Singapore’s mandatory PPVC on government land sales lifted DfMA adoption from ~40% to 76%
Planning pathways	VMC assessed through conventional pathways	UK NPPF/London Plan Policy H11 gives BTR explicit national and regional recognition
Certification & insurance	No national VMC quality-assurance scheme; each project bespoke-assessed by insurers	UK BOPAS certification underpins 60-year assurance for lenders and insurers
Logistics	Standard oversize-freight rules restrict VMC module transport	Hong Kong’s dedicated logistics guidance for modular delivery

¹⁰ JLL, “Global Living Investment Universe 2025 – Growth markets shaped by global capital” 23 April 2025
¹¹ Property Council of Australia, “A new form of housing supply for Australia: Build to Rent housing”, April 2023
¹² Urbis, Q2 2026.
¹³ Urbis, Q2 2026.

¹⁴ John Curtin Research Centre, “Manufacturing Homes – A National Strategy for Solving Australia’s Housing Crisis” July 2026.
¹⁵ RICS. “Modern methods of construction: where are we now?” 21 January 2026.

5. International Case Studies — Snapshot

Jurisdiction	BTR (% of total residential market value)	MMC adoption	Defining lesson for Australia
UK (England)	5.4%	24% of new-build residential	Sustained BTR growth followed coordinated finance guarantees, planning recognition (2018) and a national MMC definition framework, though standalone volumetric manufacturers still failed without pipeline certainty.
Canada	8% (proxy)	~2% of homes; 7.5% of construction value	Rental supply responds to targeted financing and tax measures (GST rebate, ACLP) more than broad tax expenditure — a lesson from the 1982 MURB wind-down.
Singapore	N/A	76% DfMA adoption by GFA (2025)	Mandatory PPVC on public land sales created guaranteed demand, letting manufacturers invest in factory capacity at scale.
United States	12%	~5.1% of key construction segments	Deep BTR penetration rests on accelerated depreciation and REIT-style structures; VMC remains market-led and fragmented, illustrated by manufacturer Katterra’s 2021 collapse.

A side-by-side comparison with the UK (England), Canada, the United States and Singapore shows that Australia has the largest average dwelling size, the lowest population density, and housing provision per capita below that of the UK, Canada and the United States. Affordability sits mid-pack, home prices relative to income are better than in the UK and Canada but worse than in the United States, while rental stress is lower than in Canada and the United States but higher than in the UK. Together, these characteristics point to a need to expand housing supply while improving the efficiency and capacity of housing delivery in Australia.

The recent Australian Intergenerational report puts these initiatives right in the spotlight again for our future economic prosperity, we need to turn around productivity and housing supply to get business and the broader economy fit for the future.

Across international markets, the growth of BTR has typically been supported by targeted policy interventions. These have included finance guarantees and planning recognition in the UK, accelerated depreciation and REIT structures in the United States, and targeted tax and financing measures in Canada. In several markets, policy support for rental housing has also been accompanied by measures to encourage MMC, including VMC, to improve construction productivity, reduce delivery constraints and expand housing supply. This international experience suggests that the potential of an integrated VMC–BTR model depends on a governance environment that enables its adoption and supports investment and delivery.

6. Recommendations and Priority Actions

The headline recommendations drawn from this global study to support the growth of VMC-BTR include:

- **Tax reform:** Introduce a Commonwealth GST rebate on qualifying BTR construction, modelled on Canada’s Purpose-Built Rental Housing Rebate or the UK’s zero-rating of VAT on new residential construction. State-based developer contributions need to better reflect BTR smaller unit size/occupancy, as a pro-rata of larger units.
- **Affordable housing:** is a major BTR cost, but also an opportunity to unlock a large pipeline of affordable rental and strengthen the sector’s social licence. The US Low-Income Housing Tax Credit shows the potential, financing over three million affordable rental homes through private developers since 1986. This stock should not be taxed, yet tax treatment varies widely across Australian states and territories.

Also, Federal and State Governments need to harmonise Affordable Housing policies to ensure there is no double taxing, e.g. NSW planning Affordable Housing policies are in perpetuity and Federal Affordable Housing requirements to access MIT withholding tax concessions are 10% for 15 years.

- **Modular factories:** Some countries have been able to establish local modular manufacturing capabilities, with mixed results, as many factories have struggled or closed without a reliable pipeline of projects to keep production running. Several recent initiatives point to the Australian Government wanting to encourage modular manufacturing here. Drawing on lessons from international precedents, Government should secure a consistent, long-term project pipeline before or alongside investing in factory capacity.
- **Financing reform to incentivise VMC-BTR:** Establish a national low-cost, fully repayable construction loan program for BTR, modelled on Canada’s \$55 billion Apartment Construction Loan Program, which has committed over 74,500 purpose-built rental homes by 2025, against a target of 131,000 by 2031/32. Loans should offer enhanced terms for projects delivered with certified VMC, building on WA’s BTR Kickstart Fund as the domestic starting point.

6. Recommendations and Priority Actions (continued)

- **Unified logistics framework:** Recognise VMC’s distinct transport profile, with less trucks and wider loads, rather than treating modules as standard oversize freight. Hong Kong Construction Industry Council provides a good precedent, where they developed dedicated reference material specifically addressing the logistics, covering urban delivery route planning, road width constraints, and formal coordination protocols with road management authorities. The government simultaneously encouraged the adoption of BIM and AI tools for optimal route selection and transport impact assessment.
- **Planning recognition and design guidance:** Align BTR definitions nationally; give VMC explicit, dedicated assessment pathways rather than treating it as a deviation from conventional construction. The Building (Approvals and Practitioners) Act 2026 (NSW) is Australia’s first statute to define prefabricated buildings and give MMC/VMC dedicated assessment pathways, and they should be adopted across the country. Internationally, England has recognised BTR as a distinct tenure in its planning system since 2018 through the NPPF and Planning Practice Guidance, and Singapore has mandated PPVC on selected Government Land Sales sites since 2014.
- **National VMC certification and insurance framework:** Build on the Commonwealth’s \$120 million National Productivity Fund, under which the ABCB is developing a National Voluntary Certification Scheme for MMC manufacturers (issues paper released July 2025, consultation open, rollout expected mid-2028, which should be brought forward), to match the assurance the UK’s BOPAS scheme has provided lenders and insurers since its launch in 2013.
- **Announce a dedicated VMC-BTR incentive program with a pipeline commitment.** Pipeline certainty is the signal to VMC manufacturers that public policy supports investment.

7. Conclusion

The VMC-BTR model holds significant untapped potential in Australia but realising it will require deliberate governance support. Case studies confirm that factory manufactured modular buildings can deliver faster timelines, competitive costs, and consistent quality, with market leading ESG. **What’s missing is the policy and governance framework to scale this up.** Australia’s tax settings, finance structures, planning systems, certification frameworks, and regulatory approvals were all designed for home ownership and conventional construction methods. They are actively obstructing the innovative model that Australia’s housing crisis desperately requires to improve supply and productivity.



Image 3: The Herring

Location 169-171 Herring Road, Macquarie Park	Asset Type PBSA
Modules 548 (528 units)	Levels 20 storeys
Completion Under Construction	Developer & Manufacturer Freecity Space Labs (Integrator)
Architect COX Architecture	Owner Freecity

1. Australia’s Housing Crisis and the Limits of Conventional Project Delivery

Australia’s housing crisis is driven by multidimensional factors on both the supply and demand sides. On the supply side, two issues stand out. First, the construction delivery model has suffered from declining productivity for many years. Second, the industry has been burdened by significant cost increases, which have made housing projects, particularly apartments, less feasible. This section establishes why incremental improvement within the existing delivery model is insufficient, and why innovative housing production models are required.

1.1 Australia’s Housing Shortage

A supply shortfall has driven Australia into a deep housing crisis, leaving affordability an ongoing challenge for a growing share of Australians, whether they are renting, buying, or managing mortgage repayments¹⁶. In 2024-25, more than 1 in 4 (26%) of Australians, regardless of income level, were spending more than 30% of their disposable income on housing related costs.¹⁷

Australia is also undergoing a significant demographic shift. The way households are formed and the kinds of homes people need are changing, reshaping what Australia’s housing system is being asked to deliver. **The average Australian household has shrunk from 4.5 people in 1911 to 2.6 by 2019/20**, with single-person households making up an ever-growing share of the total¹⁸. This shift challenges the traditional aspiration of home ownership centred on the large family home.

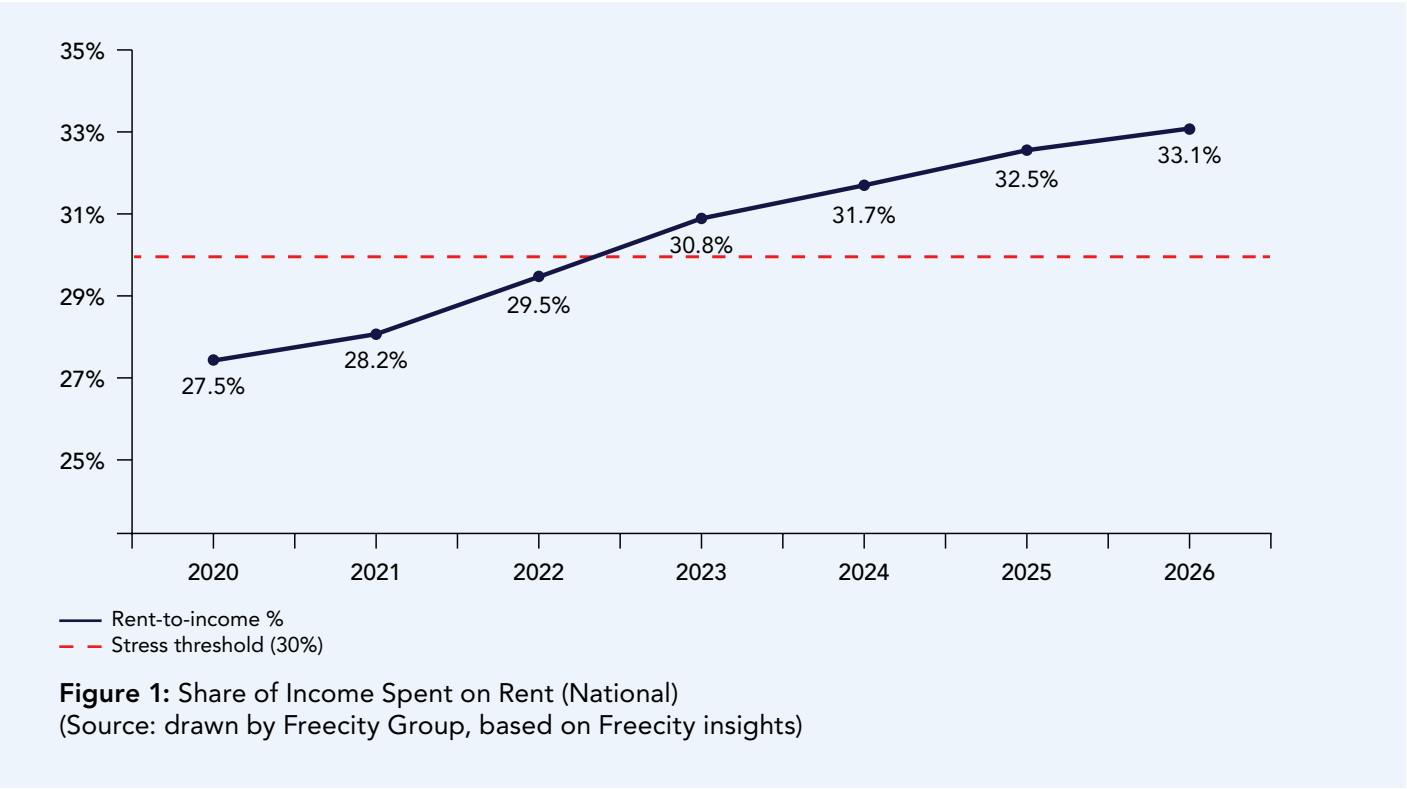
Tenure preferences are also shifting. Renting has become an increasingly common lifestyle choice, particularly among Millennials, who value the flexibility it offers. At the same time, declining home ownership affordability has pushed a growing share of Australians into the rental market. As a result, **the share of private renting increased from 19.9% in 1999–2000 to 26.2% in 2019–2020**.¹⁹

The economic pressure is especially severe in the rental market, **with the share of household income spent on rent now at over 33%, significantly exceeding the**

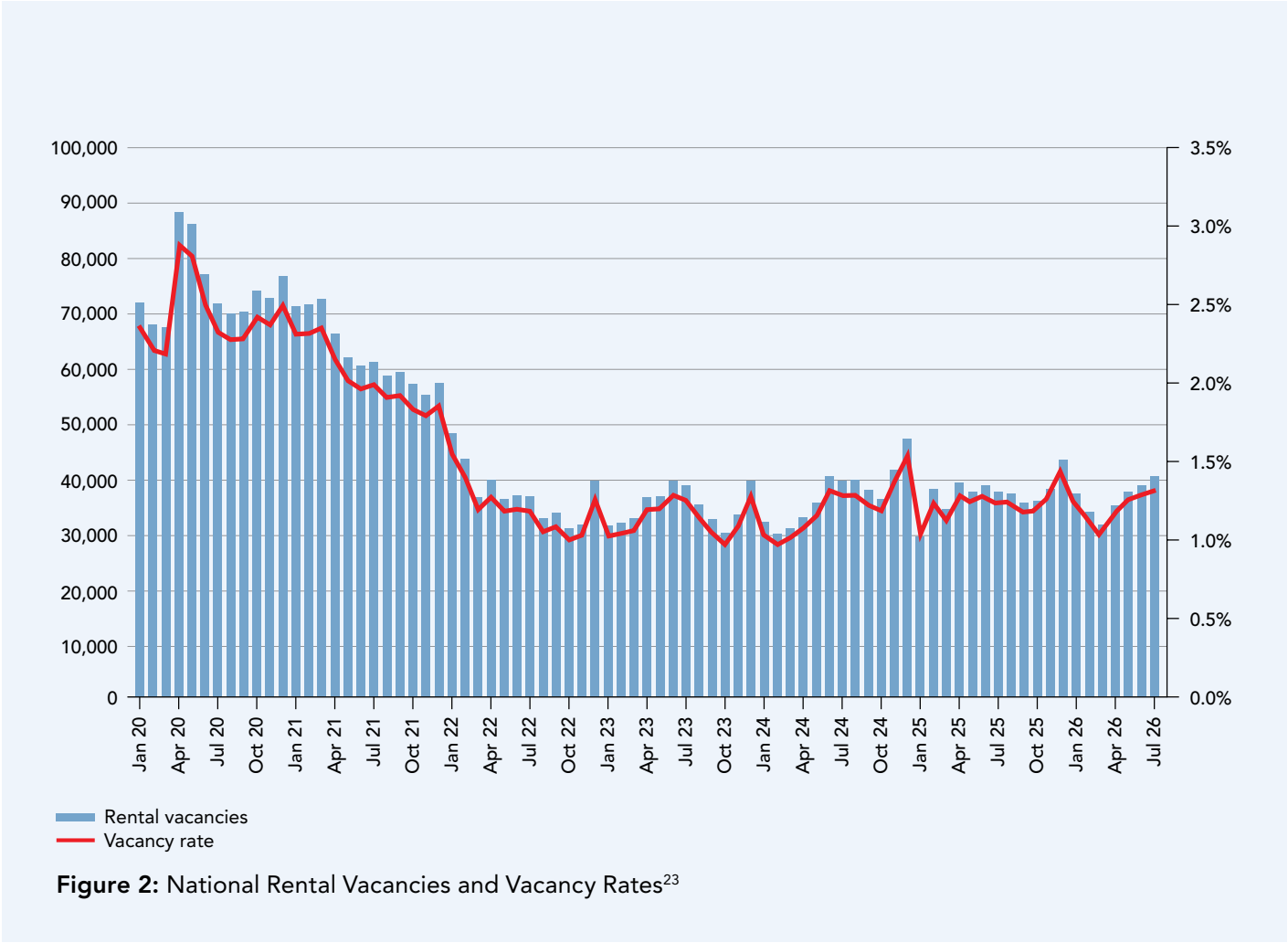
30% stress threshold (Figure 1). Meanwhile, the national vacancy rate has been at or near 1% since 2022, easing only slightly to 1.3% by July 2026 (40,771 vacancies nationally, with five of eight capital cities still below 1% and asking rents up 7.2% year on year) (Figure 2), well below the 3% threshold economists consider necessary for a competitive rental market.²⁰

Strong rental growth has made it increasingly difficult for many people to find affordable housing. The low vacancy rate and rental cost burden point to the need for more and faster housing supply, particularly rental housing supply.

In response to this crisis, in October 2022 the federal government announced the National Housing Accord, a national framework establishing a target of 1.2 million new homes to be delivered across Australia over the five years from 1 July 2024.²¹ Progress against this target, however, remains deeply concerning. While a wide range of policies have been implemented to support approvals and establish a strong housing pipeline, **only 26% of the national target had been built and 33% approved by the March quarter 2026, 21 months into the five-year program, and the Council now expects the target to be reached in the December quarter 2030**.²²



¹⁶ Power, E et al, "Surviving in a cost-of-living crisis: Australia's fraying care infrastructures"
¹⁷ Australian Institute of Health and Welfare, "Housing Affordability."
¹⁸ Australian Institute of Family Studies, "Population and Households."
¹⁹ "Investment Behaviour Towards Build-to-Rent in Australia."



²⁰ SQM Research, "Vacancy Rates."
²¹ Ministers, Treasury, "National Housing Accord: Working Together to Help Tackle Housing Challenges."
²² BuildStreet, "Is Australia on Track to Build 1.2 Million Homes by June 2029?"
²³ SQM Research, "Vacancy Rates."

1.2 Why the Conventional Housing Delivery Model Cannot Close the Gap

The conventional housing delivery model remains focused on home ownership²⁴, rental stock owned by fragmented small-scale investors²⁵, lower-density housing types, and traditional on-site construction methods. Addressing the productivity and affordability pressures outlined above will require innovation in housing, including in the following areas:

- One dimension of this shift is the type of housing being delivered. Even if low and medium density sectors deliver strong increases in the later years of the Accord period²⁶, they are unlikely to close the gap on their own. **Medium-density and high-rise apartments will need to make up a significant share of the shortfall**, especially in high-demand Transit Oriented Development (TOD) locations.
- A second dimension is the tenure model through which rental housing is delivered. Given the urgent demand for rapid rental housing supply, existing mainstream channels are not well suited to meet this need. **Australia’s dominant build-to-sell model is oriented toward ownership, not rental supply**, and where rental housing does emerge via individual investors purchasing to let, it is delivered only through fragmented, small-scale investment, not at the pace or volume required.
- These delivery-model constraints are compounded by a third dimension: the construction industry’s capacity to build at scale. **Labour shortages, rising material costs and falling productivity are making many projects unviable before construction even begins**. The data bear this out. The average construction cost per apartment has risen 73% since COVID²⁷, and national apartment approvals are running 46% below their 2016 peak (58% below in

NSW)²⁸. The larger problem is converting consents into starts: in NSW, only 48% of the apartments approved for development in the last two years have since been approved for construction, compared with 100% of detached houses²⁹. There is also a smaller number of builders willing to construct strata apartments with too many layers of risk, including the purchasers of individual apartments adding to the complexity of defect management. Conventional construction is weather dependent, labour intensive and inherently variable in quality³⁰.



Image 4: The Herring Facade

²⁴ Martin and Pawson, “Australian first home ownership assistance schemes: international comparison and assessment”
²⁵ Vij et al., “Incentivising small-scale investors to supply affordable private rental housing”
²⁶ Oreana, “Development” 2026
²⁷ Australian Bureau of Statistics, “Building Activity, Australia.” March quarter 2026. Average value of work commenced per apartment, FY2019 to the 12 months to March 2026.
²⁸ Australian Bureau of Statistics, “Building Approvals, Australia.” Apartment approvals, 2016 peak to the latest 12 months. Accessed 24 September 2026.
²⁹ NSW Department of Planning, Housing and Infrastructure, “Housing Supply Dashboard.” 24 months to June 2026. The gap between development consent and construction is currently measured only in NSW.
³⁰ Productivity Commission Australian Government, Housing Construction Productivity: Can we fix it? Research paper., 2025

2. The Volumetric Modular Construction-Build-to-Rent (VMC-BTR) Model

In response to these constraints, this section proposes the VMC-BTR model as an innovative approach to housing production in Australia and demonstrates its performance advantages.

2.1 What VMC Is

Volumetric Modular Construction (VMC) is a construction method in which three-dimensional volumetric units are manufactured in a controlled fabrication environment and

then transported to site for installation and stacking³¹. VMC is a subset of the broader concept of Modern Methods of Construction (MMC), which also includes non-volumetric panel (2D) systems³². These VMC units are typically pre-integrated with finishes, fixtures, and fittings³³. This research focuses on steel structure-VMC, as they are more suitable for medium- and high-rise developments compared to other structure types (e.g. timber)^{34 35}. The factory-based production environment delivers a cluster of advantages that are directly relevant to Australia’s housing supply crisis (Table 1):

Table 1: The Advantages of VMC in Australia

Advantage	How it addresses the housing supply crisis
Productivity	Site preparation and traditional construction of the core, basement, ground and podium (as appropriate) run concurrently with module production. Living areas are fully finished and services connections occur in risers from the corridor only. Hence, construction programs can be reduced by 25–50% compared with conventional methods ³⁶ .
Labour independence	Factory production substitutes for onsite labour across the most labour-intensive trades ³⁷ .
Cost savings and predictability	Factory environments enable materials procurement at volume and reduce weather-related delays and rework. VMC can drive significant cost savings through economies of scale and consistent, high-volume production ³⁸ .
Quality assurance	Systematic quality inspection is built into each production stage. Defect rates are lower than site-based construction ³⁹ .
Sustainability	Factory production reduces material waste, enables more efficient MEP systems integration, and produces greater environmental benefits. VMC is a true circular economy asset, as its components can be built for disassembly and re-use ⁴⁰ .
Safety	VMC enhances safety by shifting most of the high-risk assembly into controlled, factory-style environments, and reducing activities and labour on site ⁴¹ . In some cases, there is no scaffold needed and much less working from heights ⁴² .
Low-impact sites	VMC reduces on-site deliveries compared to traditional methods, minimising disruption to the local community ⁴³ .

³¹ Khan et al., “Nudge or Mandate: An Exploration into the Constraints of Volumetric Modular Construction in Australia.”
³² Mostafa et al., “Exploring the Status, Benefits, Barriers and Opportunities of Using BIM for Advancing Prefabrication Practice.”
³³ Khan et al., “Nudge or Mandate: An Exploration into the Constraints of Volumetric Modular Construction in Australia.”
³⁴ Chen et al., “Exploration of the Multidirectional Stability and Response of Prefabricated Volumetric Modular Steel Structures.”
³⁵ Thai et al., “A Review on Modular Construction for High-Rise Buildings.”
³⁶ Towart and Ruming. “Manufactured Home Estates as Affordable Retirement Housing in Australia: Drivers, Growth and Spatial Distribution.”; Tampoe. “Off-Site Constructed Housing in NSW: Opportunities and Barriers for Affordable Housing Provision.”
³⁷ Gunawardena et al., “How Australia’s prefab industry can help the housing crisis.”
³⁸ Navaratnam et al., “Performance Review of Prefabricated Building Systems and Future Research in Australia.”
³⁹ Lawson et al., “Application of modular construction in high-rise buildings.”
⁴⁰ Hong et al., “Life-Cycle Energy Analysis of Prefabricated Building Components: An Input–Output-Based Hybrid Model.”
⁴¹ Lim and Ma, “Mental Health in Construction 4.0: Enhancing Workplace Social Support Through Prefabrication.”
⁴² MSUITE, n.d. “8 Safety Advantages of Prefabrication and Modular Construction.”
⁴³ Generalova, Generalov, and Kuznetsova, “Modular Buildings in Modern Construction.”

2.2 The Role of BTR in Mitigating Australia’s Housing Crisis

BTR refers to “large-scale, purpose-built rental housing held in single ownership (often by long term institutional investors) and professionally managed. It can provide more rental housing choices in areas where people want to live”⁴⁴. As Australians’ living circumstances become more varied, BTR is well placed to deliver the diversity

of housing needed to meet this shift, at both scale and pace. The BTR model offers several benefits (Table 2).

Australia’s BTR market totals approximately 62,000 (Table 3) apartments across operating, under-construction and planned projects, with an estimated development value of \$40.1 billion⁴⁵. Urbis puts operating stock at 18,310 units as of Q2 2026, with a further 10,583 under construction⁴⁶, down on the prior period. The two sources differ in date and coverage.

Table 2: The Advantages of BTR in Australia

Advantage	How it addresses the housing supply crisis
Sustainable, Long-term delivery	Provides a sustainable, long-term delivery approach that improves the operational efficiency of rental housing management ⁴⁷ .
Boosts supply in high-demand locations	Increases housing supply in inner- and middle-ring locations, taking advantage of existing private and public infrastructure such as local amenity and public transport ⁴⁸ .
Removes pre-sale dependency	By removing the need for pre-sales, this approach accelerates the rate at which new supply reaches the market and reduces the boom-bust pattern of supply driven by market sentiment ⁴⁹ .
Enhances customer experience	Improves tenant outcomes through greater security of tenure, high-quality building amenity, and professional tenancy management that supports wellbeing.
Pathway to affordable housing	Given appropriate policy support, BTR can provide a pathway to deliver affordable housing.
Attracts investment and creates jobs	Incentivising the sector may support greater institutional investment, contribute to job creation across delivery and operations, and attract additional capital into the housing market ⁵⁰ .

Table 3: BTR Asset Distribution in Australia - Q2 2026⁵¹

	Built		Under Construction		Dev Approval		Dev Application		Total by State		% of projects
	Apts.	Buildings	Apts.	Buildings	Apts.	Buildings	Apts.	Buildings	Apts.	Buildings	
Melbourne	11,012	30	6,341	20	7,341	20	1,996	6	26,690	76	36%
Sydney	2,608	14	998	4	8,950	24	3,933	10	16,489	52	25%
Inner Brisbane	2,540	14	1,660	6	6,428	15	116	1	10,744	36	17%
Perth	173	2	90	2	1,908	11	0	0	2,171	15	7%
Adelaide	-	-	-	-	-	-	-	-	0	0	0%
Canberra	403	3	1,436	2	1,165	3	1,295	12	4,299	20	9%
Gold Coast	1,574	10	58	1	418	1	0	0	2,050	12	6%
Total	18,310	73	10,583	35	26,210	74	7,340	29	62,443	211	
Avg no. of apts / project		251		302		354		253		296	

⁴⁴ “Investment Behaviour Towards Build-to-Rent in Australia.”

⁴⁵ BDO, “BDO’s Q1 2026 Build to Rent Report” 2026.

⁴⁶ Urbis, Q2 2026.

⁴⁷ Acheampong. “The whole-of-life approach and the financial viability of build-to-rent as innovative solutions to housing affordability challenges in Australia.”

⁴⁸ Susilawati et al. “Enabling affordable rental housing through build to rent: policy reform and institutional investment in Australia”

⁴⁹ Nethercote, “Build-to-Rent and the financialisation of rental housing: Future research directions”.

⁵⁰ Swanzy-Impraim et al. “Increase government support for build-to-rent: should we expect affordable housing?”

⁵¹ Urbis, Q2 2026.

Australia’s BTR sector has considerable room to grow, **currently representing only 0.2% of total residential market value, compared to 5.4% in the UK and 12% in the United States**⁵².

International experience also demonstrates that a more established BTR sector can coexist with relatively high levels of home ownership, with home ownership rates in the UK and United States remaining comparable to Australia’s (Figure 3).

Realising this potential, however, depends on approvals translating into actual construction. While development applications and approvals accelerated significantly during 2022-2024, the volume of projects commencing construction or reaching completion has not kept pace, creating a growing disconnect between planning activity and project delivery (Figure 4).

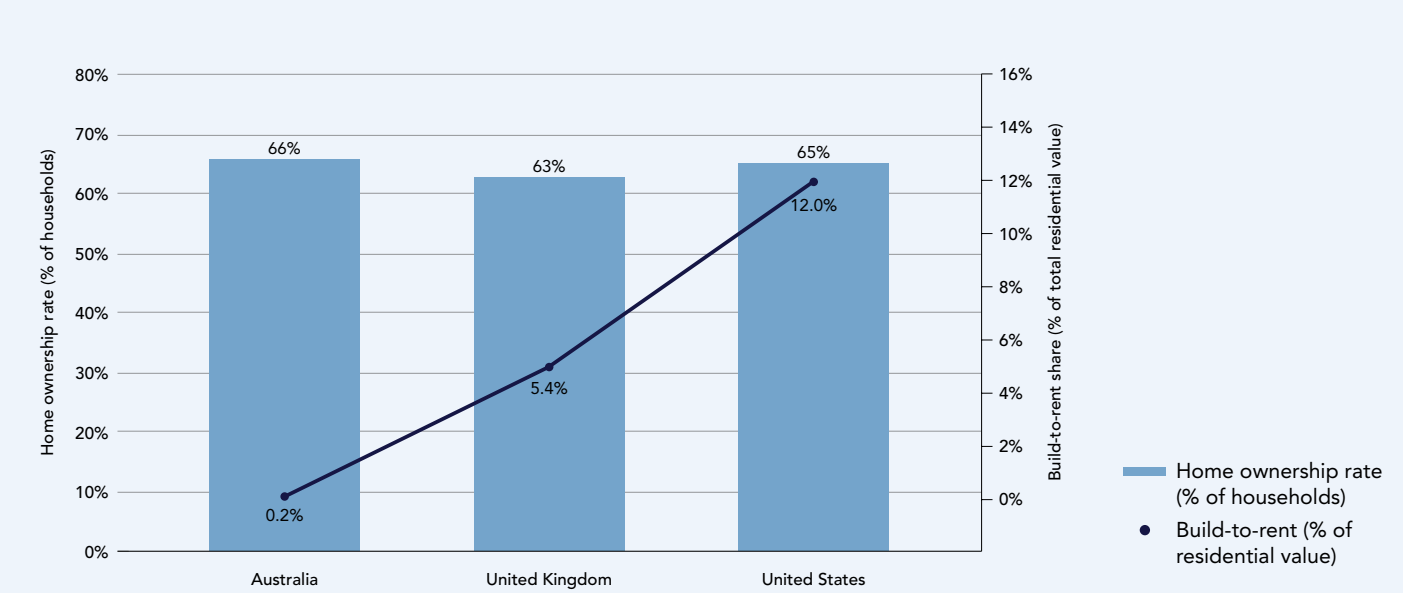


Figure 3: BTR as a percentage of the housing market and home ownership rate, by country (Source: drawn by Freecity Group, based on Freecity insights)

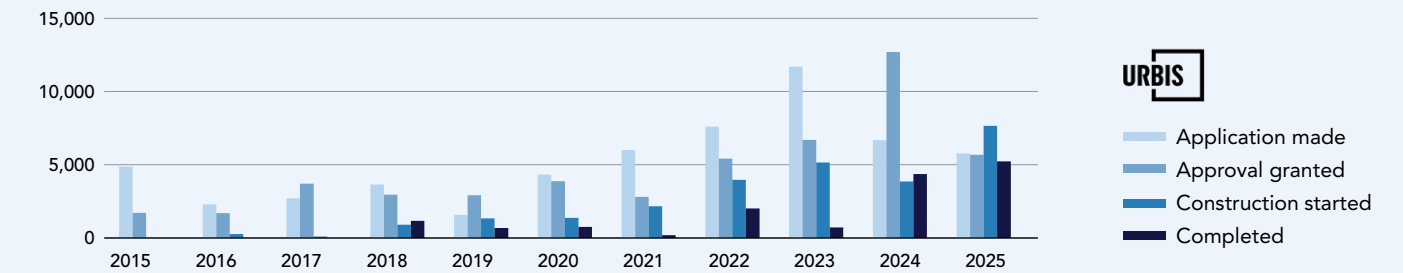


Figure 4: BTR: Apartments summated by year of milestone⁵³

⁵² Urbis, “Australia Living Sectors Market Insights (late August 2026).” 2026.

⁵³ Urbis, Rental Intelligence & Apartment Database, September 2026

A growing number of BTR apartments are stuck in a pipeline of approvals that are not translating into construction starts. There are currently 9,827 apartments approved prior to or in 2023 that remain at Development Approval stage, that have yet to progress to construction. 2024 was the biggest year for approvals, with 12,706 apartments, yet 7,649 apartments remain at DA-only status, as shown in Figure 5.

The same trend is seen in the conversion rates of approvals to construction/completion, based on the year of approval: the progression rate of approved BTR projects has deteriorated materially since 2021. Projects approved prior to the pandemic generally exhibited strong progression rates through to

construction, whereas projects approved since 2022 have demonstrated significantly weaker conversion outcomes (Figure 6).

This reflects mounting financial risk and construction cost pressures that are squeezing project viability even after approval is secured. Nationally, 64% of approved BTR developments are yet to secure funding⁵⁴.

In response to this concerning data, it has become evident that **Australia’s housing crisis urgently demands innovation to deliver greater productivity in housing production models to ensure that approvals translate into commencements**. The evidence, reviewed in the following section, points to VMC applied within the BTR framework as the means to achieve this.

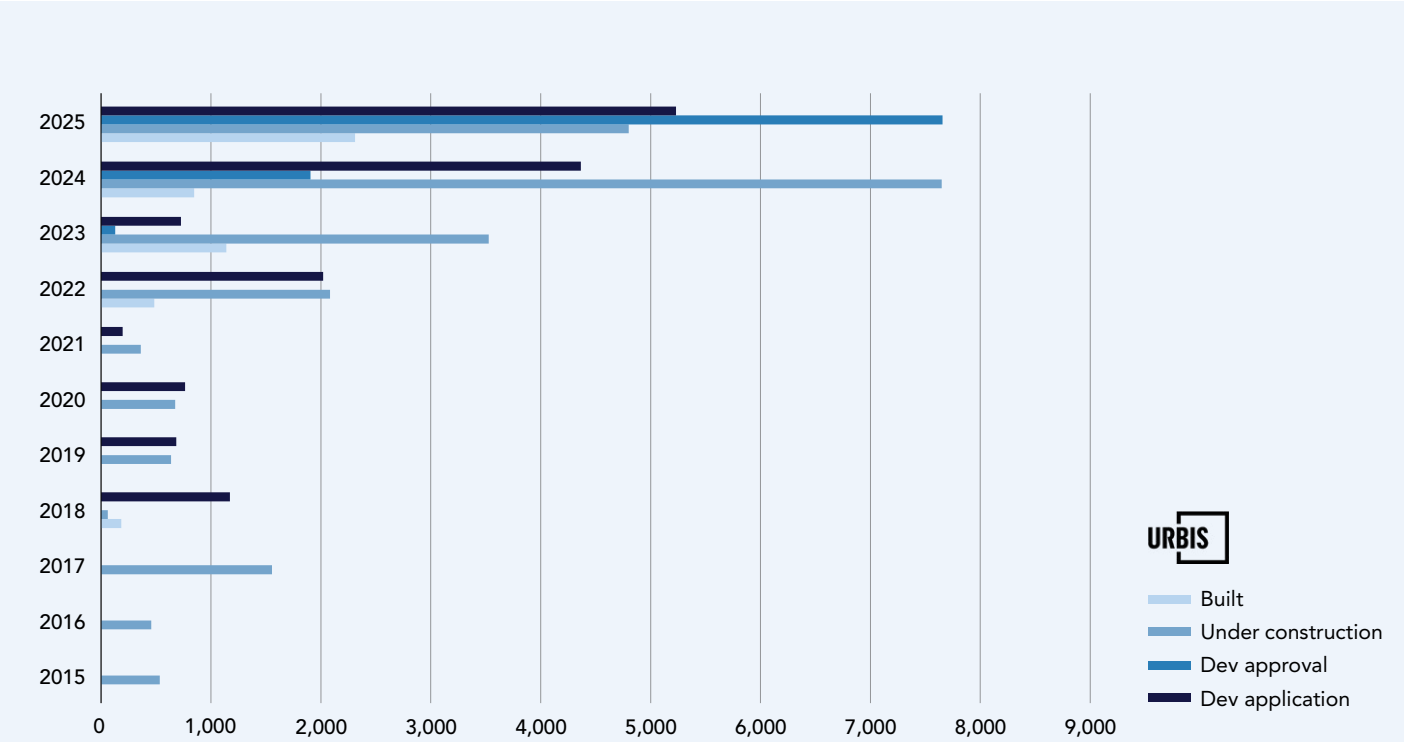


Figure 5: BTR: Apartments by current project status and year in which status achieved⁵⁵

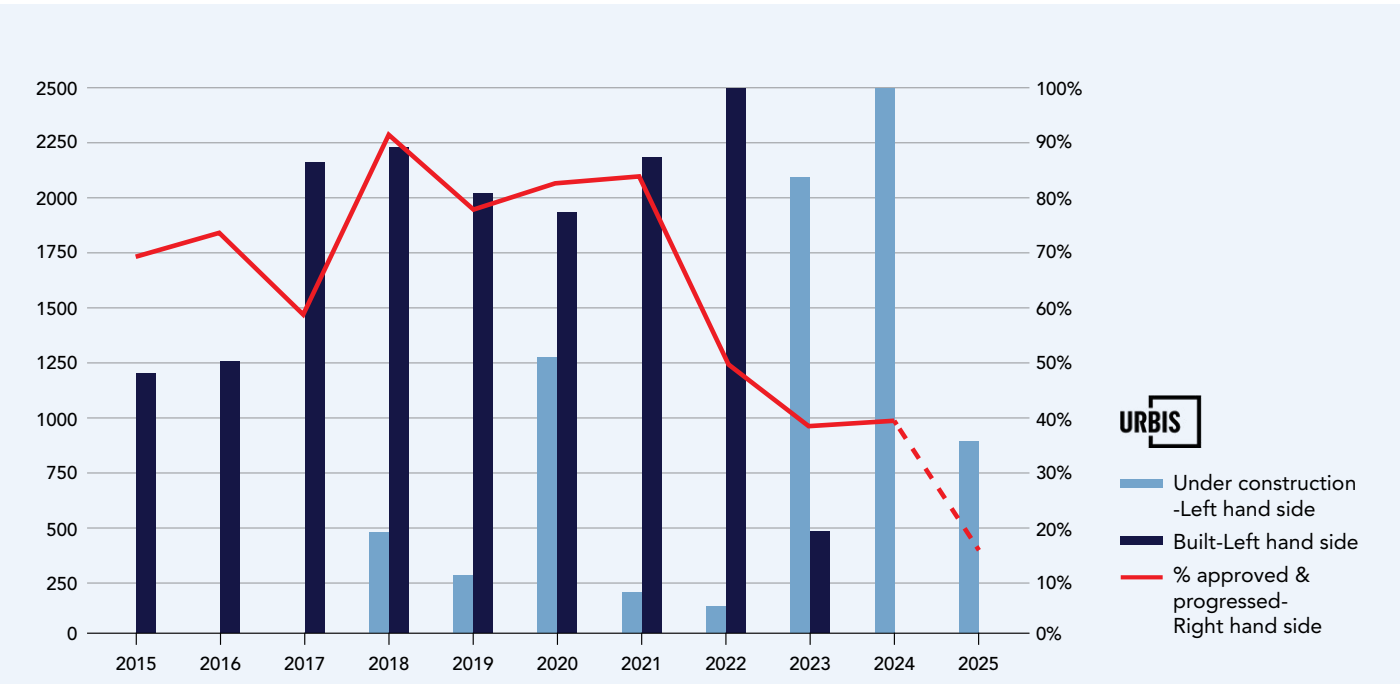


Figure 6: BTR: Apartments by current status and year approval received⁵⁶

2.3 VMC-BTR Housing Production Model

strong alignment opportunities for BTR especially at high-rise scale.

The performance case for VMC is strongest when projects share the following three characteristics, which present

Table 4: The VMC & BTR alignments

VMC characteristic	BTR alignment
1. Repetitive unit design that enables factory standardisation ⁵⁷ .	BTR developments typically involve large numbers of homogeneous units, standardised floor plates, repeated layouts, consistent fit out specifications that translate directly into factory production efficiency ⁵⁸ .
2. Large scale that generates the volume needed to justify factory procurement and logistics.	BTR developments are institutional assets developed at scale, providing the volume required for VMC to deliver its cost and program advantages ⁵⁹ .
3. A long-term owner who bears the lifecycle costs of the building and therefore has a direct financial interest in quality, durability, and reduced maintenance ⁶⁰ .	The defining feature of BTR is single institutional ownership for the long term: the developer, owner (often paired with institutional investors), and manager are either the same or a collaborating entity, holding the asset over a multi-year horizon while managing ongoing maintenance, defect, and operational costs ⁶¹ .

⁵⁴ Urbis, Apartment Essentials Dashboard. BTR Rental Intelligence Dashboard (August 2026).

⁵⁵ Urbis, Rental Intelligence & Apartment Database, September 2026

⁵⁶ Urbis, Apartment Essentials Dashboard. BTR Rental Intelligence Dashboard (August 2026).

⁵⁷ Ng, "Design Strategies for 3-D Volumetric Construction for Concrete."

⁵⁸ BAS Frames, "Modular Steel Frame Construction UK Guide."

⁵⁹ Built Offsite, "How Freecity Is Delivering Modular Construction at Scale in Australia."; Australian Constructors Association, "Moving Modular Construction from Niche to Mainstream."

⁶⁰ MacAskill et al., "Offsite Construction Supply Chain Strategies for Matching Affordable Rental Housing Demand."

⁶¹ LendingOne, "The Growing Trend of Build-to-Rent Investing."

BTR is the housing typology that aligns closely with VMC. This alignment offers a substantial and stable market for VMC providers. Because BTR owners retain assets over the long term rather than selling individual units, they represent a durable customer base capable of supporting the sustained factory investment VMC requires, offering greater business model certainty than the project-by-project relationships typical of build-to-sell delivery.

BTR’s ownership structure strengthens the financial feasibility of VMC delivery. VMC achieves its cost advantage through standardisation. Large numbers of identical units allow design, tooling, and factory processes to be amortised across the whole development, lowering the per-unit cost of construction. BTR developments, built at institutional scale with homogeneous unit types and consistent specifications, are well placed to capture this advantage, making VMC a financially competitive delivery method within the BTR model.

This ownership structure carries further significance for quality outcomes and public confidence. A build-to-sell developer’s financial incentives largely end at settlement to purchasers, subject to some ongoing guarantee and warranty obligations⁶². Quality improvements that reduce post-completion maintenance costs generate limited return to the developer, since it is the buyer who bears those later costs. A BTR owner, by contrast, captures the full lifecycle benefit of every quality investment, aligning the interests of landlord and tenant around build quality and durability. This is particularly significant in the Australian context, where defect problems in recently constructed high-rise apartments have eroded consumer confidence⁶³.

2.4 The Australian Evidence Base

The application of VMC has expanded across a range of projects from different sectors in Australia, but mature examples within the Living Sector including BTR remain limited.⁶⁴



Image 5: The Enclave: Acton (The Castle)

Location	Asset Type
North Acton, London	Co-living & BTR
Modules	Levels
505 (462 studios)	32 storeys
Completion	Developer & Manufacturer
2025	Tide & Vision & Outpost Management
Architect	Owner
HTA Design	Outpost Management & BlackRock Real Estate

⁶² Crommelin et al., “How Information Asymmetries Exacerbate Building Defects Risks for Purchasers of Australian Residential Multi Owned Properties.”; Shergold and Weir, “Building Confidence. Improving the effectiveness of compliance and enforcement systems for the building and construction industry across Australia”

⁶³ “The State of Consumer Confidence: Benchmarking Consumer Confidence Towards Purchasing Class 2 Residential Properties in NSW.”

⁶⁴ Navaratnam et al., “Performance Review of Prefabricated Building Systems and Future Research in Australia.”

Table 5: Australian VMC Case Studies

VMC Project	Details	
 The Herring Macquarie Park, Sydney NSW	Status	Under construction
	Storeys Units	20 528
	Construction Method	VMC system
	Asset type	Purpose Built Student Accommodation
	Record	Australia’s tallest volumetric modular building (Q1 2027)
	Delivery method	Parallel off-site prefabrication + on-site construction
	Developer	Freecity
	Builder	Freecity in-house VMC delivery via Space Labs Australia
	Architect	COX Architecture
 Ibis Styles East Perth Perth WA	Status	Constructed, 2019
	Storeys Units	17 252
	Construction Method	VMC system - Steel modules
	Asset type	Hotel (Ibis Styles - midscale/economy)
	Record	World’s largest high-rise modular hotel by room count, and Australia’s tallest modular hotel, at time of completion (2019)
	Delivery method	Off-site module fabrication in China (CIMC-MBS) shipped to Perth and craned into position over an in-situ basement and podium
	Developer	Rehawk Property Group, in partnership with Accor
	Builder	Pindan Group (Pindan Constructions)
	Architect	Hodge Collard Preston Architects
 The Nicholson Melbourne ⁶⁵	Status	Constructed, 2017
	Storeys Units	9 199
	Construction Method	Unitised Building (UB) system
	Asset type	Residential apartment building
	Record	Largest modular development in Victoria at time of completion
	Delivery method	Off-site fabrication of UB modules with parallel on-site works and module stacking
	Developer	VicUrban ⁶⁶
	Builder	Hickory Group
	Architect	DesignInc Melbourne

⁶⁵ Woo, “A Post-Occupancy Evaluation of a Modular Multi-Residential Development in Melbourne, Australia.”; Architectuul. “The Nicholson.”

⁶⁶ Architectuul, “The Nicholson”

Table 5: Australian VMC Case Studies (continued)

VMC Project	Details	
 NRAS Inveresk Launceston ⁶⁷	Status	Constructed, 2016
	Storeys Units	4 120
	Construction Method	Prefabricated timber-framed modular construction
	Asset type	Purpose-built student accommodation
	Record	Tasmania’s first modular multi-storey residential building
	Delivery method	Off-site module fabrication with transport and on-site modular installation
	Developer	University of Tasmania (NRAS funding)
	Builder	Hutchinson Builders (Hutchies Modular)
	Architect	Morrison & Breytenbach Architects
 One9 Melbourne	Status	Constructed, 2014
	Storeys Units	9 34
	Construction Method	UB system
	Asset type	Residential apartment building
	Record	Erected in 5 days
	Delivery method	High-completion UB modules with parallel off-site fabrication and on-site stacking
	Developer	The Moloney Group
	Builder	Vaughan Constructions (head contractor); Hickory Group (manufactured the 36 UB modules)
	Architect	Amnon Weber Architects
 Little Hero Melbourne ⁶⁸	Status	Constructed, 2010
	Storeys Units	9 63
	Construction Method	UB system
	Asset type	Residential apartment building
	Record	Completed in 9 months
	Delivery method	Parallel on- and off-site construction
	Developer	Delphine Holdings Pty Ltd
	Builder	Hickory Group and Unitised Building Pty Ltd
	Architect	Fender Katsalidis

⁶⁷ Bylund and Nolan, “NRAS Inveresk.”

⁶⁸ Fender Katsalidis, “Little Hero.”

While high-rise BTR buildings activate VMC’s advantages, Australia’s prefabricated modular construction is currently used predominantly in low-rise detached housing⁶⁹. **For the high-rise building sector, the market share of modular construction remains below 1%.**⁷⁰

International comparisons show Australia lagging global peers in MMC adoption. MMC (including VMC) accounts for 5% of Australian construction activity⁷¹. MMC

accounts for about 80% of new detached houses in Sweden, around 40% of new apartments in Japan being factory-built, and 24% of new-build residential projects in the UK⁷².

This raises two related questions, addressed in turn below: first, why has VMC adoption in Australia lagged so far behind international peers; and second, how can the alignment between VMC and BTR be leveraged to accelerate housing supply?



Image 6: Tempus St, Rouse Hill

Location 2-30 Tempus Street, Rouse Hill, NSW	Asset Type Co-living & BTR
Modules TBC (550 units)	Levels 11-23 storeys
Completion TBC - DA approved	Developer & Manufacturer Freecity Space Labs (Integrator)
Architect Architectus	Owner Freecity

⁶⁹ Lin et al., “Offsite Construction in the Australian Low-Rise Residential Buildings Application Levels and Procurement Options.”; Mostafa et al., “Exploring the Status, Benefits, Barriers and Opportunities of Using BIM for Advancing Prefabrication Practice.”

⁷⁰ Peng et al., “Numerical Analysis of Corner-Supported Composite Modular Buildings under Wind Actions.”

⁷¹ John Curtin Research Centre, “Manufacturing Homes – A National Strategy for Solving Australia’s Housing Crisis” July 2026.

⁷² RICS. “Modern methods of construction: where are we now?” 21 January 2026.

3. Governance Resistance

As demonstrated by their low adoption rates, VMC and BTR each face several barriers in Australia. While these barriers may appear technical, financial or cultural on the surface, such as industry unfamiliarity with modular methods or skills shortages, **governance underlies them both:** a system of taxation, finance structures, planning approvals and certification frameworks built for conventional construction and traditional Living Sector typologies, which has not kept pace with the innovative production model that Australia’s housing crisis requires.

While housing governance research extensively documents Australia’s housing challenges and proposed policy-oriented solutions⁷³, it has overlooked the potential role of emerging construction technologies in accelerating housing supply. Conversely, VMC research primarily focuses on technical performance metrics

such as earthquake safety, wind load resistance, fire resistance, and acoustic performance⁷⁴, overlooking both the governance and policy dimensions that shape implementation and mainstream adoption. BTR research, in turn, is largely treated as an extension of build-to-sell scholarship, overlooking the distinct governance and delivery challenges that arise from BTR’s institutional ownership structure and its different financial dynamics.

Current governance arrangements, characterised by fragmented authority across multiple government levels, regulations designed for conventional construction, and limited engagement mechanisms between public regulators and private sector, are inadequate for enabling innovation adoption⁷⁵. There are five observations demonstrating the governance resistance to innovative change.

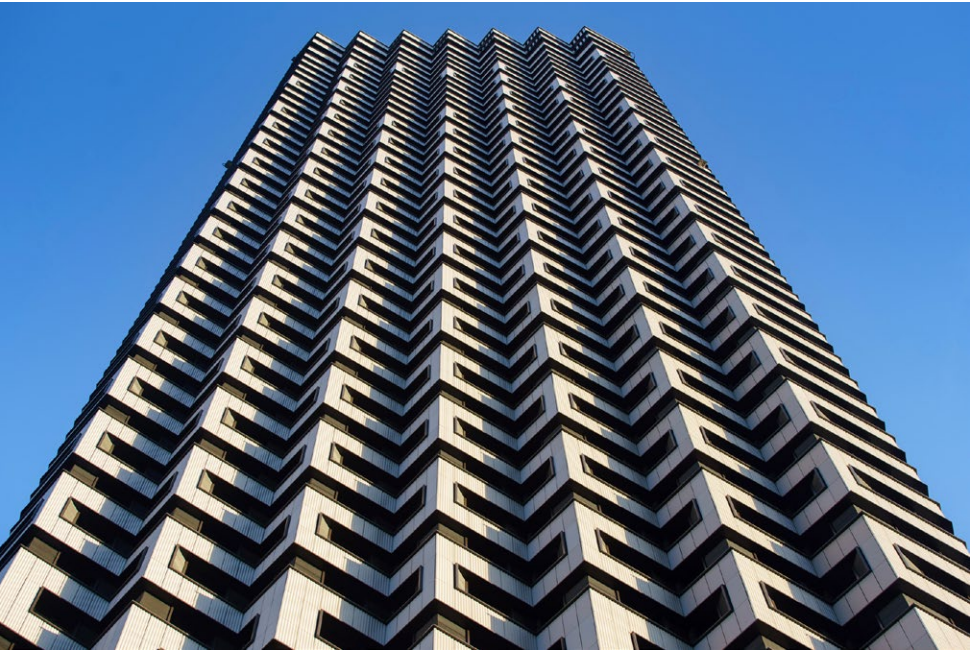


Image 7: College Road Geometric Facade

⁷³ Ma et al., “Sustainable Policy Dynamics—A Study on the Recent ‘Bust’ of Foreign Residential Real Estate Investment in Sydney.”; Rumung et al., “Housing Affordability and Development Contributions: New Perspectives from Industry and Local Government in New South Wales, Victoria and Queensland.”; Rogers and Koh. “The Globalisation of Real Estate: The Politics and Practice of Foreign Real Estate Investment.”; Gurran and Phibbs, “‘Boulevard of Broken Dreams’: Planning, Housing Supply and Affordability in Urban Australia.”

⁷⁴ Navaratnam et al., “Performance Review of Prefabricated Building Systems and Future Research in Australia.”; Zhang et al., “Current State of Using Prefabricated Construction in Australia.”

⁷⁵ Steinhardt et al., “The Structure of Emergent Prefabricated Housing Industries.”; Tampoe, “Off-Site Constructed Housing in NSW: Opportunities and Barriers for Affordable Housing Provision.”

First, the technical barriers are largely solvable. VMC fire safety performance, structural integrity, and Indoor Environmental Quality outcomes are addressable through engineering design and quality manufacturing⁷⁶. The international evidence from Sweden, Japan, and the UK demonstrates that, when properly designed and certified, VMC can achieve equivalent or better technical performance to conventional construction. The persistence of technical concerns in Australia reflects inadequate standards/frameworks⁷⁷ and certification pathways, which are themselves a governance gap.

Second, the economic barriers are largely downstream of the governance gap. The high upfront costs and unfavourable financing structures⁷⁸ that deter VMC-BTR investment are not inherent to the model. The VMC financing premium in Australia reflects lender unfamiliarity with an asset class lacking a national quality certification standard, itself a significant governance gap. The GST framework compounds this. Because residential rent is input-taxed, BTR owners cannot reclaim input tax credits on construction or operating costs. Build-to-sell developers can, because the sale is a taxable supply, as can operators of commercial residential premises such as hotels or serviced apartments⁷⁹. **BTR funds the 10% GST on construction upfront and cannot recover it, so the impost becomes a cash flow burden.** Given VMC’s capital intensity and high upfront payment structure⁸⁰, the GST burden falls earlier in the project cash flow than for conventional construction.

Third, the workforce barriers, while real, are secondary constraints. The construction industry shows a strong preference for conventional building methods due to low-risk tolerance and tight margins, which hinders innovation⁸¹, and builders generally lack the

necessary confidence to alter established practices to support the adoption of VMC⁸². Additionally, the use of prefabricated components can reduce the demand for certain on-site labour skills and has raised concerns⁸³. As a counter-measure, favourable financial and regulatory environments can make VMC-BTR commercially attractive and provide clear pathways for workforce transition, diminishing cultural resistance.

Fourth, there is a path dependency in how governance and approval processes have evolved around conventional construction methods. VMC and BTR represent a new mode of housing delivery, yet they continue to be assessed and processed through governance frameworks and approval pathways designed for conventional, on-site, build-to-sell construction. Rather than being treated as a distinct model requiring its own fit-for-purpose processes, VMC-BTR projects are filtered through existing systems that were not designed to accommodate them, creating ambiguity in how projects are assessed, adding delay, and discouraging their use.

Finally, the cultural barriers are arguably a transitional risk. While Australians have traditionally preferred conventional, site built housing and may remain sceptical of prefabricated construction, growing exposure to prefabricated construction is likely to build familiarity, gradually eroding scepticism and fostering broader market acceptance⁸⁴ as demonstrated in international markets where prefabricated housing has achieved widespread consumer acceptance. The VMC-BTR model will prove itself to the consumer through high quality completed products that do not require pre-sale and can deliver housing at scale whilst other housing sectors mature.

⁷⁶ Navaratnam et al., “An Evidence-Based Assessment of the Potential for Upscaling Prefabricated Timber Modular Building Construction in Australia.”

⁷⁷ Steinhardt et al., “The Structure of Emergent Prefabricated Housing Industries.”

⁷⁸ Wuni and Shen, “Critical Success Factors for Modular Integrated Construction Projects.”; Pan and Sidwell, “Demystifying the Cost Barriers to Offsite Construction in the UK.”

⁷⁹ Australian Taxation Office, “GSTR 2012/5. Goods and services tax: residential premises.”

⁸⁰ Grosskopf, “Financing Modular Construction: Overcoming Cash Flow & Equity Challenges.”; Bertram et al., “Modular construction: From projects to products”

⁸¹ Lin et al., “Offsite Construction in the Australian Low-Rise Residential Buildings Application Levels and Procurement Options.”; Rotimi et al., “Specific Skill Requirements within Prefabricated Residential Construction.”

⁸² Wong et al., “Are Contractors Ready for Greater Use of Prefabrication in Projects?”

⁸³ Navaratnam et al., “The Challenges Confronting the Growth of Sustainable Prefabricated Building Construction in Australia”

⁸⁴ The Productivity Commission, “Housing construction productivity: Can we fix it? Research paper.”

4. Research Design

This study employs a qualitative review of publicly accessible documents to examine how governance and policy settings favour or deter both VMC adoption and BTR investment in Australia, and what international experience can offer to inform policy reform.

The international jurisdictions selected for comparison, the UK, the US, Canada and Singapore, were chosen for their comparability and relevance to BTR and VMC market maturity. They are common-law nations with mature private rental markets, comparable traditions of planning law, and established institutional investment environments.

Each jurisdiction also represents a distinct stage of relevant development. The US constitutes the most mature BTR market, where institutional rental housing has operated at scale for decades. The UK offers the most instructive recent BTR growth trajectory, driven by targeted tax and planning reform. Canada provides a particularly relevant comparator as a jurisdiction in active policy transition, navigating challenges similar to those currently facing Australia. Singapore is included specifically for VMC adoption, given its high modular construction adoption rate and its closer institutional and supply-chain relationship with the Asia-Pacific region.

Examined together, these cases allow for the identification of how other jurisdictions have addressed barriers to VMC and BTR, and provide lessons applicable to the VMC-BTR model in Australia.



Image 8: The Eades

Location	Walthamstow, London	Asset Type	BTR
Modules	1,375 (495 homes)	Levels	34 storeys & 27 storeys
Completion	2025	Developer & Manufacturer	Tide & Vision
Architect	Assael Architecture	Owner	Long Harbour Ltd.

Within Australia, the review encompasses national-level taxation and financial regulation alongside three state jurisdictions, New South Wales, Victoria, and Queensland, selected for their scale of BTR activity and recent legislative change.

Government-issued and institutionally produced documents represent a legitimate and rich data source for qualitative inquiry, and synthesis of such material can assist in understanding the range of existing policy interventions and where further development is needed.

International documents are included where publicly available and relevant to the four policy domains under examination: taxation (including land tax and GST settings), housing finance (institutional investment vehicles and debt instruments), planning approvals and zoning permissions, and inclusionary affordability requirements. Technology support mechanisms, such as digital planning portals and PropTech integration, are also reviewed where they intersect with regulatory efficiency for BTR proponents.

Documents analysed include government websites, legislative instruments, planning scheme provisions, and parliamentary committee reports. Data were examined using thematic analysis, coded and managed using NVivo12. The identified themes, tax, finance, planning, and construction technology, shape the early-stage decision-making process of housing development, rather than the construction phase, affecting whether and how to pursue new housing production methods.

5. Australian Policy and Governance Frameworks: Barriers, International Precedents, and Reform Pathways

Six specific policy and governance gaps were identified. Each is described in terms of what is missing, why it matters for VMC-BTR, and what the international evidence suggests as a way forward.

5.1 Taxation

Australia’s BTR tax framework operates across two levels of government. The Commonwealth sets out income and foreign investment tax policies, while states and territories control land-based taxes and may offer BTR concessions. The following table summarises current tax settings across the Commonwealth, New South Wales, Victoria and Queensland:



Image 9: Interior of The Herring module

Table 6: BTR Taxation in Australia

Jurisdiction	Tax Mechanism	Eligibility	Since	Outcome(s)
Commonwealth	4% annual capital deduction.	At least 50 dwellings held under single ownership for at least 15 years.	2024	Establishes a national tax framework that defines BTR as a product: large-scale developments, single ownership, long-term rental use and a small affordable housing component.
	15% withholding tax rate on foreign investors’ rental income and capital gains from eligible BTR assets (reduced from standard rates). ⁸⁵	At least 10% affordable dwellings, of which at least 2% must be lower-income dwellings and the remainder for moderate-income tenants.		The federal incentives improve after-tax returns and position BTR as an attractive model for long-term investors with institutional and overseas capital.
				Delivers a concessional withholding tax benefit to foreign co-investors within Managed Investment Trust (MIT) structures, leaving domestic institutional investors, including superannuation funds, without an equivalent incentive despite co-investing in the same asset.
	BTR carve-out from new negative gearing limitation (established residential investment loses negative gearing eligibility from 1 July 2027; BTR retains it)	BTR assets as defined under the existing federal framework (50+ dwellings, single ownership, etc.)	Announced 12 May 2026; effective 1 July 2027	Widens the tax gap between BTR and traditional buy-to-let investment, reinforcing BTR’s relative attractiveness
	BTR MIT withholding concession for foreign investors	10% of dwellings let at affordable rents for the 15-year concession period.	2024	Ties the federal concessions to a defined affordable housing contribution, strengthening BTR’s social licence. However, the affordable component is one of the largest costs in a BTR feasibility and receives no tax relief. Where state consent or contribution schemes also require affordable dwellings in perpetuity, projects can face two obligations on the same stock.

⁸⁵ Australian Government Taxation Office, “Build to rent tax incentives.”

Table 6: BTR Taxation in Australia (continued)



Jurisdiction	Tax Mechanism	Eligibility	Since	Outcome(s)
New South Wales	50% land tax reduction.	Must start on/after 1 July 2020 and follow Treasurer’s BTR Guidelines.	2020 ⁸⁷ (amended 2025) ⁸⁸	Reduces land tax costs and removes foreign-owner surcharges. With no fixed end date for its concessions, it provides ongoing support for BTR as a long-term rental model. Supports Australian-based developers.
	Ongoing land tax concession, made permanent from the 2026 land tax year (previously due to expire 31 December 2039).	Land must be owned or acquired by an Australian corporation for an eligible BTR project.		
	Foreign purchaser surcharge duty (9%) exemption or refund for qualifying BTR properties, from 1 July 2026. Concessions are reversed if the project stops meeting BTR eligibility. ⁸⁶	Must remain a BTR asset for at least 15 years under single ownership. Refunds only after the project is certified as meeting BTR criteria. Owner must lodge yearly compliance declarations.		
Victoria	50% land tax reduction.	At least 50 self-contained dwellings on one parcel.	2021	Offers moderate tax relief for projects completed within a set timeframe, potentially building a pipeline for new BTR supply. Requirements align with the federal model.
	Exemption from the absentee owner surcharge. ⁸⁹	All dwellings held and managed by one entity. Certificate of occupancy issued between 1 Jan 2021 and 1 Jan 2032. Dwellings rented or offered without restrictions under leases of at least three years.		
Queensland	50% land tax reduction.	At least 50 dwellings.	2023	Creates a welcoming environment for global capital for BTR by removing both the foreign-owner land tax surcharge and Additional Foreign Acquirer Duty. The concession period, up until 2050, also provides confidence to investors to hold and operate BTR assets over time.
	Full exemption of the foreign land tax surcharge.	Occupancy certified between 1 July 2023 and 30 June 2030.		
	Full exemption of Additional Foreign Acquirer Duty (AFAD) for acquisitions of land. ⁹⁰	Must include discounted rent units. Development is solely or mainly residential. At least 10% of dwellings at discounted rent to eligible tenants.		

⁸⁶ Revenue NSW. “Exemption for Build-to-Rent.”; Revenue NSW. “G014v2. Build to rent”; Revenue NSW. “Other Exemptions.”
⁸⁷ New South Wales, State Revenue Legislation Amendment (COVID-19 Housing Response) Act 2020.
⁸⁸ New South Wales, Land Tax (Build-to-Rent Concessions) Amendment Act 2025
⁸⁹ State Revenue Office of Victoria. “Discount for Build-to-Rent Developments | State Revenue Office.”; State Revenue Office of Victoria. “Understanding the Absentee Owner Surcharge | State Revenue Office.”; Victorian Legislation, “Windfall Gains Tax and State Taxation and Other Acts Further Amendment Act 2021.”; State Government of Victoria, “Budget papers. 2026/27 State Budget papers.”
⁹⁰ Queensland Revenue Office. “Build-to-Rent Concessions.”; Queensland Revenue Office. “Additional foreign acquirer duty (AFAD).”; Queensland Government. “Land Tax Act 2010”; Queensland Government. “Revenue Legislation Amendment Act 2023.”

Despite these measures, significant gaps remain. **The inability to recover GST on construction continues to inflate upfront costs**⁹¹, and the tax system provides no recognition for productivity-enhancing delivery methods such as VMC. These omissions represent a missed lever: targeted tax reform could meaningfully improve VMC-BTR feasibility and international precedents offer instructive models for how to unlock this model.

Development contributions compound this pressure. Although levied through the planning system rather than the tax system, they are a direct government charge on each new dwelling and weigh heavily on feasibility. Apartment construction costs have risen roughly 80% over the past decade, largely since COVID-19, making feasibility the primary barrier to new supply⁹², while total

developer contributions for dwellings in the Parramatta CBD have risen 106% since 2018, for example.

Because contributions are charged per dwelling regardless of size, the NSW Housing and Productivity Contribution applies the same rate to a BTR studio as to a four-bedroom build-to-sell apartment, penalising the smaller, more affordable dwellings that BTR typically delivers. Contributions relief is therefore a real and quantifiable, if partial, lever for restoring feasibility and could be allocated as following: 25% of the standard rate for studios and one-bedroom dwellings, 50% for two-bedroom, 75% for three-bedroom and 100% for four-bedroom dwellings, with dual-key BTR assessed at the smaller-dwelling rate.

Table 7: International Precedents – Taxation on BTR



Country	Tax Mechanism	Since	Outcome(s)
A. Construction Tax Relief			
UK	New residential buildings are zero-rated for VAT purposes — effectively no construction tax applies.	1994	The UK’s VAT zero-rating on new residential construction means BTR developers face no equivalent of Australia’s unrecoverable GST on construction costs, providing a cost advantage that supports project feasibility across all housing typologies. Gap for Australia Australia’s GST treatment of BTR construction remains unreformed.
	Professional fees remain standard-rated and are generally unrecoverable once units are let.		
	Developers can recover input VAT on construction costs.		
	Applies to all new residential development including BTR. ⁹³		
Canada	Purpose-Built Rental Housing GST/HST Rebate. ⁹⁴ Removes 100% of federal GST/HST on qualifying new rental buildings (minimum 4 units).	2023	Rebates 100% of the federal (and, in HST provinces, provincial) GST/HST self-assessed on the building’s fair market value at completion, for eligible purpose-built rental projects, offsetting a tax based on deemed sale value rather than construction cost. Gap for Australia Australia provides no equivalent rebate or completion-stage offset, leaving BTR construction GST as a permanent, uncompensated cost.
	Subject to eligibility criteria including self-supply rules and long-term exempt rental use.		

⁹¹ BDO, “Funding Options for Build-to-Rent in 2023 - BDO.”
⁹² National Housing Supply and Affordability Council, State of the Housing System 2026.
⁹³ UK Government. “Buildings and Construction (VAT Notice 708).”
⁹⁴ Government of Canada, “Enhanced GST Rental Rebate to build more apartments for renters.”; Government of Canada. “Purpose-built Rental Housing Rebate.”

Table 7: International Precedents – Taxation on BTR (continued)

Country	Tax Mechanism	Since	Outcome(s)
B. Depreciation			
United States	27.5-year depreciation schedule for multifamily rental (vs 39 years for commercial), since 1986. Cost segregation allows acceleration of deductions on shorter-lived components — 5- or 15-year property.	Various	Accelerated depreciation and cost segregation directly improve after-tax returns on long-term rental investment and reduce holding costs during development and lease-up.
	100% bonus depreciation (introduced in 2017), phased down to 80% (2023), 60% (2024), 40% (early 2025), then permanently restored to 100% for qualifying property acquired and placed in service after 19 January 2025.		Gap for Australia Australia’s 4% capital works deduction still lags the effective rate achievable through US cost segregation.
	Many cities operate 10–30-year property tax abatement programs for rental developments. ⁹⁵		
C. Investor Tax Treatment and Real Estate Investment Trust (REIT) Structures			
UK	Income profits and capital gains of the qualifying property rental business exempt from corporation tax.	2007	The UK REIT structure has provided a stable, tax-efficient vehicle for institutional BTR investment for nearly 20 years, underpinning the UK’s 5.4% BTR penetration rate (vs Australia’s 0.2%, both as a share of residential value). The long-established framework provides investors certainty that Australia’s more recent and time-limited MIT concessions do not yet replicate.
	Distributions are treated as property rental income in investors’ hands and are subject to a 20% withholding tax, with reductions available under applicable tax treaties. Applies to residential rental including BTR. ⁹⁶		Gap for Australia Australia’s MIT concession is limited to 15 years before reverting from the concessional 15% to 30% withholding.
Japan	Japanese-REIT and Residential Property Tax Advantages - Residential land assessed at two-thirds of value for property tax and one-third for city planning tax.	Long-standing	Japan’s structural tax advantages for residential rental (embedded across property, inheritance, and investment vehicle taxation) have supported a large, stable rental sector.
	Enhanced reductions for small residential land (up to 200 m²) — applies per apartment in multifamily buildings.		Gap for Australia Australia’s land tax settings actively disadvantage BTR relative to build-to-sell.
	Inheritance tax system favours rental property through low assessment and leasehold deductions.		
	Japanese-REIT distributions subject to beneficial withholding rates under treaty arrangements since 2000. ⁹⁷		

⁹⁵ Internal Revenue Office, “Publication 527 (2025), Residential Rental Property | Internal Revenue Service.”; Internal Revenue Office, “Cost Segregation Audit Technique Guide. Large Business and International”

⁹⁶ UK Government, “Finance Act 2006”

⁹⁷ KPMG, “Taxation in Japan 2024.”; KPMG, “Japanese Real Estate Investment Structures Overview.”

Table 8: International Precedents – Taxation on VMC

Country	Tax / Policy Mechanism	Since	VMC-BTR relevance in Australia
A. Direct Tax Incentives for Modular Manufacturing			
UK	Super-deduction on capital plant investment: 130% first-year capital allowance on qualifying plant and machinery used in MMC manufacturing processes (2021–2023). ⁹⁸	2021	The super-deduction directly lowered the cost of factory tooling, robotics, and Computer Numerical Control investment for UK MMC manufacturers during the post-pandemic recovery window. Gap for Australia No equivalent accelerated capital allowance applies to MMC manufacturing plants or businesses employing MMC.
	Replaced by Full Expensing (100% first-year allowance) from April 2023 onwards. ⁹⁹		
	R&D Tax Credit scheme allowing modular firms to claim back a proportion of innovation investment.		
B. Investment and Production Incentives			
United States	Section 179 deduction — immediate expensing of up to US\$2.56 million of qualifying tangible personal property in 2026, including modular building components and factory equipment.	1986 (expanded over time)	Accelerated depreciation reduces the upfront capital cost of modular manufacturing facilities, improving investment returns and encouraging factory expansion.
	Section 45L tax credit (up to US\$5,000 per unit for energy-efficient construction) was terminated for homes acquired after 30 June 2026 and is no longer available.	2022 (45L)	
	Opportunity Zone tax benefits available to modular factories sited in designated zones. ¹⁰⁰	2017	Rewards high-performance housing outcomes and supports the competitiveness of VMC by recognising its ability to consistently achieve energy-efficiency standards. Encourages private investment in modular manufacturing by reducing capital gains tax liabilities for eligible investments. Gap for Australia No equivalent per-unit energy-performance tax credit; modular factory equipment receives standard depreciation treatment.

⁹⁸ UK Government, “Policy paper. Budget 2021: documents”

⁹⁹ UK Government, “Guidance. Full expensing. An introduction to full expensing and the UK’s capital allowances regime.”

¹⁰⁰ Internal Revenue Service, “Publication 946 (2025), How to Depreciate Property”; Internal Revenue Service, “Credit for builders of new energy-efficient homes”; Internal Revenue Service, “Inflation Reduction Act of 2022.”; Internal Revenue Service, “One, Big, Beautiful Bill provisions.”

Recommendation 5.1 – Tax Reform for VMC-BTR

Five coordinated tax reforms would materially improve VMC-BTR feasibility:

- The Commonwealth could introduce a GST rebate on construction costs for qualifying BTR developments, modelled on Canada’s Purpose-Built Rental Housing Rebate, to eliminate the 10% upfront cost currently borne by BTR developers, which puts BTR at a disadvantage to build-to-sell (strata) apartments.
- State based developer contributions need to better reflect BTR smaller unit size. This would encourage a more diverse product mix, including smaller and more affordable dwellings, rather than penalising them at the same rate as larger apartments.
- Affordable Housing is one of the biggest costs in a BTR feasibility, however it delivers a strong social license for the sector and has one of the largest pipelines to be unlocked for affordable rental, so there should be no taxes on this stock and the reality is very mixed.

Also, Federal and State Governments need to harmonise Affordable Housing policies to ensure there is no double taxing. The double count can be resolved at the state end at no cost, where a consent or contribution scheme requires an affordable component in perpetuity, recognise the 15-year Commonwealth MIT obligation as satisfying it for that equivalent stock by value, by developing a DCF adjustment formula.

- The states could expand their land tax concession frameworks to provide explicit uplift for BTR projects utilising VMC or MMC, rewarding productivity-enhancing delivery.
- Tax incentives for eligible offsite manufacturing and VMC factory assets could be introduced to support early ramp-up investment in modern construction capacity and to lift housing supply productivity.



Image 10: 1598 University Avenue

Location	Central Berkeley, California	Asset Type	Rental
Modules	Not disclosed (207 units)	Levels	8 storeys
Completion	2025/26	Developer & Manufacturer	NX Ventures, Synergy Modular & Volumetric Building Company
Architect	DJR Architecture & Trachtenberg Architectus	Owner	NX Ventures & 1598 University Avenue, LLC

5.2 Loans and Finance

BTR financing currently available across New South Wales, Victoria and Queensland includes:



Table 9: BTR Finance

Financing source	Product(s)
Bank finance	Senior secured construction loans: typically provided to established commercial real estate owners and developers and characterised by a lower risk profile. ¹⁰¹
Institutional equity	Direct equity: capital investment into individual commercial real estate assets. Platform investment: commitment across a portfolio or development pipeline. Forward funding: investor funds construction in exchange for ownership upon completion. ¹⁰²
Non-bank lenders	Stretched senior debt: higher-leverage senior loan facilities offered by non-bank lenders, often used to maximize leverage while maintaining priority security. Mezzanine debt: subordinated capital used to supplement senior debt at higher interest rates, providing additional leverage for projects with predictable cash flows. Whole-loan facilities: single lender structures combining senior and mezzanine components, streamlining financing and potentially reducing transaction costs. ¹⁰³
Partnerships	Joint venture equity: shared ownership and risk between developers and institutional investors. Development agreements: capital partners fund delivery while developers manage construction and operations. Strategic alliances: long-term partnerships to scale pipelines.
Social impact finance	Impact investment funds: capital targeting financial return and measurable social outcomes. ESG-linked debt: financing tied to sustainability or social performance metrics.
Government	Ground Lease Model (Homes Victoria): long-term ground leasing contracts of at least 40 years where a project company finances, builds, manages and maintains housing, and receives service payments for delivering housing, including market dwellings. Western Australia’s Kickstart Fund: Aligning with international precedents, Western Australia’s BTR Kickstart Fund already demonstrates how concessional finance can lower capital costs and bridge the equity–debt gap, providing coverage of up to 30% of costs during construction (interest-free for up to three years) and up to 30% of asset value during operation at concessional rates for up to seven years. ¹⁰⁴ The \$75 million fund caps loans at \$250,000 per dwelling for developments of 40+ units with 30% affordable housing; EOIs closed in December 2025. WA has since added a 75% BTR land tax exemption and a \$250 million pre-sale guarantee.

Across Australia, available financing for market BTR and VMC is largely provided on commercial bank debt, institutional capital, and bespoke financial structures. Lenders may apply additional risk premiums to VMC due to concerns with off-site oversight, transport sequencing risks, and uncertainty around collateral value¹⁰⁵, while underdeveloped models further constrain credit appetite¹⁰⁶.

¹⁰¹ Reserve Bank of Australia, “Box C: Financial Stress and Contagion Risks in the Residential Construction Industry | Financial Stability Review – October 2022.”; Qualitas, “Unlisted funds.”
¹⁰² Property Council of Australia. “Australia’s Evolving Capital Markets April 2025.”
¹⁰³ Hudson, Kurian, and Lewis. “Non-Bank Lending in Australia and the Implications for Financial Stability | Bulletin – March 2023.”
¹⁰⁴ Keystart, “Build to Rent Initiative in Western Australia.”
¹⁰⁵ Barnes, “Why Lenders Are Reluctant to Finance Modular Homes.”
¹⁰⁶ Khan et al., “Nudge or Mandate.”

Lenders may also apply additional pricing adjustments to reflect BTR’s back-ended revenue profile, with returns reliant on rental income and asset stabilisation rather than presales¹⁰⁷. As BTR cannot rely on presales to de-risk construction, and VMC’s limited track record leads to higher premiums, **financing is a critical constraint on VMC-BTR project viability**. Targeted interventions, such as government-backed loans, guarantees, and concessional debt, could reduce uncertainty, improve lender confidence, and lower the cost of capital.

Table 10: International Precedents – Loans and Finance

Country	Mechanism	Since	Outcome
Austria	The housing construction bond system channels low-cost capital to regulated, limited-profit housing associations, which have raised more than EUR 20 billion for rental delivery under federal legislation ¹⁰⁸ .	1993	Provides a deep, stable capital pool at below-market rates, enabling rental housing delivery at scale and over long periods.
Germany	Quality standards and certification schemes such as the Golden Cube and the Hausbau Design Award recognise successful modular projects and demonstrate their quality, improving market confidence in offsite construction ¹⁰⁹ .	1996	Reinforces lender confidence in a market with a long-established prefabrication tradition, ensuring innovative modular systems meet recognised structural and durability standards.
UK	The Private Rented Sector Housing Guarantee Scheme uses sovereign guarantees to reduce the cost of long-term debt for BTR projects, improving leverage and pricing relative to commercial lending ¹¹⁰ .	2013 ¹¹¹	Lowers debt cost, reduces lender risk aversion, and makes BTR projects financeable at acceptable returns.
UK	National Housing Bank	2026	£16 billion of new financial capacity (£10.5 billion investment capital, including £2.5 billion of low-interest loans for social and affordable housing providers, plus £5.5 billion of guarantee capacity) ¹¹²
UK	BOPAS (Buildoffsite Property Assurance Scheme) certification is recognised by lenders for necessary assurance ¹¹³ .	2013	Reduces lender unfamiliarity risk by providing a standardised, insurable assurance route for modular construction up-front costs.
Canada	The Rental Construction Financing Initiative was a federal government program that provided developers with low-interest, fully repayable loans at favourable terms unavailable through private financing, making purpose-built rental construction financially viable for the first time in a generation ¹¹⁴ .	2017	The initiative directly contributed to the acceleration in rental completions and was subsequently renamed the Apartment Construction Loan Program (ACLP), supporting more than 74,500 rental homes (2025 Annual Report) ¹¹⁵ . As of March 2025, over \$23 billion in loans have been committed through the program to support the creation of over 59,000 purpose built rental homes ¹¹⁶ .



Recommendation 5.2 – Financing Reform for VMC-BTR

Aligning with international precedents, Western Australia’s BTR Kickstart Fund already demonstrates how concessional finance can lower capital costs and bridge the equity–debt gap. Extending similar schemes to New South Wales, Victoria and Queensland, where the majority of Australia’s BTR pipeline is concentrated, would improve project feasibility.

¹⁰⁷ BDO, “Funding Options for Build-to-Rent in 2023 - BDO.”
¹⁰⁸ Koessler, “Housing Bonds and Their Role for Limited-Profit Housing Associations in Austria”
¹⁰⁹ Dedeu Dunton et al., Research Note on Offsite Construction.
¹¹⁰ UK Government, “Private Rented Sector Housing Guarantee Scheme.”
¹¹¹ Danny Alexander and Mark Prisk, “Next Steps for £10 Billion Housing Guarantees,” GOV.UK
¹¹² UK Government, “National Housing Bank”.
¹¹³ BOPAS, “Build offsite Property Assurance Scheme London: Build offsite.”
¹¹⁴ Canada Mortgage and Housing Corporation, 2017 Annual Report, 24.
¹¹⁵ HICC, “Housing” (June 2025).
¹¹⁶ Housing, Infrastructure and Communities Canada, “Housing”.

5.3 Incentives for MMC (VMC) Deployment

At the Commonwealth level, the 2025-26 Budget allocated \$54 million to MMC, comprising \$49.3 million for state and territory programs and \$4.7 million for a national voluntary certification scheme, thougheligibility and access for private VMC projects remain unclear¹¹⁷. **The 2026/27 Budget also committed \$120 million through the National Productivity Fund to remove regulatory barriers affecting MMC**, including nationally consistent definitions and manufacturer certification pathways¹¹⁸.

At the state level, governments have begun backing MMC through direct funding and dedicated programs. While these efforts have so far concentrated on government-led social and affordable housing rather than the institutional BTR sector, which this paper identifies as having significant potential to deliver new supply at the scale and speed the housing shortfall demands.

In New South Wales, Homes NSW and the Building 4.0 CRC each committed \$2 million in May 2024 to an MMC Program aimed at producing standardised, factory-built components for social housing. On 4 August 2026 the NSW Parliament passed the Building (Approvals and Practitioners) Act 2026, which for the first time defines “prefabricated buildings” in law and establishes a single, statewide approval pathway.¹¹⁹



¹¹⁷ Ministers, “The Albanese Labor Government Is Building More Homes More Quickly, and Making Them Easier to Buy | Treasury Ministers.”
¹¹⁸ Australian Government, Budget 2026–27: Productivity (Canberra: Australian Government, 2026)
¹¹⁹ Homes NSW and Building 4.0 CRC, “Homes NSW MMC Program” (2024); NSW Government, “New building laws for a new era of approvals and modern methods of construction in NSW” (2026).
¹²⁰ Queensland Government, “Homes for Queenslanders” (2024); BRS, “Homes for Queenslanders: Budget delivers plan, 600 modular homes” (June 2024).
¹²¹ Homes Victoria, “Regional Housing Fund.” Victoria, Department of Treasury and Finance, “Victorian Budget 2024/25: Our Big Build” (2024).

In Queensland, the Homes for Queenslanders plan (launched February 2024) and the record \$2.8 billion committed in the June 2024 State Budget funded up to 600 modular social homes in 2024–25, within a broader target of one million new homes including 53,500 social homes by 2044, delivered through the Residential Activation Fund, the Land Activation Program and the Queensland Housing Code.¹²⁰

In Victoria, which accounts for the largest share of the national BTR pipeline, as noted earlier, Homes Victoria’s Regional Housing Fund committed in 2024 to deliver 250 modular social and affordable homes, while the 2024–25 State Budget funded MMC under its building reform program and expanded the Development Facilitation Program to streamline planning approvals.¹²¹ Policy attention has since shifted from funding individual modular projects toward shifting how MMC is contracted, aiming to respond to the higher upfront costs associated with off-site manufacturing. Domestic Building Contracts Amendment Act 2025 (No.36 2025) introduces deposit limits scaled to the share of MMC used in a project, prescribed progress payment schedules for MMC works, and prescribed forms of MMC in domestic building contracts, with draft regulations open for public consultation on Engage Victoria from 18 August to 16 September 2026. This builds on the Victorian Government’s MMC statement and the third edition of the Victorian Prefabricated Construction Directory, which now lists around 200 companies across the MMC supply chain.

Image 11: InnoCell

Location Hong Kong Science Park	Asset Type Purpose built rental & co-living
Modules 418 (392 rooms)	Levels 17 storeys
Completion 2020	Developer & Manufacturer Hong Kong Science and Technology Parks Corporation & Hip Hing Engineering
Architect Leigh & Orange (L&O)	Owner Hong Kong Science and Technology Parks Corporation

Table 11: International Precedents - MMC incentives

Country	Incentives	Since	Outcome
UK	The Affordable Homes Program provides capital grant funding for affordable and intermediate rental housing, and government guidance encourages the use of MMC within these programs, often supported by planning and land-use facilitation ¹²² . 25% MMC requirement on the £11.5 billion Affordable Homes Program (2021–2026).	2021	Creates a direct, grant-funded pipeline accessible to VMC developers, with integrated planning support, reducing project risk.
	MMC Taskforce (2021) with £10m seed funding. ¹²³		
Germany	Recent federal investment under the EUR 2 billion Climate-Friendly New Construction in the Low-Price Segment (KNN) program provides a steady pipeline for affordable housing delivery and is widely seen as favourable to modular and prefabricated delivery methods ¹²⁴ .	2023	Pipeline certainty enables VMC manufacturers to invest in factory capacity with confidence, driving down unit costs through scale.
	The KfW development bank complements this by offering favourable loans with interest rates as low as 1-2% for terms of 10 to 35 years.		
United States	Federal programs such as the HOME Investment Partnerships Program provide formula-based funding allocations to states and local governments for eligible rental housing activities and projects. These include mixed-income developments, and projects using offsite construction methods are eligible where they meet the program's requirements. ¹²⁵	Ongoing	Provides a stable, formula-based funding base that states can direct toward the affordable component of VMC-BTR delivery without bespoke legislative action.
Singapore	PPVC mandate on selected Government Land Sales (GLS) sites since 1 November 2014. ¹²⁶	2014	Singapore created demand certainty for VMC manufacturers by mandating PPVC on government land sales, generating the order pipeline necessary to justify factory investment.
	Built Environment Transformation Gross Floor Area (GFA) Incentive Scheme (24 Nov 2021 – 23 Nov 2026): up to 3% bonus floor area above Master Plan limit for private developments (≥5,000 sqm) meeting productivity standards including 65% PPVC and 65% prefabricated MEP, translating directly into additional saleable units and revenue. ¹²⁷		DfMA adoption increased from just under 40% in 2020 to 76% in 2025. ¹²⁹
	Built Environment Productivity Solutions Grant (PSG): co-funding for offsite construction technologies. ¹²⁸		DfMA through GFA increased from 44% in 2021 to 51% in 2022. ¹³⁰



5.4 System Levers and Planning Pathways for BTR and VMC

The table below summarises the current planning-related settings and enabling initiatives for BTR and VMC housing projects across the Commonwealth, New South Wales, Victoria and Queensland:

Table 12: Planning Pathways for BTR and VMC in Australia

Jurisdiction	BTR	VMC
Commonwealth	Defined as a residential property development consisting of 50 or more dwellings made available for rent to the public, owned by a single entity for at least 15 years. ¹³¹	National Voluntary Certification Scheme for manufacturers of prefabricated construction: national framework still in development.
		Prefabricated, modular and offsite construction Handbook (2024, NCC 2022): clarifies that volumetric modular systems can comply with NCC DTS and Performance Solution pathways through appropriate evidence, design coordination, inspections, and site supervision, improving regulatory certainty for offsite construction.
New South Wales	Defined under Part 4 of the State Environmental Planning Policy (Housing) 2021 (Housing SEPP) as development comprising at least 50 rental dwellings, with all buildings containing those dwellings located on the same lot. The tenanted component must remain under single ownership and control, be operated by a single managing agent providing on-site management, and generally not be subdivided into separate lots for at least 15 years.	National Housing Accord (2022): encourages modern methods of construction (MMC) to expand the housing pipeline.
		MMC taskforce (2023-): advisory body created to accelerate the use of modular and offsite construction, with a primary focus on social and key worker housing.
		Homes NSW MMC Program (2024): Industry-led research and prototype initiative with Building 4.0 CRC to demonstrate how MMC can deliver more medium density social housing.
		SCM5862 Modern Methods of Construction Procurement List (2023): stronger emphasis on panelised systems rather than volumetric systems.
	Assessed through the standard development application (DA) pathway or, for qualifying projects, the State Significant Development (SSD) pathway. Major housing proposals may also access the Housing Delivery Authority (HDA) pathway, including concurrent rezoning where appropriate.	Building (Approvals and Practitioners) Act 2026 (passed 4 August 2026): makes NSW the first Australian jurisdiction to formally recognise MMC in legislation, defining “prefabricated buildings” and integrating them into the statutory building approvals system, with modular-specific provisions commencing first, on assent. The Act repeals and replaces the Design and Building Practitioners Act 2020 and the Building and Development Certifiers Act 2018, consolidating approvals, certification and practitioner obligations into a single regime.
		2026–27 NSW Budget: \$32.3 million committed to implement the new laws, including modernising the building approvals system, integrating it into the NSW Planning Portal, and piloting AI tools to speed up licence application processing.
	BTR-specific planning, amenity and design provisions apply under Part 4 of the Housing SEPP, alongside relevant Apartment Design Guide and local planning requirements.	



¹²² GOV.UK, “The Affordable Homes Programme Annual Report 2024 to 2025.”

¹²³ UK Government. “Policy paper. Budget 2021: documents.”; Health, “Government to launch taskforce to accelerate delivery of MMC housing.”

¹²⁴ Dedeu Dunton et al., “Research Note on Offsite Construction.

¹²⁵ HUD Exchange, “What Types of Projects and Activities Can Grantees Seek Out in the OZ?”

¹²⁶ Singapore Government Agency. “Prefabricated Prefinished Volumetric Construction (PPVC).”

¹²⁷ Singapore Government Agency. “Built Environment Transformation Gross Floor Area Incentive Scheme”.

¹²⁸ Singapore Government Agency. “Built Environment Productivity Solutions Grant (PSG)”.

¹²⁹ Ministry of National Development, “Written Answer on Promoting and Supporting the Use of Prefabrication Methods for Construction Projects.”

¹³⁰ Building and Construction Authority, Annual Report 2022/2023, p. 4.

¹³¹ Australian Government Taxation Office. “Build to rent development tax incentives.”

Table 12: Planning Pathways for BTR and VMC in Australia (continued)



Jurisdiction	BTR	VMC
Victoria	No specific BTR land-use definition; BTR is generally treated as conventional residential development (e.g. apartments/ dwellings). Planning approval occurs through the standard planning permit process or, for eligible projects, facilitated pathways such as the Development Facilitation Program (DFP), including Great Design Fast Track. Relevant apartment design and amenity requirements apply depending on building height, development type and zone, including Clauses 55, 57 and 58 of the relevant planning scheme.	Off-site construction guide (2022): guidance for evaluating procuring and delivering off-site construction for government infrastructure, including modular housing. Enabling MMC (2025-under review): initiative to review the Building Act and related regulations to support prefabricated, modular and offsite construction.
Queensland	Defined under Schedule 24 of the Planning Regulation 2017 as a residential use involving 50 or more dwellings that are used for residential tenancies under residential tenancy agreements, are not held under individual titles, are managed by an on-site manager, and are not public housing. Assessment pathways and benchmarks are determined through local planning schemes, including code or impact assessment as applicable. Within a Priority Development Area (PDA), development is assessed under the relevant PDA development scheme administered by Economic Development Queensland (EDQ). BTR design and amenity requirements are primarily established through applicable local planning schemes and development codes, and therefore may vary between local government areas.	RAAC Modular Manufacturing Centres (2022-): government-run factories enabling volumetric modular production and workforce development. QBuild MMC Program (2023-): volumetric modular, flat-pack and kit of parts solutions to deliver social and frontline worker housing at scale. MMC supplier standing offer Arrangement (2023-): prequalified panel of 11 MMC suppliers established as part of QBuild MMC Program to streamline procurement of modular and panelised systems. Homes for Queenslanders Modular Commitment (2024): 600 modular homes funded under \$2.8 billion package, focusing on off-site manufacturing.

Across jurisdictions, the current BTR landscape shows that some states have introduced formal definitions and assessment pathways, while others continue to treat BTR within broader residential categories. **Even where definitions exist, projects are assessed through mechanisms designed for conventional multi-unit housing**, which may not fully reflect the operational characteristics of long-term rental models or provide consistent expectations across assessment authorities.

For VMC, governments have begun to support modular and off-site construction through guidance, research programs, manufacturing centres and procurement mechanisms. However, these initiatives sit outside the planning and building permit system, with approvals largely structured around traditional site-based construction, not explicitly accounting for the factory

component. This can create uncertainty about when inspections occur, how factory-produced components are verified, and what certifications are required at what stage, contributing to delays and additional costs.¹³² In addition, certification requirements for prefabricated components vary by jurisdiction¹³³. For any developer or manufacturer seeking to operate at national scale, **the result is a compliance environment of extraordinary complexity and cost**¹³⁴.

In New South Wales, planning is structured through State Environmental Planning Policies (SEPPs) and Local Environmental Plans (LEPs). The State Environmental Planning Policy (Housing) 2021 (the Housing SEPP) defines BTR housing for the first time in NSW planning law and sets out where it may be located (commercial cores and metropolitan centres), the minimum scheme

size (50 dwellings under single ownership with on-site management), and non-discretionary development standards that prevent councils from imposing controls that would render BTR unviable.¹³⁵

The UK provides the most developed example of a planning system where BTR is given explicit policy recognition. The English planning framework operates through national policy (the National Planning Policy Framework, NPPF), practical guidance (the Planning Practice Guidance, PPG), and local plans. The PPG, updated in September 2018, treats BTR as distinct from other housing tenures and advises local authorities on

how to integrate BTR into local plans and development assessments including expectations for 20% affordable private rent and minimum 15-year covenant periods. At the regional level, the London Plan 2021 includes a BTR-specific provision, Policy H11, which establishes qualifying criteria (single ownership, unified management, on-site presence, 15-year covenant) and requests that London boroughs “take a positive approach to the BTR sector”.¹³⁶ **None of the other jurisdictions examined here has matched the UK’s combined national-and-regional planning recognition of BTR as a distinct tenure.**

Recommendation 5.4 – Planning Recognition for BTR and VMC

Planning policy at both Commonwealth and state levels could explicitly recognise VMC as an eligible delivery method for BTR, with dedicated assessment pathways that account for factory-based production rather than treating it as a deviation from conventional construction.

Queensland’s integrated procurement model for MMC, combining manufacturing centers, prequalified supplier panels, and committed housing pipelines, offers a replicable template for aggregating public demand at national scale, which is an effective lever for driving down VMC costs and building the supply chain depth that private VMC-BTR projects require.

5.5 Insurance for VMC

Businesses involved in modular construction currently struggle to get insurance at a reasonable cost. Insurance companies are unfamiliar with how VMC works and see it as a higher risk compared to traditional construction.¹³⁷ This insurance gap creates financial

exposure for developers and acts as a deterrent, particularly for smaller operators considering the transition from conventional to modular delivery. A shortage of skilled professionals with experience in DfMA, BIM, digital design, and commercial cost estimation¹³⁸ further limits the industry’s capacity to build the track record required to inform insurance markets.

Table 13: Insurance for VMC¹³⁹

Insurance type	Requirements
Contract works	Factory quality assurance (QA) documentation, transport and crane plans, module storage risk controls, engineering certification, and fire/waterproofing performance. Higher premiums due to transport and installation risks.
Public liability	Detailed lift studies, transport-route assessments and evidence of insurance coverage from transport subcontractors if any.

¹³² Housing Industry Association and Swinburne University of Technology. “Regulatory barriers associated with prefabricated and modular construction.”

¹³³ Lin et al., “Offsite Construction in the Australian Low-Rise Residential Buildings Application Levels and Procurement Options.”

¹³⁴ Khan et al., “Nudge or Mandate.”; Navaratnam et al., “The Challenges Confronting the Growth of Sustainable Prefabricated Building Construction in Australia.”

¹³⁵ New South Wales Government. “State Environmental Planning Policy (Housing) 2021. Part 4 Build-to-rent housing. Housing”.

¹³⁶ UK Government. “Collection Planning practice guidance. The National Planning Policy Framework and relevant planning practice guidance.”

¹³⁷ Khan et al., “Nudge or Mandate: An Exploration into the Constraints of Volumetric Modular Construction in Australia.”

¹³⁸ Rotimi et al., “Specific Skill Requirements within Prefabricated Residential Construction.”

¹³⁹ Bellrock, “Insurance Challenges for Clients and Contractors in Residential Modular Construction.”; Aon Insights, “Risk Ready: Navigating Construction Insurance in a Changing Market.”; Lockton, “Addressing Insurer Concerns Regarding Modular Construction.”; Chan and Wyatt, “The Connection Between Modular Construction and Project Cargo Insurance.”

Table 13: Insurance for VMC (continued)

Insurance type	Requirements
Workers’ compensation	Factory safety systems and manual handling procedures.
Professional Indemnity	Digital models, clear allocation of responsibility between design and manufacture. Many limit or exclude product-related failures.
Product liability	Manufacturing quality assurance systems, component traceability, testing outcomes, and assessments of potential systemic defects across modules.
Property	As-built documentation, module connection details, fire engineering reports, and reinstatement timelines. Higher premiums as VMC is often seen as harder to repair.
Business interruption	Evidence of module replacement lead times. Perception that modular reinstatement is slower often increases premiums.

Australia does not yet have a national VMC quality assurance and certification framework (Australian Building Codes Board opened public consultation in July 2026 on a draft National Voluntary Certification Scheme for Manufacturers of Prefabricated Construction). Without a standardised, independently audited certification system establishing the durability and performance standards of VMC systems, insurers and lenders have no common evidence base. Each project requires bespoke assessment. The result is information asymmetry, higher premiums, and a persistent perception of risk that does not reflect the actual performance record of VMC.

Internationally, the UK’s Build Offsite Property Assurance scheme (BOPAS) provides a risk assurance and valuation certification system specifically designed for offsite construction¹⁴⁰. **BOPAS certification assesses the durability and long-term performance of offsite-manufactured systems over a minimum 60-year period**, providing lenders and insurers with the evidence base needed to underwrite and mortgage these properties on standard terms. The UK Government’s MMC Definition Framework provides the complementary taxonomy which is a common classification of offsite construction methods enabling consistent treatment across planning, procurement, insurance, and finance.

Recommendation 5.5 – National VMC Certification and Insurance Framework

The Commonwealth has begun this process. The 2025–26 Federal Budget allocated \$4.7 million, within a \$54 million prefabricated and modular housing package, to develop a voluntary national certification scheme for offsite construction¹⁴¹. The same Budget committed a further \$120 million from the National Productivity Fund to incentivise state and territory reforms that establish nationally consistent definitions, certification pathways, and regulatory neutrality between offsite and conventional delivery.¹⁴²

To match the certainty delivered by the UK’s BOPAS scheme, three further steps are needed: engaging lenders and insurers in the scheme’s design, linking certification to eligibility for public funding and finance, and extending coverage from manufacturer certification to the full factory-to-site delivery chain.

¹⁴⁰ BOPAS. “Build offsite Property Assurance Scheme London: Build offsite.”; LRQA. “Recognised assurance for innovative construction.”
¹⁴¹ Ministers, Treasury. “The Albanese Labor Government is building more homes more quickly and making them easier to buy.”
¹⁴² Australian Building Codes Board. “Prefabricated, modular and offsite construction.”; Build Offsite. “\$120m NCC reform fund targets modular construction barriers”.

5.6 Fragmented Regulatory Standards for Logistics

At the delivery stage, road transport frameworks apply standard oversize and overmass conditions to VMC modules, restricting allowable routes, requiring escort vehicles, and limiting travel to low-traffic periods¹⁴³. **This constraint is most acute in CBD and inner-urban locations where VMC’s capacity to reduce on-site disruption and accelerate housing supply is most valuable**, yet where road access restrictions are most stringent¹⁴⁴.

This treatment overlooks the fact that VMC reduces total construction traffic. Although modules are large, VMC replaces hundreds of smaller, uncoordinated truck movements with far fewer managed deliveries: at the Ten Degrees BTR development in Croydon (UK), modular delivery cut vehicle movements to site by 80%, with less noise, dust and transport-related emissions.¹⁴⁵ Because VMC programs are also shorter, disruption to surrounding streets is both reduced and over sooner. In established urban areas, a quieter, shorter and better-managed build helps developers earn and keep the social licence to deliver new housing. Transport rules that treat every module as an exceptional load therefore work against a delivery method that lowers the overall impact on the road network.

Recommendation 5.6 – Unified Logistics Framework for VMC

Recognise VMC’s distinct transport profile, with less trucks and wider loads, rather than treating modules as standard oversize freight. Addressing these barriers requires reform at multiple levels: guidance should account for the dual-location nature of VMC by enabling concurrent factory and site approvals and establishing clear factory inspection protocols.

Hong Kong offers an instructive precedent for addressing VMC transport logistics as a governance challenge. Similar constraints, including narrow streets, undulating terrain, and dense urban environments where module delivery is most logistically demanding yet most strategically valuable, the Hong Kong Construction Industry Council developed dedicated reference material specifically addressing the logistics, covering urban delivery route planning, road width constraints, and formal coordination protocols with road management authorities¹⁴⁶. The government simultaneously encouraged the adoption of BIM and AI tools for optimal route selection and transport impact assessment, with Hong Kong’s first pilot project demonstrating how digital infrastructure can resolve inter-disciplinary logistics problems before modules leave the factory¹⁴⁷.

Australia has limited equivalent guidance, leaving developers to navigate standard oversize freight regulations that were not designed with modular construction in mind, though recently NSW’s Building (Approvals and Practitioners) Act 2026 provides for regulations on prefabricated building transport, delivery and installation once made.

¹⁴³ Transport Australia, “Moving Modular Construction from Niche to Mainstream.”; Advanced Manufacturing Growth Centre LTD. (2022). “Regulatory barriers associated with prefabricated and modular construction.”
¹⁴⁴ Siniat Australia, Modular Construction in Australia.
¹⁴⁵ Housing Design Awards, “Ten Degrees.” 2024. Modular delivery benefits reported by Vision Modular Systems. <https://hdawards.org/scheme-ten-degrees/>
¹⁴⁶ Construction Industry Council. “Reference Material on Logistics and Transport for Modular Integrated Construction Projects.”
¹⁴⁷ Zhang, W et al., “Enhancing Modular Construction Supply Chain: Drivers, Opportunities, Constraints, Concerns, Strategies, and Measures.”

6. International Case Studies

Housing systems across advanced economies face a shared challenge. Yet the policy responses adopted in different jurisdictions vary considerably according to governance structure, land availability, market maturity and the degree of state intervention in housing delivery.

This section examines four international case studies, UK (England), Canada, Singapore and the United States, selected to represent contrasting institutional approaches to two interrelated housing delivery innovations, BTR and VMC. These jurisdictions span a spectrum of governance models, from Singapore’s highly centralised, state led

housing system to the United States’ decentralised, market driven approach, with UK (England) and Canada occupying intermediate positions characterised by multi-level governance and targeted federal or national intervention.

Table 14 summarises key demographic, economic and housing market characteristics across the five comparator countries, including Australia as a reference point. Each case study examines the historical evolution, key policy instruments and institutional mechanisms through which BTR and VMC have been promoted.



Image 12: Tengah Plantation C3 & Common Green Development Project

Location Tengah, Singapore — Plantation District	Asset Type Public Housing (HDB / BTO)
Modules Not disclosed (1,140 units)	Levels 10 blocks: 7, 8, 11, 14 & 15 storeys
Completion 2022	Developer & Manufacturer HDB & Greyform
Architect Surbana Jurong	Owner HDB

Table 14: International Countries’ Housing Status Comparison

Characteristic	Australia	UK (England)	Canada	United States	Singapore
Population	27,801,023 ¹⁴⁸	69,931,528 (56,489,800) ¹⁴⁹	41,417,056 ¹⁵⁰	342,694,161 ¹⁵¹	6,110,000 ¹⁵²
Population density (people/km²)	3.6 ¹⁵³	285 (433)	4.6	37.4	8,300
BTR ¹⁵⁴ (% of total residential market value)	0.2%	5.4%	8% (proxy) ¹⁵⁵	12%	N/A
MMC adoption rate	5%	24% of new build residential ¹⁵⁶	2% of homes; 7.5% of construction market (by value) ¹⁵⁷	About 5.1% of construction activity in key segments ¹⁵⁸	76% adoption of DfMA ¹⁵⁹
Homeownership rate ¹⁶⁰ (% of the population that owns their home)	66.3%	63.2%	66.5%	65.3% ¹⁶¹	87.9%
Housing affordability (price-to-income) ¹⁶²	7.5	8.3	9.4	4.5	N/A
Rental affordability % of Renters “Rent-Burdened” (>30% of income)	30% ¹⁶³	23.3% ¹⁶⁴	33% ¹⁶⁵	49.7% ¹⁶⁶	N/A
Housing per capita (dwellings per 1,000 people)	418	446	422	427	245
New supply per capita (1,000 people) (annual growth in supply 2025)	6.3	2.5	4.1	6.3	N/A
Housing average size (m²)	214	96	181	201	40

¹⁴⁸ Australian Bureau of Statistics, “National, State and Territory Population.” 31 December 2025

¹⁴⁹ Office for National Statistics, “Population estimates” 1 July 2026

¹⁵⁰ Government of Canada, “Canada’s Population Estimates, First quarter 2026.” 1 April 2026

¹⁵¹ United States, “U.S. and World Population Clock”, 25 July 2026

¹⁵² Strategy Group Prime Minister’s Office, Overall Population. 1 June 2025

¹⁵³ Australian Bureau of Statistics, “Regional Population.”; As of June 2025

¹⁵⁴ Property Council of Australia, “Build-to-Rent Housing Advice, Stage 1–2.”

¹⁵⁵ Calculated as the assessment value of residential properties owned by businesses and government as a share of total residential assessment value. This category is broader than BTR, and assessment value is not equivalent to market value. Statistics Canada, “Residential Properties by Characteristics, Property Use and Ownership Type,” Table 46-10-0093-01, Canadian Housing Statistics Program, August 2026.

¹⁵⁶ Rushton, T “Modern methods of construction have evolved from niche innovation to a central pillar of the UK’s housing strategy, but barriers to their adoption remain” 21 January 2026.

¹⁵⁷ Canada, Housing, Infrastructure and Communities “Questions Period Note: Modular Housing/Construction” 15 September 2025

¹⁵⁸ Modular Building Institute “Industry Analysis” 9 August 2026.

¹⁵⁹ Growbeansprout “Singapore Construction Demand Hit a 10-Year High. Where to Look for Investment Opportunities” 26 June 2026.

¹⁶⁰ Davis, K “Ranked: Countries with the most and least home ownership rate, 2025”

¹⁶¹ Nash, J “Home Ownership Rate at 65.3% in Q1 2026”

¹⁶² Neufeld, D “Mapped Home Prices vs. Incomes Around the World”

¹⁶³ SGS Economics & Planning “Rental Affordability Index 2025: Signs of stabilisation, but pressures remain high” November 2025

¹⁶⁴ Ward-Glenton, H “What is the UK’s average rent, how does it compare globally”

¹⁶⁵ CMHC.ca “Rent Control and the Affordability of Rental Housing in Canada”

¹⁶⁶ United States Census Bureau “Nearly Half of Renter Households Are Cost-Burdened, Proportions Differ by Race” 2023

6.1 CASE 1 – UK (England)

Although classified under the broader ‘UK’ category in Table 14, the following discussion centres on England, given the significant differences in housing policy and data reporting across the four UK nations. England has experienced persistent housing delivery challenges for several decades, with new housing supply consistently falling below estimated demand despite successive government initiatives to increase construction. In 2024–25, **England delivered 208,600 net additional dwellings, representing a 6% decline from the previous year**¹⁶⁷ and remaining well below the government’s stated ambition since 2018 of delivering 300,000 homes annually¹⁶⁸. This shortfall is considered a systemic housing delivery challenge arising from the interaction of planning processes, land availability, infrastructure provision, construction capacity and investment conditions, which together constrain the rate at which new housing can be delivered¹⁶⁹. More recently, rising construction costs¹⁷⁰, labour shortages¹⁷¹ and reduced developer confidence and investment¹⁷² have further reduced development activity, raising concerns regarding the capacity of conventional housing delivery systems to meet future demand.

Housing delivery in England operates within a plan-led planning system¹⁷³. The Ministry of Housing, Communities and Local Government (MHCLG) establishes the National Planning Policy Framework (NPPF), while Local Planning Authorities (LPAs) apply that policy locally, determine planning applications, and secure developer contributions through planning obligations¹⁷⁴. Homes England, the government’s housing and regeneration agency, supports housing delivery through land assembly, infrastructure investment, development finance, and regeneration programs¹⁷⁵. In London, the Greater London Authority (GLA) provides strategic spatial planning through the London Plan, which guides housing growth and development across the capital¹⁷⁶. These institutions establish the policy, planning, and investment framework within which housing is delivered

by local authorities, housing associations, and private developers. These arrangements mean that housing delivery is shaped by national, strategic and local planning requirements that determine where, at what scale, and under what conditions development can proceed.

England’s contemporary housing strategy has combined policies intended to increase housing delivery through both institutional investment and construction modernisation. Since the early 2010s, successive governments have introduced financial incentives, planning reforms and regulatory changes to encourage institutional investment in BTR housing, while promoting MMC, including VMC, to improve construction productivity and expand housing delivery capacity. The following sections examine the evolution of these complementary policy approaches, focusing on the adoption of BTR and the government’s efforts to promote VMC as part of England’s broader housing delivery strategy.

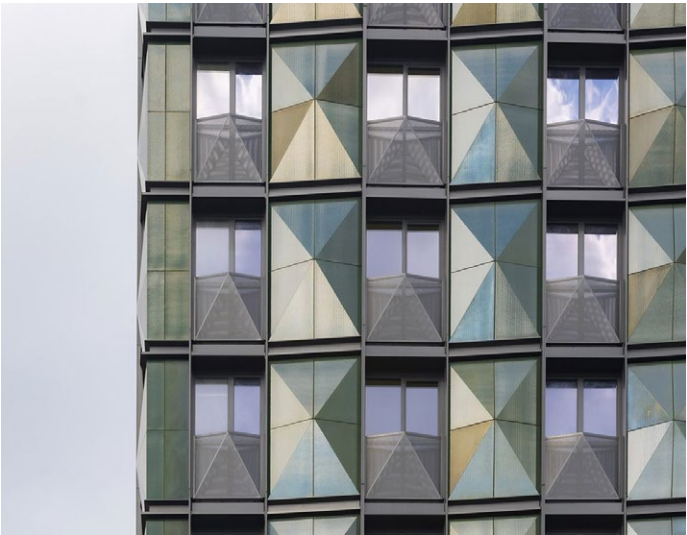


Image 13: Ten Degrees Facade

¹⁶⁷ Ministry of Housing, Communities and Local Government, “Housing Supply: Net Additional Dwellings, England: 2024 to 2025,” November 20, 2025

¹⁶⁸ Ministry of Housing, Communities and Local Government, “Government Announces New Housing Measures.”

¹⁶⁹ Radix Big Tent Housing Commission, Beyond the Permacrisis, 6.

¹⁷⁰ Department for Business and Trade, “Construction Building Materials.”; Building Cost Information Service (BCIS), “BCIS Building Forecast.”

¹⁷¹ Holmes and Burgess, Construction and Building Trades; CITB, Construction Workforce Outlook; HM Treasury, “Government Unleashes Next Generation of Construction Workers.”

¹⁷² Savills, “English Housing Supply Update Q2 2025”

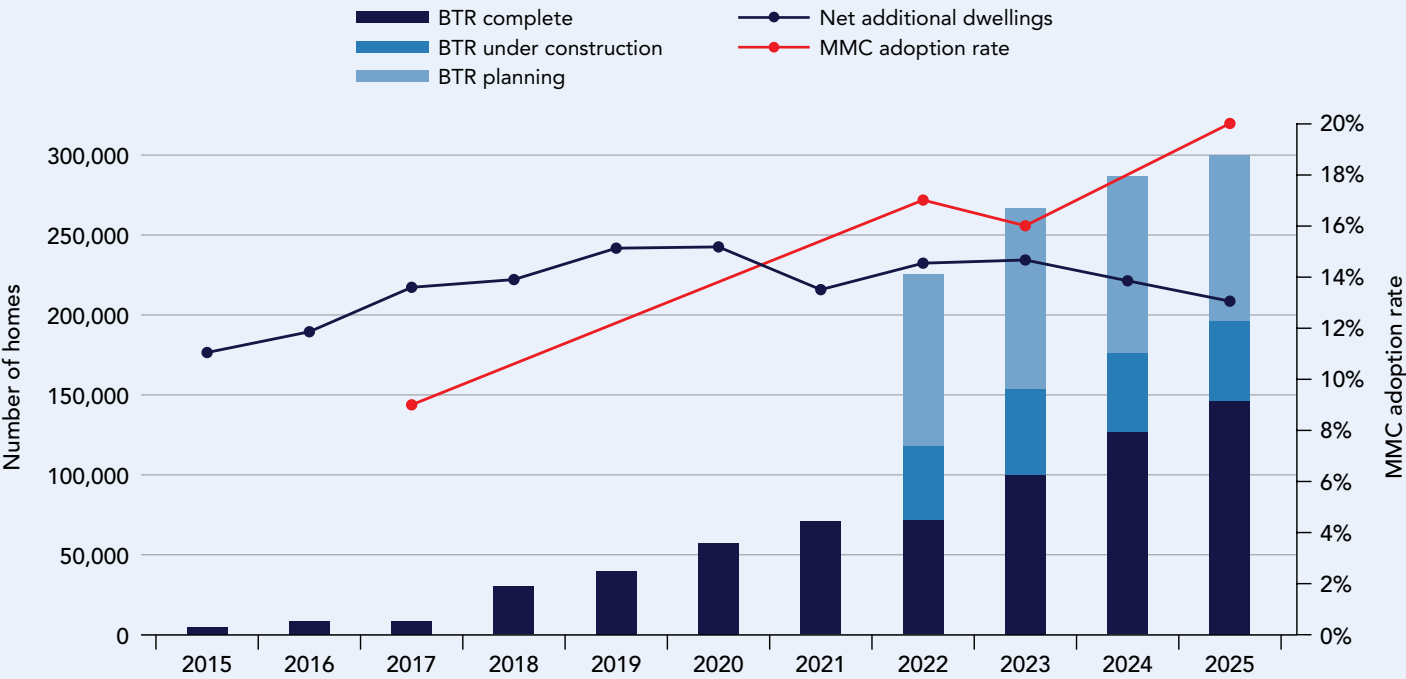
¹⁷³ Ministry of Housing, Communities and Local Government, National Planning Policy Framework.

¹⁷⁴ Ministry of Housing, Communities and Local Government, National Planning Policy Framework, chap. 3 (“Plan-making”) and chap. 4 (“Decision-making”); Town and Country Planning Act 1990, sec. 2E.

¹⁷⁵ Homes England, Homes England Framework Document, secs. 1–2.

¹⁷⁶ Greater London Authority, The London Plan, chap. 4.

UK housing supply, Build-to-Rent delivery, and MMC adoption



Market event	2019 - 2022 Covid-19 disruption
Financial assistance	2013 Private-rented-sector debt guarantee scheme - Up to £10 billion
Financial programs for BTR	2013 BTR fund - ~£1 billion
Financial programs for MMC/VMC	2016 Home Building Fund (via Homes England) £4.5 billion, principal state investment channel backing volumetric (Category 1) manufacturers 2021 - 2026 Affordable Homes Programme - Set a target that 25% of grant-funded homes use MMC 2023 Homes England direct support to Ilke Homes - ~£60 million
Planning reform (BTR)	2018 NPPF revision + Planning Practice Guidance - Formally defined BTR as a tenure within the planning system; introduced "Affordable Private Rent" as BTR's affordable-housing contribution 2021 London Plan Policy H11 - BTR
Construction policies (MMC)	2013 Construction 2025 strategy 2016 Farmer Review - "Modernise or die" warning to the construction sector 2017 Housing white paper, <i>Fixing Our Broken Housing Market</i> - Introduced a "presumption in favour" of off-site construction across several public departments 2019 MMC Definition Framework

Figure 7: UK housing supply, BTR delivery, and MMC adoption trends 2015-2025
(Source: drawn by the authors, based on data from Knightfrank.co.uk)

6.1.1 BTR Development

England’s BTR sector emerged as part of broader government efforts to strengthen housing delivery by attracting long-term institutional investment into rental housing, a sector historically dominated by small-scale landlords¹⁷⁷. From 2011, the **British Property Federation (BPF)** actively advocated for greater institutional investment in the private rented sector through engagement with government and industry stakeholders¹⁷⁸. A key turning point followed with Sir Adrian Montague’s independent review, published in 2012, which identified three principal barriers to institutional investment: the limited supply of suitable investment opportunities, the treatment of rental housing within the planning system, and the need to build investor confidence in a pipeline of projects capable of delivering secure, long-term returns¹⁷⁹.

In response to the Montague Review, the UK Government introduced a coordinated package of policy and financial interventions aimed at reducing barriers to institutional investment and improving the viability of large-scale BTR developments. **The BTR Fund (2013) committed up to £1 billion of equity investment to accelerate the delivery of BTR¹⁸⁰, while the Private Rented Sector Debt Guarantee Scheme (2013) made up to £10 billion in government-backed loan guarantees available to improve access to long-term finance and encourage institutional investment¹⁸¹.** These financial interventions were subsequently complemented through planning and regulatory reforms. In 2018, the National Planning Policy Framework (NPPF) introduced a formal planning definition of BTR, recognising it as a distinct form of rented housing within England’s planning system¹⁸². At the regional level, the London Plan 2021 Policy H11 established planning guidance specific to BTR developments, including affordable housing expectations and covenant requirements¹⁸³.

The above complementary policy interventions contributed to establishing the conditions for the expansion of institutional investment in the sector¹⁸⁴. By Q2 2026, the BTR sector had delivered 156,688 completed homes across Great Britain, while annual starts had fallen 79% to 3,455 and homes under construction were down 21% year on year. In addition, the overall development pipeline reached 310,310¹⁸⁵ homes, comprising completed developments, schemes under construction, and projects at various stages of planning¹⁸⁶.

England’s approach to promoting BTR has therefore been built around finance and planning interventions. This policy framework has contributed to establishing BTR as a recognised institutional asset class and an increasingly important contributor to housing delivery, **accounting for approximately 8% of all new homes completed in Great Britain during 2025¹⁸⁷**. Nevertheless, the widening gap between planning approvals and construction starts suggests that long-term housing delivery depends not only on supportive planning and financing policies but also on maintaining commercial feasibility under changing macroeconomic conditions. These dynamics lend support to the view that sustained BTR delivery is more likely to happen where government provides risk-sharing finance, planning certainty, and binding affordability mechanisms together, supported by a stable regulatory and macro-financial environment.

6.1.2 MMC/VMC adoption

The UK pursued a similarly deliberate policy approach to offsite construction, motivated by concerns over long-term housing demand and construction productivity. The 2016 Farmer Review¹⁸⁸ argued that the industry’s fragmented structure and reliance on traditional methods constrained housing delivery, prompting a series of government initiatives including the Construction

Sector Deal (2018)¹⁸⁹, and the publication of the Modern Methods of Construction Definition Framework (2019)¹⁹⁰, which established a common classification system intended to improve confidence among lenders, insurers and investors. Homes England subsequently sought to stimulate adoption by requiring MMC across its land disposals, encouraging its use through development finance and pilot projects, and using programs such as *Accelerated Construction* to increase demand while expanding industry capability¹⁹¹. Despite this coordinated policy framework, **much of the UK’s first generation of large-scale volumetric manufacturers subsequently failed or exited the market¹⁹²**. The House of Lords subsequently concluded that government support for MMC had lacked clear objectives and robust evaluation despite considerable public investment¹⁹³.

The available evidence suggests these outcomes reflected challenges associated with the commercial model for standalone volumetric manufacturing. Systematic reviews identify financing constraints, uncertain demand, regulatory compliance, warranty and insurance requirements, and limited long-term performance data as recurring barriers to wider adoption¹⁹⁴. Two case studies in Newcastle city centre similarly report that while volumetric construction often incurred higher upfront costs than traditional methods, shorter construction schedules and earlier building occupation could partially offset these costs in some projects¹⁹⁵. Evidence gathered between 2021 and 2023 suggested that modular MMC adoption difficulties were associated with the commercial challenge volumetric manufacturers faced, particularly dependence on a consistent project pipeline and working capital¹⁹⁶.

In summary, the UK experience suggests that **sustained uptake of volumetric manufacturing is more likely where government intervention extends beyond supporting production capacity** to creating more predictable demand, clearer standards, and greater confidence across procurement, finance, warranty and insurance systems.



Image 14: Union Wharf

Location Greenwich, London	Asset Type BTR
Modules 635 (249 homes)	Levels 22 storeys & 12 storeys
Completion 2019	Developer & Manufacturer Essential Living & Elements Europe Ltd
Architect Assael Architecture & HTA Design	Owner Essential Living

¹⁷⁷ Marsh and Gibb, The Private Rented Sector in the UK, p.15.

¹⁷⁸ Kilpatrick, The Rise of Build to Rent in the UK, p. 41.

¹⁷⁹ Montague, Review of the Barriers to Institutional Investment in Private Rented Homes.

¹⁸⁰ HM Treasury, “Budget 2013,” GOV.UK, March 2013, 39.

¹⁸¹ Ministry of Housing, Communities and Local Government, “2010 to 2015 Government Policy: Rented Housing Sector,” app. 9, “Private Rented Sector.”; Parliament UK, “The Private Rented Sector.”

¹⁸² Ministry of Housing, Communities and Local Government, “National Planning Policy Framework,” GOV.UK, July 2018, 65.

¹⁸³ Greater London Authority, The London Plan, Policy H11 “Build to Rent.”

¹⁸⁴ British Property Federation, Build to Rent Statistics Q2 2026.

¹⁸⁵ British Property Federation, Build to Rent Statistics Q2 2026.

¹⁸⁶ British Property Federation, Build to Rent Statistics Q2 2026.

¹⁸⁷ British Property Federation, Build to Rent Statistics Q2 2026.

¹⁸⁸ Farmer, Mark. “The Farmer Review of the UK Construction Labour Model Modernise or Die Time to Decide the Industry’s Future”.

¹⁸⁹ Department for Business, Energy and Industrial Strategy, Construction Sector Deal,

¹⁹⁰ MHCLG Joint Industry Working Group on MMC, Modern Methods of Construction: Introducing the MMC Definition Framework

¹⁹¹ Homes England, Strategic Plan 2018/19–2022/23.

¹⁹² House of Lords Built Environment Committee, “Modern Methods of Construction in Housing,” para. 59.

¹⁹³ House of Lords Built Environment Committee, “Modern Methods of Construction in Housing,” para. 72.

¹⁹⁴ Khan et al., “Nudge or Mandate: An Exploration into the Constraints of Volumetric Modular Construction in Australia.”; Saad, Dulaimi, and Gorse, “Prospects of Promoting MMC Across the Public Construction Sector.”

¹⁹⁵ Thurairajah et al., “Unexpected Challenges in the Modular Construction Implementation.”

¹⁹⁶ Akerlof Ltd, “Written Evidence (MMC0008).”

6.2 CASE 2 – Canada

Canada has experienced persistent housing supply constraints over the past decade as rapid population growth has outpaced residential construction. Between 2022 and 2023, international migration accounted for over 97% of Canada’s population growth, the fastest annual population increase since the 1950s¹⁹⁷. By mid-2026, Canada’s population exceeded 41.4 million¹⁹⁸, placing sustained pressure on housing demand, particularly in the country’s largest metropolitan areas where employment opportunities and new arrivals concentrated¹⁹⁹. Although housing construction has remained comparatively strong, with 259,028 housing starts in 2025, up 5.6% on 245,367 in 2024²⁰⁰, the Canada Mortgage and Housing Corporation (CMHC) estimates that around 430,000 to 480,000 units per year until 2035 are needed to meet projected housing demand²⁰¹. Rental market conditions have also begun to moderate following recent increases in housing supply and lower population growth, with the average vacancy rate for purpose-built rental (PBR) apartments increasing from 2.2% in 2024 to 3.1% in 2025²⁰².

In Canada, provincial governments have primary constitutional responsibility for property, including housing²⁰³, delegating land use administration to municipal governments²⁰⁴. Since the establishment of the CMHC at the end of 1945, the federal government has periodically influenced housing outcomes through national financing programs, research²⁰⁵, and more recently with taxation incentives. Although the federal government devolved many housing responsibilities to provinces during the 1980s and 1990s, the launch of the National Housing Strategy (NHS) in 2017 marked a renewed federal role in housing policy through targeted direct investment and intergovernmental cooperation. To operationalise this vision across jurisdictions, the 2018 Housing Partnership Framework established a multilateral mechanism to align priorities, funding programs, support co-investment, plan across policy sectors, and share information in an open and timely manner²⁰⁶.

Canada’s contemporary housing policies build on a longer history of federal intervention in housing policies. Since the 1970s, governments have periodically used taxation measures and financing programs to incentivize PBR housing, although the form and intensity of these interventions have changed over time. More recent initiatives have combined tax incentives, concessional finance and municipal planning partnerships to stimulate PBR development, while increasing support for MMC, including VMC, to improve construction productivity and expand housing delivery capacity. The following sections examine the evolution of these policy approaches, focusing on the adoption of PBR housing and the emerging role of VMC within Canada’s broader housing supply strategy.

6.2.1 PBR/BTR Development

Canada’s PBR sector has been shaped by successive cycles of government intervention, withdrawal and renewed engagement. Although the contemporary PBR or BTR model is associated with institutional ownership, large-scale rental communities and professional management, the policy objective of encouraging private investment in rental housing has existed for several decades. Federal rental policy has historically relied on taxation measures and financing mechanisms to influence investment decisions, with the nature of support shifting from broad tax incentives in the 1970s towards targeted financing and supply-oriented interventions post-2017.

The first major federal initiative aimed at stimulating private rental construction was the Multiple Unit Residential Building (MURB) program, introduced in 1974. The program allowed investors in qualifying rental properties to deduct depreciation and certain expenses against other sources of income, reducing the after-tax cost of rental investment. MURB was part of a broader federal effort to increase rental housing supply by encouraging private-sector participation in apartment

construction. Evaluations of the program indicate that it generated additional construction activity, with 35.6% of housing starts attributed to it²⁰⁷; however, it also incurred significant fiscal costs through foregone tax revenue and was subsequently phased out²⁰⁸.

The termination of MURB in 1982 marked a transition away from broad tax-based incentives for rental construction. The decline of PBR investment reflected a combination of factors, including demographic trends, tax reforms, rising development costs relative to achievable rents, land competition from expanding condominium market, and favourable homeownership conditions²⁰⁹. Research on Canadian housing policy has indicated that the withdrawal of rental incentives coincided with a prolonged period in which private rental construction remained comparatively limited, contributing to greater reliance on condominium developments and secondary markets to meet rental demand²¹⁰.

The federal government’s renewed involvement in rental housing began with the 2017 NHS, which reintroduced federal investment and financing instruments. Two key components administered by the CMHC were the Rental Construction Financing Initiative (RCFI)²¹¹ and the Mortgage Loan Insurance Select (MLIS) product²¹². While the RCFI provided low-cost loans for the construction of PBR housing, the MLIS offered up to 95% financing, reduced premiums and extended amortizations up to 50 years for multi-unit residential properties (5+ units). To qualify under either stream, projects were assessed against specific requirements for affordability, accessibility, and energy efficiency²¹³. RCFI and MLIS sought to improve project feasibility by reducing financing costs and supporting developments that may otherwise have faced challenges obtaining conventional financing.

Rental financing support was expanded in 2023²¹⁴ and 2025 through the Apartment Construction Loan Program (ACLP), which succeeded and expanded the RCFI

framework. Latest adjustments **increased federal low-cost lending capacity to \$55 billion, targeting 131,000 new units by 2031/32** and raising the capital cost allowance rate from 4% to 10% for rental developments²¹⁵ to enhance project viability across market segments. These initiatives represent a shift from earlier rental interventions such as MURB: instead of reducing investor tax liabilities broadly, the federal government increasingly uses targeted financing to encourage specific housing outcomes while incorporating eligibility requirements to deliver overarching social benefits.



Image 15: 605 Studio West

Location 605 9 Street SW, Calgary	Asset Type Affordable housing
Modules 56 (84 studio units)	Levels 6 storeys
Completion 2025	Developer & Manufacturer ATCO Structures
Architect WalterFedy Architecture	Owner Attainable Homes Calgary

¹⁹⁷ Government of Canada, “2025 Annual Report to Parliament on Immigration,” Canada.ca, November 2025.

¹⁹⁸ Statistics Canada, review of *Population estimates on 17 June 2026, by age and gender*, Statistics Canada Dissemination, June 17, 2026.

¹⁹⁹ Canada Mortgage and Housing Corporation, “Housing Market Outlook 2026”.

²⁰⁰ Canada Mortgage and Housing Corporation, Housing starts up 5.6% in 2025 from 2024, Cmhc-schl.gc.ca, 2025.

²⁰¹ Canada Mortgage and Housing Corporation, Canada’s Housing Supply Shortages.

²⁰² Canada Mortgage and Housing Corporation, “Rental Market Report,” www.cmhc-schl.gc.ca, January 31, 2024; the percentage refers to a specific subset of rental units: PBR properties with three or more units.

²⁰³ Constitution Act, 1867, s 92(13).

²⁰⁴ Constitution Act, 1867, s 92(13).

²⁰⁵ Central Mortgage and Housing Corporation, 1-6.

²⁰⁶ Housing, Infrastructure and Communities Canada, *Federal-Provincial/Territorial Housing Partnership Framework*.

²⁰⁷ Fallis et al., Final Report: The Economic Impact of Federal Rental Housing Program, 6

²⁰⁸ Tax Expenditures—Housing

²⁰⁹ Pomeroy and MacLennan, Rental Housing in Canada’s Cities, 4;15.

²¹¹ Pomeroy, “Examining the Financialization of Rental Housing A Brief Submitted to Review Panel on the Financialization of Purpose-Built Rental Housing,” June 2023.

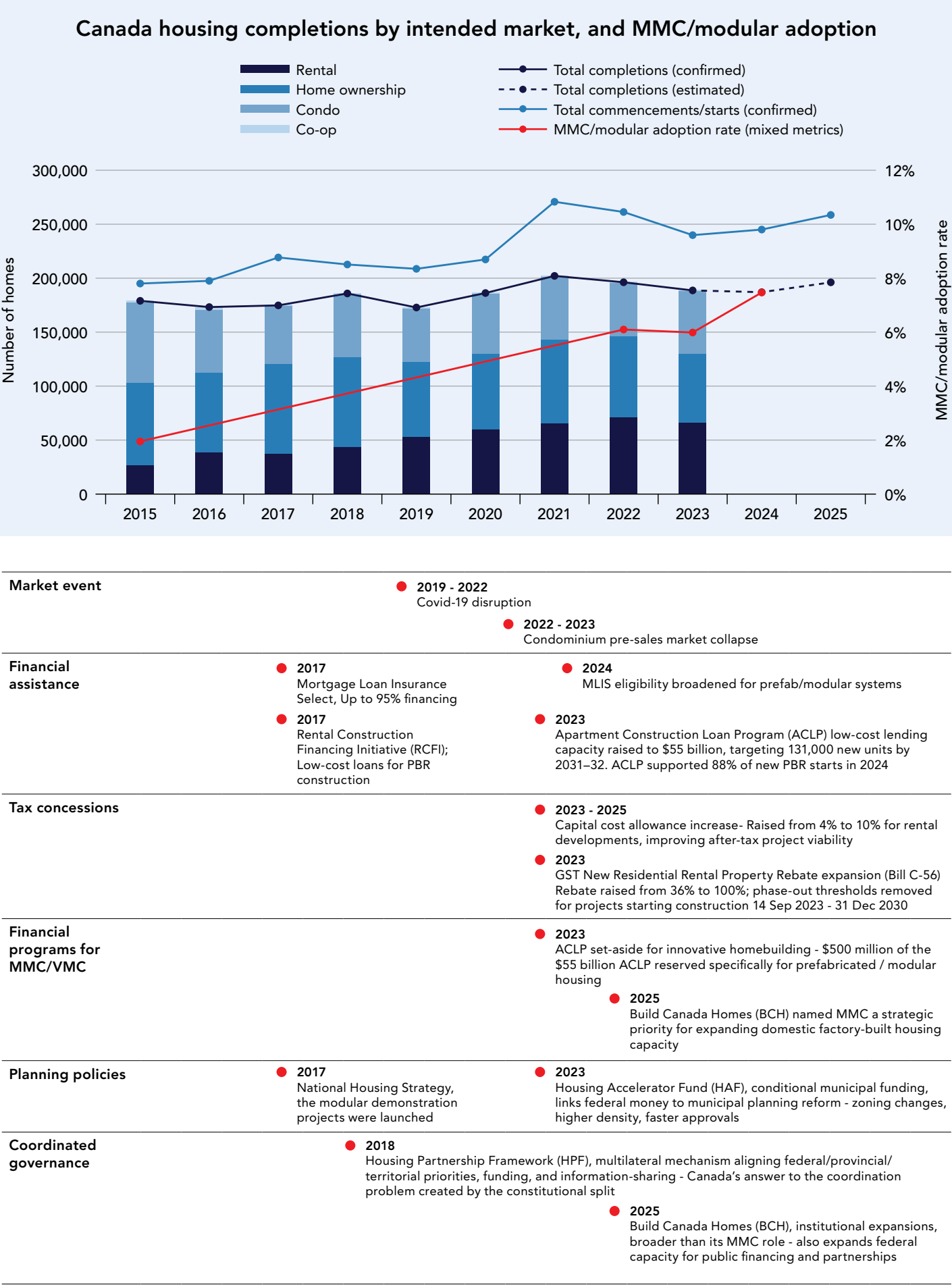
²¹² Government of Canada, review of Canada’s National Housing Strategy - A place to call home., January 30, 2018, 37.

²¹³ Canada Mortgage and Housing Corporation, “Increasing the Supply and Affordability of Canada’s Rental Housing,” Cmhc-schl.gc.ca, 2024.

²¹⁴ Canada Mortgage and Housing Corporation, “Rental Construction Financing. Highlight Sheet.,” October 5, 2023, 2; Canada Mortgage and Housing Corporation, MLI Select | CMHC, www.cmhc-schl.gc.ca, November 2024.

²¹⁵ Department of Finance Canada, “2023 Fall Economic Statement,” Government of Canada, accessed July 5, 2026, p. 30-31.

²¹⁵ Housing, Infrastructure and Communities Canada, “Housing.”



including the ability to manufacture building components concurrently with site preparation, improved quality control, and shorter on-site construction periods. At the same time, the demonstration program highlighted practical challenges associated with transportation logistics, installation sequencing, and moisture management, emphasising that project outcomes remained highly dependent on local conditions²²³.

Support for MMC expanded through the Housing Supply Challenge (2020), which funded projects designed to increase off-site manufacturing capacity, improve interoperability across modular systems, and encourage innovation in housing delivery²²⁴. The program sought to address systemic barriers limiting the wider adoption of factory-based construction. Federal financing programs have also progressively incorporated MMC into mainstream housing policy. Recent CMHC guidance has broadened MLIS eligibility for prefabricated and modular housing systems, after a pilot that insured more than 800 rental homes using modular construction across five provinces, and introduced Prefab Plus (5% minimum deposit on factory-built homes). The pilot included Calgary’s 605 Studio West, 84 affordable units built and occupied in under a year²²⁵. In addition, the federal government announced that \$500 million of the ACLP would be reserved to support innovative homebuilding approaches, including prefabricated and modular housing²²⁶. This initiative was complemented in 2025 through the establishment of BCH, which identified MMC in its third mandate, expanding domestic housing production capacity and supporting factory-built housing²²⁷.

Despite increasing policy support, the adoption of VMC in Canada continues to face structural constraints. Beyond the mismatch between conventional construction finance and factory-based production, CMHC has identified procurement practices, fragmented supply chains, transportation logistics, workforce capability, and limited manufacturing scale as key barriers to wider adoption²²⁸. Promised productivity gains are therefore highly variable: while VMC can accelerate delivery on

suitable developments, realised benefits depend on factors including design standardisation, production repetition, factory utilisation, transportation logistics and sufficient project volume to support manufacturing scale.

Canada’s approach to VMC has been characterised by incremental institutional support. Successive federal initiatives have progressively integrated modular construction within research, financing and industrial policy, reflecting an enabling strategy intended to reduce barriers to adoption, while improving construction productivity. Although evidence of large-scale market transformation remains limited, recent measures including dedicated ACLP funding and the establishment of BCH—suggest that VMC is increasingly being positioned as an important component of Canada’s long-term housing supply strategy.

²²³ Canada Mortgage and Housing Corporation, “Key Lessons on Modular Housing From Across Canada.”
²²⁴ Canada Mortgage and Housing Corporation, “The Housing Supply Challenge.”
²²⁵ Canada Mortgage and Housing Corporation, “CMHC Expands Mortgage Insurance to Support Prefab and Modular Construction.”
²²⁶ Canada, Department of Finance, Budget 2024, “Changing How We Build.”
²²⁷ Housing, Infrastructure and Communities Canada, Framework Agreement, “Mandate.”
²²⁸ Canada Mortgage and Housing Corporation, “Key Lessons on Modular Housing From Across Canada.”

6.3 CASE 3 – Singapore



Singapore’s housing delivery is led by a highly centralised state and dominated by the public sector. Approximately 77% of Singapore’s resident population (2023) lives in housing developed by the Housing and Development Board (HDB), while 87.9% of resident households own their homes through long-term public homeownership programs²²⁹. The private housing sector consists mainly of private non-landed housing (such as condominiums and apartments) and private landed housing (including terrace houses, semi-detached houses, and detached houses). Unlike BTR markets in countries such as the UK, United States, and Australia, Singapore does not have a well-established institutional purpose-built rental sector. Most private rental supply comes from individual owners leasing private residential properties.

As a densely populated city-state with limited land availability, Singapore has historically relied on integrated land use planning, public housing delivery and coordinated infrastructure investment to accommodate population and economic growth. Consequently, Singapore’s

housing policy has pursued broader objectives beyond simply increasing housing supply, including improving construction productivity, enhancing building quality, and advancing sustainability outcomes.

Since the late 1990s, the Singapore Government has increasingly regarded construction productivity as a strategic economic priority²³⁰. Dependence on foreign construction workers and the need to deliver large volumes of housing efficiently prompted a transition towards industrialised construction methods²³¹. From 2015 onwards, the government progressively embedded Design for Manufacturing and Assembly (DfMA) within the built environment regulatory framework through the Productivity Gateway Framework (PGF)²³². Successive policy interventions have therefore transformed Prefabricated Pre-finished Volumetric Construction (PPVC) / VMC from a niche construction method into a central component of Singapore’s built environment strategy.



Image 16: Tampines GreenGem

Location Tampines Street 96, Singapore	Asset Type Public housing (HDB / BTO)
Modules Not disclosed (1,086 units)	Levels 13-17 storeys across 13 residential blocks
Completion 2023	Developer & Manufacturer HDB & Welltech Construction
Architect HDB in-house design team	Owner HDB

²²⁹ Singapore Department of Statistics, Population Trends 2025, p. vii.
²³⁰ Singapore Construction 21 Steering Committee, Construction 21.
²³¹ Phang, “Singapore’s Construction: Moving Toward a Knowledge-Based Industry.”
²³² Building and Construction Authority, “Productivity Gateway Framework.”

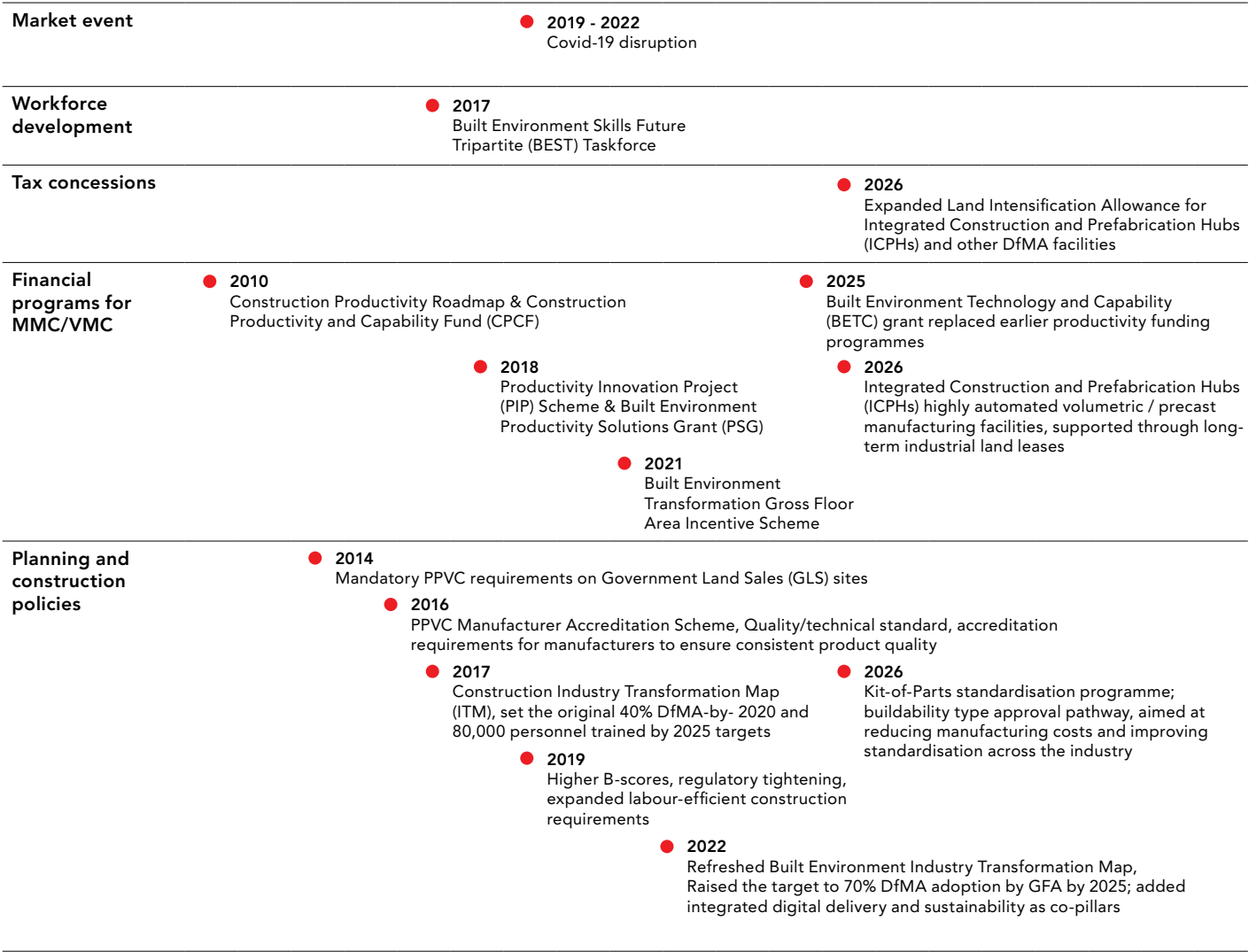
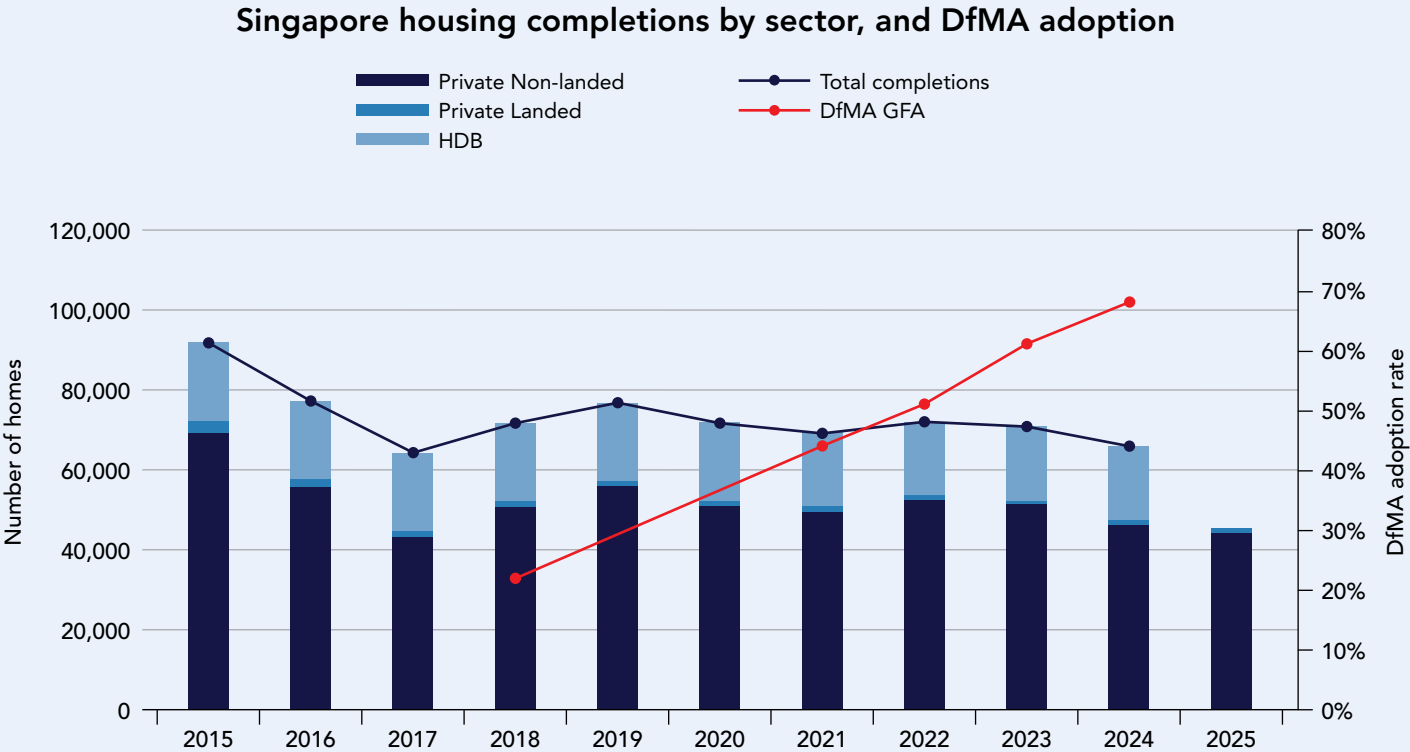


Figure 9: Singapore housing completions by sectors, and DfMA adoption (Source: drawn by the authors, based on the data from BCA (Building and Construction Authority))

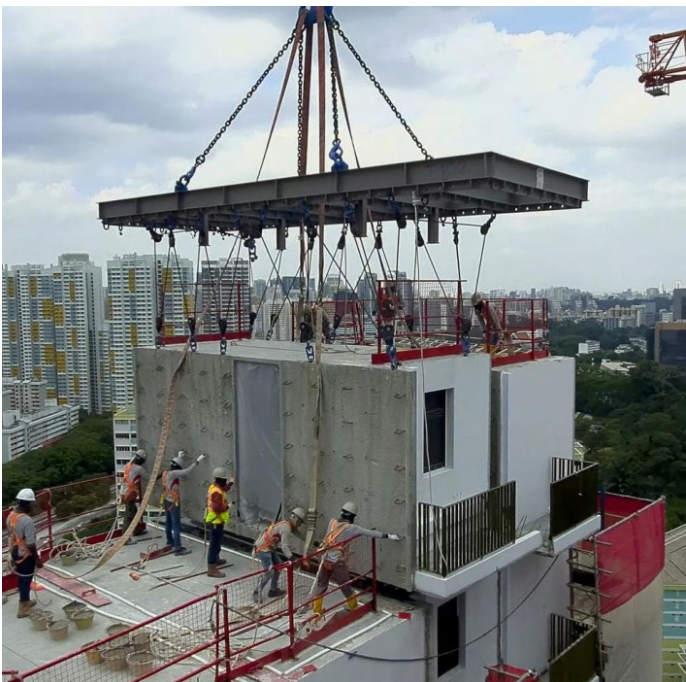


Image 17: Avenue South Residence

Location Silat Avenue, Singapore	Asset Type Private residential
Modules 3,069 (1,074 units)	Levels 2x 56 storey towers & 5x 4 storey blocks
Completion 2023	Developer & Manufacturer United Venture Development
Architect ADDP Architects LLP	Owner United Venture Development

6.3.1 MMC / VMC adoption

Singapore represents one of the world’s most comprehensive examples of government-led adoption of VMC. Although prefabricated construction methods had been used in Singapore since the 1980s, particularly within HDB developments, their application remained limited and largely project-specific²³³. The decisive policy shift occurred in 1999 with the Construction 21 Steering Committee (C21) report, which recommended a minimum buildability score for building designs and financial incentives for prefabrication, alongside measures to raise workforce skills, and encourage integrated and multidisciplinary project delivery²³⁴. Singapore progressively adopted a mandatory approach to PPVC/ VMC as part of the broader DfMA strategy. Government intervention has since combined regulation, public procurement, financial support, industrial investment and workforce development to transform construction practices and improve productivity across the built environment sector.

The foundations of Singapore’s later DfMA and PPVC/ VMC strategy were established through the Buildability Framework, introduced under an amendment to the Building Control Act in 2001²³⁵. The framework required new developments to achieve minimum Buildable Design Scores (B-Scores), encouraging standardisation, labour-efficient design and the use of prefabricated building components without prescribing a particular

construction technology²³⁶. Through successive amendments, the framework was expanded to include Constructability Scores (C-Scores)²³⁷ and progressively strengthened productivity requirements, embedding buildability and labour efficiency within Singapore’s statutory building control regime. These reforms provided the regulatory platform upon which the Government subsequently developed its DfMA strategy and, later, mandatory PPVC requirements.

The government’s approach became significantly more directive in 2014, when the BCA introduced mandatory PPVC requirements for selected Government Land Sales (GLS) residential sites²³⁸. The requirement was subsequently extended to additional GLS sites²³⁹ and selected public-sector developments, creating a predictable pipeline of PPVC/VMC projects and establishing a minimum level of market demand. In 2019, non-landed projects of at least 25,000 m² were required to achieve higher B-Scores or adopt DfMA solutions, thereby increasing regulatory incentives for the adoption of industrialised construction methods²⁴⁰.

Singapore’s regulatory approach was accompanied by substantial investment in the institutional and industrial capabilities required to support large-scale VMC adoption. Launched in 2010, the Construction Productivity Roadmap (CPR) combined regulatory reforms to improve buildability with measures to promote prefabrication, technology adoption, workforce

²³³ Housing & Development Board, “Background on HDB’s Construction Productivity Efforts,” para. 1.
²³⁴ Singapore Construction 21 Steering Committee, Construction 21.
²³⁵ Building and Construction Authority, “Buildability and Constructability Framework.”
²³⁶ Singapore, Building Control (Buildability and Productivity) Regulations 2011, sec. 4
²³⁷ Singapore, Building Control (Buildability and Productivity) Regulations 2011, sec. 5
²³⁸ Building and Construction Authority, “BCA to Unveil Second Construction Productivity Roadmap Next Year,” para. 10.
²³⁹ Building and Construction Authority, “Government Land Sales (GLS) Programme.”
²⁴⁰ Building and Construction Authority, “Enhancements to the Buildability Framework.”

capability development, and industry innovation²⁴¹. Complementing these reforms, the Construction Productivity and Capability Fund (CPCF) provided financial assistance to help firms invest in productive technologies and workforce upgrading and reduce reliance on foreign workers²⁴².

This strategy was consolidated through the 2017 Construction Industry Transformation Map (ITM)²⁴³ and the refreshed 2022 Built Environment Industry Transformation Map (BEIT)²⁴⁴, which positioned DfMA, Integrated Digital Delivery (IDD) and sustainability as the principal pillars of industry transformation²⁴⁵. These strategies integrated manufacturing, digital design, and construction processes within a broader productivity agenda. The original ITM targeted 40% DfMA adoption by 2020 and the training of 80,000 personnel by 2025²⁴⁶, while the BEIT set a target of achieving DfMA adoption across 70% of new developments by gross floor area by 2025²⁴⁷.

Singapore Government also invested directly in expanding manufacturing capacity. Since 2012, the Singapore government has supported the Integrated Construction and Prefabrication Hubs (ICPH) program, under which 30-year industrial land leases are allocated to encourage the development of highly automated prefabrication facilities aiming to intensify land use, increase manufacturing capacity, and improve construction productivity²⁴⁸. To ensure consistent product quality, the BCA introduced the PPVC Manufacturer Accreditation Scheme in 2016, establishing technical and quality assurance requirements for accredited manufacturers²⁴⁹. Workforce capability was strengthened

through initiatives such as the Built Environment Skills Future Tripartite (BEST) Taskforce, which developed structured education and professional training pathways in DfMA, digital construction and advanced manufacturing²⁵⁰.

Mandatory regulation was complemented by financial incentives intended to reduce implementation costs and encourage industry innovation. The Productivity Innovation Project (PIP) Scheme, introduced in 2010 under the CPCF, provided co-funding for firms investing in productivity-enhancing technologies, including prefabrication, automation, robotics, IDD and DfMA manufacturing facilities²⁵¹. In 2019, the scheme received a further S\$200 million funding allocation under the BuildSG Transformation Fund to accelerate industry transformation²⁵². The Public Sector Construction Productivity Fund (PSCPF), launched in 2017 with an initial allocation of S\$150 million and expanded by an additional S\$95 million in 2019, supported public-sector projects implementing DfMA technologies, including PPVC, Mass Engineered Timber (MET), structural steel construction and advanced precast systems²⁵³.

Financial incentives were progressively expanded to support the government’s evolving regulatory framework. The Built Environment Transformation Gross Floor Area Incentive Scheme (2021) provides bonus gross floor area for private developments achieving at least 65% PPVC implementation in residential projects²⁵⁴. More recently, the Built Environment Technology and Capability (BETC) Grant (2025) replaced earlier productivity funding programs with a dedicated capability-building initiative supporting advanced construction technologies²⁵⁵.



Image 18: The Clement Canopy

Location Clementi Avenue, Singapore	Asset Type Private residential
Modules 1,899 (505 units)	Levels 2x 40 storey towers
Completion 2019	Developer & Manufacturer United Venture Development & Dragages Singapore
Architect ADDP Architects LLP	Owner United Venture Development

Complementary reforms implemented in 2026, including the Kit-of-Parts approach²⁵⁶, the Buildability Type Approval pathway²⁵⁷ and the extension of the Land Intensification Allowance from ICPHs to a broader range of multi-storey DfMA facilities²⁵⁸, aim to further reduce manufacturing costs, improve standardisation and strengthen domestic production capacity.²⁵⁹

Singapore’s coordinated policy framework has resulted in one of the highest levels of industrialised construction adoption internationally. **DfMA adoption, measured as a proportion of gross floor area, increased from 19% in 2017 to 76% in 2025**, exceeding the government’s target of 70% by 2025²⁶⁰. Importantly, this increase occurred despite a moderation in the private residential development cycle following the 2012–13 peak²⁶¹, suggesting that adoption was strongly influenced

by sustained government intervention, including regulatory requirements, public-sector procurement and incentives. The substantial pipeline of HDB developments also provided manufacturers with predictable demand, enabling investment in production facilities and supporting economies of scale.

Singapore’s experience with its PPVC and DfMA strategies suggests that **mandatory regulation, industrial investment, and institutional support can collectively accelerate the adoption of innovative construction methods**. While Singapore’s highly centralized governance system may limit direct transferability to larger federal jurisdictions, its approach offers a clear, evidence-based model for how coordinated government intervention can mainstream VMC as part of a long-term construction productivity strategy.

²⁴¹ Grace Fu, “Construction Productivity,” par. 2.

²⁴² Grace Fu, “Construction Productivity,” par. 4.

²⁴³ Building and Construction Authority, “Overview of Construction ITM,” Annex A.

²⁴⁴ Building and Construction Authority, “Built Environment Industry Transformation Map to Facilitate Integration and Collaborative Breakthrough Across the Entire Value Chain.”

²⁴⁵ Building and Construction Authority, “Overview of Construction ITM,” Annex A, para. 2.; Building and Construction Authority, “Built Environment Industry Transformation Map to Facilitate Integration and Collaborative Breakthrough Across the Entire Value Chain.”

²⁴⁶ Building and Construction Authority, “Built Environment Industry Transformation Map to Facilitate Integration and Collaborative Breakthrough Across the Entire Value Chain,” para. 6 and 11(b).

²⁴⁷ Building and Construction Authority, “Built Environment Industry Transformation Map to Facilitate Integration and Collaborative Breakthrough Across the Entire Value Chain,” para. 6.

²⁴⁸ Building and Construction Authority, “Construction Industry Transformation Map,” Build Smart, no. 37, pg. 6.

²⁴⁹ Singapore Concrete Institute, “PPVC Manufacturer Accreditation Scheme.”

²⁵⁰ Growbeansprout “Singapore Construction Demand Hit a 10-Year High. Where to Look for Investment Opportunities” 26 June 2026.

²⁵¹ Grace Fu, “Construction Productivity”.

²⁵² Building and Construction Authority, “New Funding Framework, Manpower Scheme to Support Transformation of Built Environment Sector.”

²⁵³ Building and Construction Authority, “More Support and Incentives to Transform Built Environment Sector,” para. 5; Building and Construction Authority, “New Funding Framework, Manpower Scheme to Support Transformation of Built Environment Sector.”

²⁵⁴ Building and Construction Authority, “Built Environment Transformation Gross Floor Area Incentive Scheme.”

²⁵⁵ Building and Construction Authority, “Annex B: Built Environment Technology and Capability (BETC) Grant.”; Building and Construction Authority, “Built Environment Sector Gets a \$100m Boost to Drive Next Phase of Industry Transformation.”

²⁵⁶ Building and Construction Authority, “Launch Of Buildability Type Approval to Incentivise Adoption of Kit-of-parts Approach,” Annex C in New Pro-Enterprise Measures to Accelerate Built Environment Sector Transformation

²⁵⁷ Building and Construction Authority, “Circular on Buildability Type Approval.”

²⁵⁸ Building and Construction Authority, “Land Intensification Allowance Scheme for the Built Environment Sector Expanded to Optimise Industrial Land Use.”

²⁵⁹ Growbeansprout “Singapore Construction Demand Hit a 10-Year High. Where to Look for Investment Opportunities” 26 June 2026.

²⁶⁰ Ministry of National Development, “Written Answer on Promoting and Supporting the Use of Prefabrication Methods for Construction Projects.”

²⁶¹ Statistics Singapore, “Release of 4th Quarter 2013 Real Estate Statistics.” - The report recorded that developers launched 15,885 private residential units in 2013, compared with 21,478 units in 2012, while developer sales declined from 22,197 units in 2012 to 14,948 units in 2013, indicating a moderation in private residential development activity following the high levels recorded in 2012

6.4 CASE 4 – United States

The US has experienced a long-term shift in housing demand from owner occupation towards rental housing, particularly following the **Global Financial Crisis (GFC)**. The country has historically been characterised by high rates of homeownership, extensive suburban development, and a housing system shaped by private sector delivery. The national homeownership rate reached approximately 69% in 2004 before declining after the housing market collapsed, when millions of households experienced foreclosure or lost access to mortgage credit²⁶². This contributed to sustained growth in renter households, with rental demand particularly strong in high-cost metropolitan areas where limited housing supply and rising housing costs created increasing affordability pressures²⁶³. Although housing construction has recovered since the GFC²⁶⁴, it remains constrained by factors including restrictive zoning and regulatory policies, skilled labour shortages, financing limitations and elevated development costs²⁶⁵.

Housing policy in the US operates through a decentralised governance structure in which states and local governments hold primary responsibility for land-use regulation, zoning and development approvals, while the federal government influences housing outcomes mainly through financing systems, taxation policy and

targeted housing programs. Unlike countries with extensive public housing sectors, the US has historically relied on private and nonprofit providers for rental housing delivery. Federal housing policy has primarily sought to support market-based housing provision through mortgage finance institutions, tax incentives and targeted affordable housing programs, including the Low-Income Housing Tax Credit (LIHTC)²⁶⁶, established under the Tax Reform Act of 1986. The One Big Beautiful Bill Act (OBBBA) delivered the most significant expansion of the credit in over a decade, permanently increasing the 9% LIHTC allocation by 12% and lowering the Private Activity Bond financing threshold from 50% to 25% for the 2026 to 2029 period.

The contemporary rental market reflects this policy trajectory: large-scale multifamily rental development has expanded through private investment, institutional ownership and established housing finance mechanisms, while MMC, including VMC, have developed primarily through private-sector innovation rather than national government coordination. The following sections examine the evolution of institutional rental development and VMC adoption, focusing on the policy mechanisms, market drivers and barriers shaping their contribution to housing delivery.

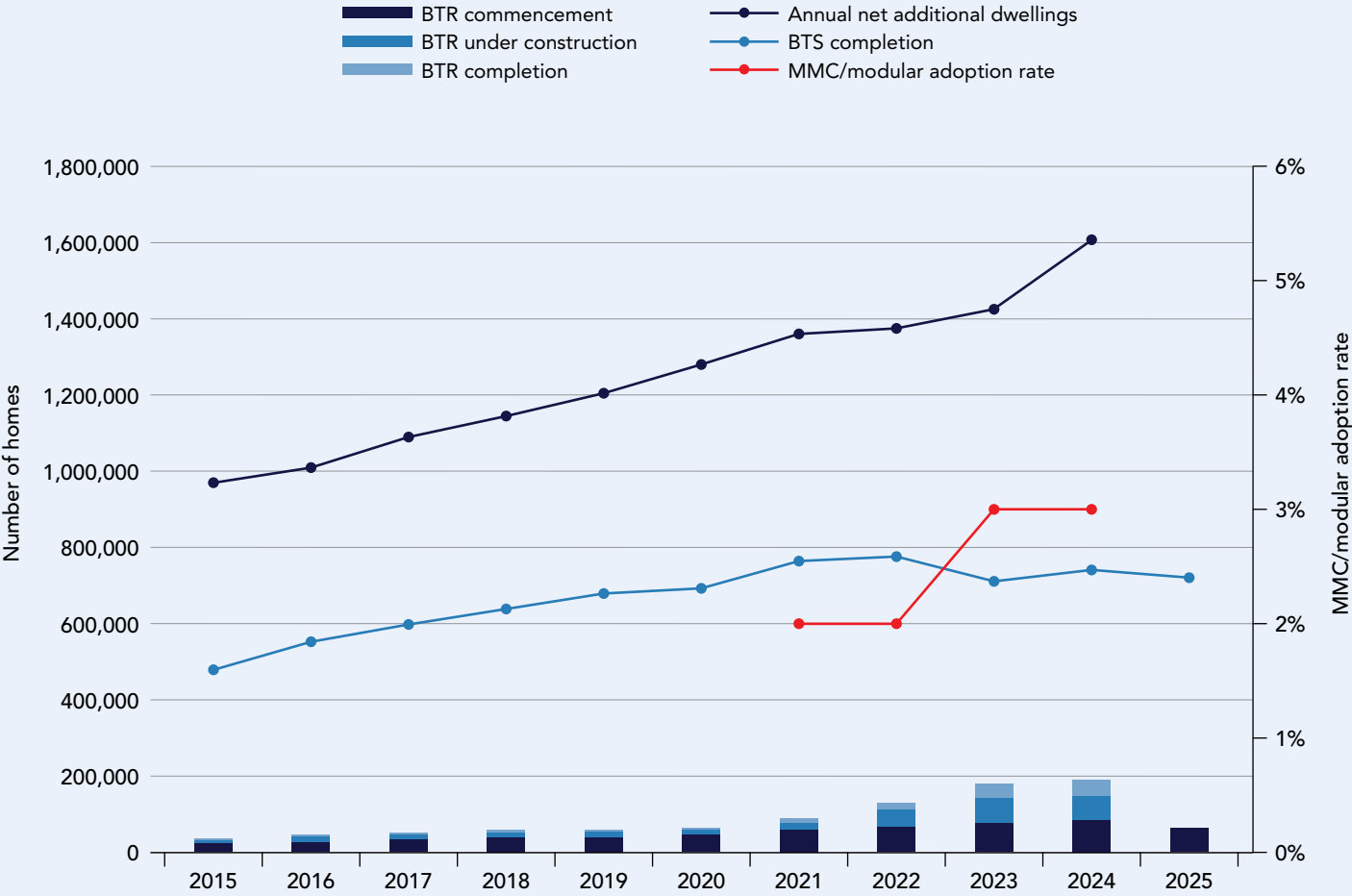


Image 19: 461 Dean Street

Location Brooklyn, New York	Asset Type BTR
Modules 930 (363 units)	Levels 32 storeys
Completion 2016	Developer & Manufacturer Forest City Ratner & FC+Skanska Modular LLC
Architect SHoP Architects	Owner Principal Global Investors

²⁶² Joint Center for Housing Studies of Harvard University, The State of the Nation’s Housing 2017, pg. 19-20.
²⁶³ Joint Center for Housing Studies of Harvard University, America’s Rental Housing 2024.
²⁶⁴ U.S. Census Bureau, “Completed Housing Units.”
²⁶⁵ Joint Center for Housing Studies of Harvard University, The State of the Nation’s Housing 2024.
²⁶⁶ Mark P. Keightley, “The Low-Income Housing Tax Credit: Policy Issues.”

US housing supply, Build-to-Rent delivery, and MMC adoption



Market event	● 2019 - 2022 Covid-19 disruption
National diagnostic	● 2021 Rental Housing Finance Survey, Documents growing share of professionally-managed large multifamily properties vs. small individual-landlord units
Private sector event	● 2015 Katera founded, Venture-backed attempt at integrated design-manufacture-delivery VMC model ● 2017 Factory OS founded, California-based, narrower/ more targeted VMC approach focused on multifamily, responding to regional labour/cost constraints
Research enabling	● 2023 Offsite Construction for Housing: Research Roadmap, U.S. Department of Housing and Urban Development, in partnership with the National Institute of Building Sciences and MOD X — identified key knowledge gaps across six areas: Regulatory Framework, Standards and System Performance, Capital/Finance/ Insurance, Project Delivery and Contracts, Labor and Workforce, and Business Models

Figure 10: US housing supply, BTR delivery, and MMC adoption
(Source: drawn by the authors, based on the data from NAHB analysis; US Census Bureau; CBRE Research/Yardi Matrix)



Image 20: 461 Dean Street module lift

6.4.1 Multifamily rental / BTR adoption

The US multifamily rental housing sector has expanded significantly since the GFC, reflecting changes in household tenure preferences, housing affordability conditions and investment patterns. The country's housing system has historically been characterised by owner occupation and low-density suburban development, supported by post-war highway investment, mortgage finance and extensive metropolitan expansion²⁶⁷. This urban form contributed to a housing market in which single-family detached housing dominated new construction for much of the twentieth century²⁶⁸, while higher-density rental development remained concentrated in larger metropolitan centres²⁶⁹.

The housing market conditions following the GFC altered this trajectory. Between 2007 and 2012, millions of households experienced foreclosure or lost access to mortgage finance, contributing to a decline in homeownership and sustained growth in rental demand²⁷⁰. **The national homeownership rate declined from 69.2% in 2004 to 65.0% in Q2 2026**, while the number of renter households increased substantially²⁷¹. The resulting growth in renter households coincided with renewed investment in professionally managed multifamily rental housing, particularly in large metropolitan areas where strong rental demand and housing affordability pressures encouraged higher-density residential development²⁷².

The US has historically relied on private-sector rental provision, supported by federal financing mechanisms and targeted subsidies. Federal involvement expanded significantly after the decline of direct public housing construction during the 1970s and 1980s, with policy increasingly focused on enabling private and nonprofit rental development²⁷³. The most significant federal rental housing intervention has been the LIHTC, introduced through the Tax Reform Act of 1986²⁷⁴. LIHTC provides federal tax credits allocated through state housing finance agencies, which developers sell to investors

to generate equity for affordable rental projects. Developments receiving credits must comply with income restrictions and affordability requirements for extended periods²⁷⁵. Since its establishment in 1986, LIHTC has financed more than three million affordable rental units, becoming the largest federal program supporting affordable rental production²⁷⁶. However, most US rental housing continues to be delivered through market-rate multifamily development rather than direct government-supported construction.

The expansion of market-rate multifamily rental housing has been supported by the development of a specialised housing finance system. The Federal Housing Administration (FHA) has provided construction debt for multifamily housing since the 1930s²⁷⁷, while Fannie Mae and Freddie Mac significantly expanded their share of multifamily mortgage lending as private lenders withdrew²⁷⁸. These institutions have enabled developers and investors to access long-term financing for apartment communities, contributing to the growth of professionally-managed rental assets.

Between 2001 and 2021, ownership of rental properties by nonindividual investors — including partnerships, LLCs, real estate corporations, and Real estate investment trusts (REITs) grew steadily, reaching 27% of all rental properties, with the fastest growth among small and midsize multifamily buildings. This shift was driven in part by the strong, sustained performance of multifamily real estate as an asset class, as well as by construction-defect liability concerns that, in some markets, discouraged condominium development in favour of rental housing²⁷⁹. Multifamily construction activity also remained concentrated in large metro areas, where land costs are highest²⁸⁰.

Although single-family housing remains the dominant form of new residential construction in the United States, the relative contribution of multifamily housing has increased since 2010, multifamily completions increased from approximately 125,000 units in 2010

to 461,000 units in 2025²⁸¹. The 2021 Rental Housing Finance Survey showed that large multifamily properties represent a substantial share of the U.S. rental stock and differ from smaller rental properties in their ownership and management structures. While smaller properties remain widespread and are often owned by individual investors, larger properties are predominantly professionally managed and more frequently owned through corporate entities²⁸².

However, the US multifamily model also presents limitations. Multifamily development is concentrated in large metropolitan areas, where land is most expensive, and construction is shaped by local zoning and land use regulation, **an estimated 75% of residential land in many United States cities is zoned exclusively for single-family homes**, restricting where multifamily rental housing can be built. Although institutional and other non-individual investors (including partnerships, LLCs, and real estate corporations) have expanded their ownership share from 18% to 27% of rental properties between 2001 and 2021, with even sharper growth among large multifamily buildings, the majority of rental properties nationally are still owned by individuals, indicating that ownership remains comparatively fragmented despite this trend²⁸³.

The US multifamily rental housing sector reflects a market-oriented approach in which private capital, supported by federal housing finance institutions and targeted tax incentives, has become the primary mechanism for expanding rental supply. Since the introduction of LIHTC in 1986 and the expansion of multifamily finance after the 2007–2009 financial crisis, these mechanisms have supported the growth of professionally managed rental housing, particularly in metropolitan areas experiencing strong population and employment growth. However, the effectiveness of this model is shaped by the spatial characteristics of the US housing system, where decades of low-density suburban development and fragmented local planning

²⁶⁷ Fetter, "The Twentieth-Century Increase in U.S. Home Ownership."

²⁶⁸ U.S. Census Bureau, Outline of 32 Years of Housing Data, pg. 9-10.

²⁶⁹ Joint Center for Housing Studies of Harvard University, The State of the Nation's Housing 2024.

²⁷⁰ Joint Center for Housing Studies of Harvard University, The State of the Nation's Housing 2024.

²⁷¹ U.S. Census Bureau, "Housing Vacancy Survey: Historical Tables," tables 7-8

²⁷² Joint Center for Housing Studies of Harvard University, America's Rental Housing 2024.; Joint Center for Housing Studies of Harvard University, The State of the Nation's Housing 2023

²⁷³ PwC and the Urban Land Institute, "Emerging Trends in Real Estate 2026" 2025.

²⁷⁴ Mark P. Keightley, "The Low-Income Housing Tax Credit: Policy Issues."

²⁷⁵ Mark P. Keightley, "The Low-Income Housing Tax Credit: Policy Issues."

²⁷⁶ Council of Economic Advisers, "Increasing the Supply of Affordable Housing," pg. 168.

²⁷⁷ HUD, "The Federal Housing Administration Celebrates 90 Years of Making Homeownership Possible for American Families."; National Multifamily Housing Council, "FHA Multifamily and the Apartment Industry Fact Sheet."

²⁷⁸ U.S. Government Accountability Office, Mortgage Financing.

²⁷⁹ Kroll, C et al. "The Impact of Construction-Defect Litigation on Condominium Development", CPRC Brief, October 2002.

²⁸⁰ Joint Center for Housing Studies of Harvard University, America's Rental Housing 2024.;

²⁸¹ U.S. Census Bureau, "Lot Size of New Single-Family Houses Completed."; U.S. Census Bureau, "Units in New Multifamily Buildings Completed."

²⁸² HUD and U.S. Census Bureau, "2021 Rental Housing Finance Survey."

²⁸³ Joint Center for Housing Studies of Harvard University, America's Rental Housing 2024

have influenced where and how higher-density rental housing can be delivered. Continued expansion of multifamily rental housing will therefore depend not only on capital availability, but also on the ability of metropolitan areas to integrate higher-density housing within existing urban and suburban environments.

6.4.2 MMC / VMC adoption

VMC adoption in the US has developed through a market-led pathway shaped by construction productivity challenges, regional housing pressures and private-sector experimentation. The US construction industry has an atomistic structure, comprising a very large number of predominantly small firms (around 80% employing fewer than ten people) organised around specialisation and subcontracting rather than integrated production, with residential contractors in particular operating within geographically limited, local markets²⁸⁴. While offsite and modular methods have been identified by industry practitioners as a means of addressing productivity, quality and labour-shortage pressures, survey-based research indicates that their adoption remains uneven, constrained by regulatory inconsistency, a conservative bidding culture, limited industry experience with modularisation, and firms' capacity to align production and demand across market cycles²⁸⁵.

Interest in VMC increased from the mid-2010s, as developers and technology firms sought responses to persistent industry challenges, including skilled labour shortages, rising construction costs and extended delivery timelines²⁸⁶. These pressures were particularly evident in high-cost metropolitan markets such as California, where strong demand for multifamily rental housing, combined with escalating construction costs, created incentives to explore off-site production methods²⁸⁷. US volumetric modular activity has largely developed around light timber-frame construction²⁸⁸, reflecting the sector's continuity with conventional US wood-frame residential building practice²⁸⁹.

Consequently, VMC adoption has been concentrated in specific sectors, regions, and construction typologies rather than becoming a mainstream national construction approach.

The US pathway has been characterised by private-sector innovation and efforts to industrialise construction through vertically integrated delivery models. The most prominent example was Katerra, founded in 2015, which sought to transform the architecture, engineering and construction (AEC) industry by integrating design, material procurement, manufacturing, supply-chain management and construction within a single organisation to deliver buildings with greater efficiency, cost certainty and quality. **Despite attracting more than US\$1 billion in venture capital investment and rapidly expanding its operations, Katerra ceased operations in 2021.** Its experience illustrates the challenges of scaling industrialised construction, where success depends not only on manufacturing capability but also on effective coordination of software systems, supply chains, procurement models, financing arrangements, regulatory approvals and market demand²⁹⁰.

Federal government involvement in US off-site and modular construction has primarily focused on research, technical guidance, standardised development and the creation of enabling regulatory conditions rather than direct market intervention or procurement mandates. The US Department of Housing and Urban Development (HUD), through its Office of Policy Development and Research (PD&R), has supported research into factory-built and innovative housing systems to improve housing supply, affordability and construction efficiency²⁹¹. The National Institute of Standards and Technology (NIST) has supported research into advanced construction methods, digitalisation and productivity improvement, while the International Code Council (ICC) and Modular Building Institute (MBI) have developed the ICC/MBI 1200, 1205 and 1210 standards to improve consistency in the design, fabrication, inspection and regulatory compliance of off-site construction across jurisdictions²⁹².

These initiatives have sought to facilitate market adoption by reducing technical and regulatory barriers rather than mandating the use of modular construction.

A continuing challenge for VMC adoption is the alignment between manufacturing-based production and regulatory and financial systems. Although building codes provide common technical frameworks, states and municipalities retain responsibility for adoption and enforcement, creating variation in approval processes²⁹³. Financing also remains challenging: modular manufacturers typically require large upfront deposits (**commonly 30–60% of contract value**) to secure materials and reserve factory production capacity months before units are transported and installed on site, a cash-flow profile that diverges from conventional construction ties schedules to on-site progress, and that many lenders remain unfamiliar with²⁹⁴.

The US experience shows a private-sector pathway where firms have experimented with industrialised construction in response to market pressures rather than through a nationally coordinated housing delivery strategy. While VMC has demonstrated potential to improve productivity in suitable applications, **wider adoption depends on whether the broader construction ecosystem** including, regulation, finance, procurement, and supply chains, can adapt to support factory-based delivery at scale.



Image 21: College Road module lift

²⁸⁴ Costantino, Pellegrino, and Pietroforte, "Asset Specificity and Specialization."

²⁸⁵ Razkenari et al., "Perceptions of Offsite Construction."

²⁸⁶ Razkenari et al., "Perceptions of Offsite Construction."

²⁸⁷ Galante, Draper-Zivetz, and Stein, Building Affordability by Building Affordably.

²⁸⁸ WoodWorks, "Mass Timber in Volumetric Modular Construction."

²⁸⁹ Şişman, "The Rise of Wooden Houses in the United States."

²⁹⁰ Curtis, "Interview with Craig Curtis."

²⁹¹ U.S. Department of Housing and Urban Development, Offsite Construction for Housing: Research Roadmap.

²⁹² NIST, "Prefabrication and Modularization."; International Code Council, "Off-Site and Modular Construction."

²⁹³ Congressional Research Service, Building Codes, Standards, and Regulations.

²⁹⁴ Salama et al., "Financial Modeling for Modular and Offsite Construction."

7. Conclusion

Australia’s housing crisis demands an innovative delivery model. BTR is a new housing typology in Australia, emerging this decade, that could deliver 10,000 homes a year²⁹⁵, if growth rates like the UK are maintained. However, in recent years BTR projects in Australia have all but stalled at DA, due to tax and cost constraints. **BTR and VMC are aligned and the combination delivers the speed, quality, and scale that the crisis requires**, and Australian projects confirm the model works in local conditions. Governance gaps constrain the scaling up of the VMC-BTR housing delivery and could be a key lever towards bridging the supply gap in Australia.

The governance gaps identified for taxation, concessional finance, planning, certification, and regulatory standards are not evenly distributed across the project lifecycle. **Their impact is most acute, and most consequential, at the earliest stages of a project:** feasibility assessment, finance initiation, contract structuring, and pre-concept design. It is at these stages that developers, investors, and financiers make the foundational decision of whether to pursue a VMC-BTR model.

Unfavourable tax treatment suppresses feasibility returns before a site is acquired. The absence of government-backed finance and guarantees makes construction funding harder to secure than for conventional alternatives. Unclear planning pathways introduce approval risk that lenders price into financing terms. Inadequate certification frameworks mean that insurers cannot provide the certainty that project finance requires.

Collectively, these governance gaps converge at the pre-concept and early finance stages to make the VMC-BTR decision effectively unviable.



Image 22: The Eades Facade

Major implementation priorities are identified for action

- Introduce a Commonwealth BTR tax concession framework to address GST irrecoverability on construction costs. Ensure state-based developer contributions better reflect BTR smaller unit size/occupancy.
- Affordable Housing is one of the biggest costs in a BTR feasibility, however it delivers a strong social license for the sector and has one of the largest pipelines to be unlocked for affordable rental, so there should be no taxes on this stock. Also, Federal MIT withholding tax settings and Affordable Housing concessions need to harmonise with State Government policies, to ensure no double tax.
- Establish a national low-cost, fully repayable construction loan program for BTR, modelled on Canada’s Apartment Construction Loan Program.
- Recognise VMC’s distinct transport profile, with less trucks and wider loads, rather than treating modules as standard oversize freight.
- Align BTR definitions nationally; give VMC explicit, dedicated assessment pathways rather than treating it as a deviation from conventional construction.
- Establish a national VMC quality certification framework. It resolves the information asymmetry that underlies both the financing premium and the insurance gap.
- Announce a dedicated VMC-BTR incentive program with a pipeline commitment. Pipeline certainty is the signal to VMC manufacturers that public policy supports investment.

Several of these gaps have progressed since this research was undertaken, illustrating that the sector’s challenges are increasingly recognised, even where they remain unresolved. On 28 May 2026, the Commonwealth released Homes for Australia: A National Plan, a \$47 billion housing strategy; the 2026-27 Federal Budget also expressly carved BTR out of the incoming negative gearing restriction. NSW has legislated a statutory MMC regime under the Building (Approvals and Practitioners) Act 2026 (passed 4 August 2026), and the Australian Building Codes Board (ABCB) has a national MMC certification scheme in consultation, which is due for delivery in mid-2028 and should be brought forward. These developments indicate that several of the report’s recommendations are already partly underway reinforcing the paper’s recommendations for closing the remaining gaps.

²⁹⁵ Savills, Molior and British Property Federation (now Real Estate:UK), Build-to-Rent quarterly statistics, Q1 2025 and Q1 2026; Savills, UK Build to Rent Market Update, Q1 2019 to Q1 2024; Zero Deposit research reported by The Intermediary, 29 June 2026

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