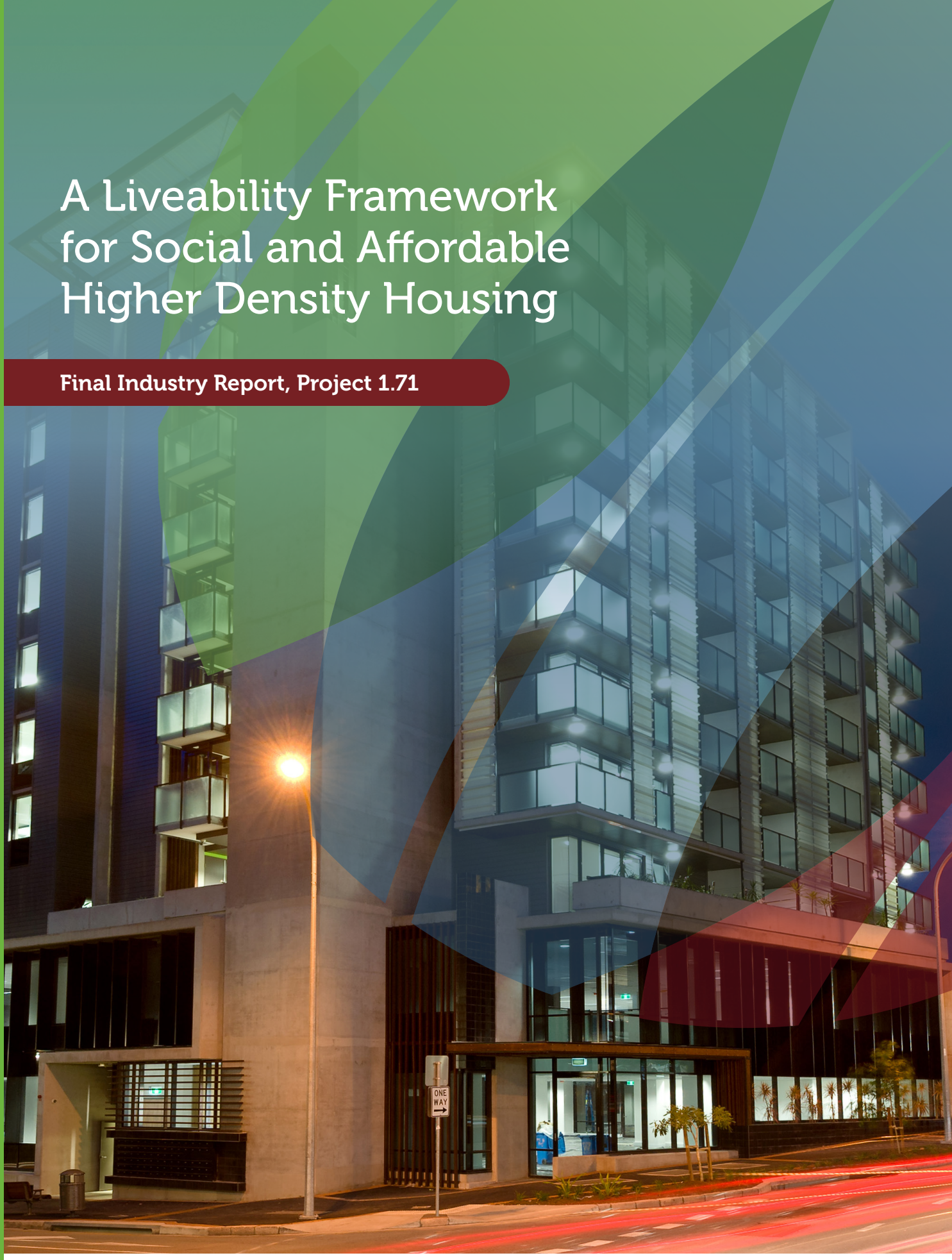
A Liveability Framework for Social and Affordable Higher Density Housing

Final Industry Report, Project 1.71



September 2021

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Sustainable Built Environment National Research Centre AUSTRALIA

Acknowledgments

This research has been developed with support provided by Australia's Sustainable Built Environment National Research Centre (SBEnrc). SBEnrc develops projects informed by industry partner needs, secures national funding, project manages the collaborative research and oversees research into practice initiatives. Core Members of SBEnrc include BGC Australia, Government of Western Australia, Queensland Government, Curtin University, Griffith University, RMIT University and Western Sydney University. This research would not have been possible without the valuable support of our core industry, government and research partners.

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We acknowledge Now Living (BGC), Brisbane Housing Company Limited and Foundation Housing for case study involvement, and thank the industry stakeholders who provided time for interviews and whose insights provided significant benefit to this research.

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Message from the Chair

"It has been a privilege to be the Chair of the Project Steering Group which has provided strategic guidance for this important research. I see valuable opportunities for the application of this research, with particular relevance to the COVID environment. This robust research enters community and sector deliberations at a strategic time of concern regarding affordable and social housing. All research outputs are publicly available. This Final Industry Report will add to richness of any discussions in other roles and provides an amazing resource more broadly, including those in both State and Commonwealth governments. The SBEnrc team has consistently demonstrated professionalism in the research methodology and project management. I thank the team for their leadership and wish them well with their future endeavours."

Sue Ash AO
Chair, Project Steering Group

Preface

The Sustainable Built Environment National Research Centre (SBEnrc), the successor to Australia's Cooperative Research Centre (CRC) for Construction Innovation, is committed to making a leading contribution to innovation across the Australian built environment industry. We are dedicated to working collaboratively with industry and government to develop and apply practical research outcomes that improve industry practice and enhance our nation's competitiveness.

We encourage you to draw on the results of this applied research to deliver tangible outcomes for your operations. By working together, we can transform our industry and communities through enhanced and sustainable business processes, environmental performance and productivity.

John V McCarthy AO
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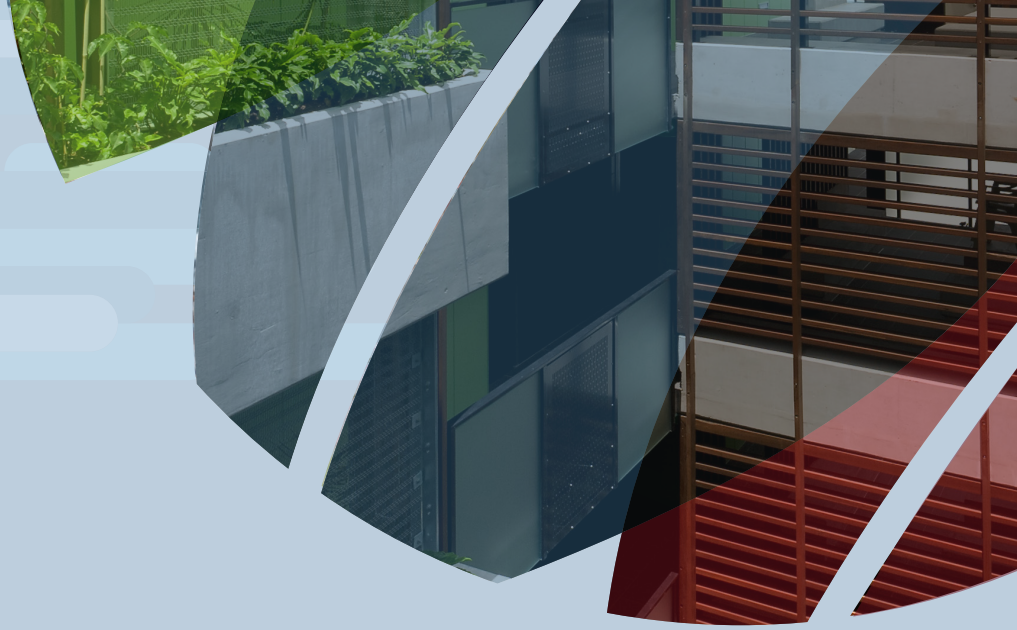

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Executive Summary

Liveability and accessibility in higher density urban housing and precincts are critical to maximise investment and minimise future risks to our community.

This research was guided by a need to shift from a cost-based focus to better understanding the benefits and long-term value derived from liveable and accessible housing precincts. It aims to build a better understanding also of government, industry and not-for-profit roles in shaping industry structure and driving new urban forms, and improving the adoption of liveable and accessible design outcomes.

The findings are informed by a review of industry and academic literature (April to October 2020), and case studies in both Brisbane and Perth supported by 23 interviews with industry stakeholders (October 2020 to May 2021).

The research has developed a Liveability Framework for Medium to High-density Social and Affordable Housing (the Liveability Framework). The intent is for the framework to be used by our SBEnrc partners, and the social and affordable housing sector more broadly, to guide decision-making around the design, development and management of more effective, accessible and liveable social and affordable higher density housing.

The Liveability Framework – aimed at maximising future benefits and minimising community risk – includes 53 sub-components and guidelines across five key components in three key themes:

Quality of life	1. Liveability: Place-based and community-focused 2. Accessibility: Person-centred and community-focused
External Environment	3. Social, economic and environmental value: Building the value equation
Enabling Environment	4. Regulatory and policy environment 5. Improving adoption

Drummond precinct streetscape, Ellenbrook, Western Australia
(Source: Now Living – BGC Group)

The industry challenge

SBEnrc social and affordable housing research undertaken since 2014 has investigated key issues for the sector, as defined by government, industry, not-for-profit and research partners.

This ongoing program of research has been a partnership among government, industry and academia to help build an evidence base in support of policymaking and housing delivery. It has highlighted complexity of the social and affordable housing system so that policy and strategic settings can be better addressed by our partners and the broader sector. Understanding of the inter-relatedness of various elements of housing provision in a person-centred, place-based policy environment has been further advanced.

In 2020, COVID-19 disrupted lives, policy settings and the housing supply chain. It also further exposed pre-pandemic housing problems, with the vulnerabilities in the system becoming more acute. This was particularly challenging for many living in medium- and higher-density inner city housing.

The Liveability Framework for Medium to High-density Social and Affordable Housing (the Liveability Framework) is a project and precinct-based, value-focused tool to be used to guide decision-making around the design, development and management of more effective higher density social and affordable housing.

- **1 in 5 Australians are estimated to live with disability, which approximately equates to 4.3 million people.**
- **24 per cent of adults with disability experience very good or excellent health, compared with 65 per cent of adults without disability.**
- **32 per cent of adults with disability experience high/very high psychological distress, compared with 8 per cent without disability.**
- **48 per cent of working-age (aged 15–64) people with disability are employed, compared with 79 per cent without disability.**

Source: Australian Institute of Health and Welfare, retrieved 6 April 2020: hiips://www.aihw.gov.au/reports/disability/people-with-disability-in-australia/summary

SBEnrc Social Housing Research Program

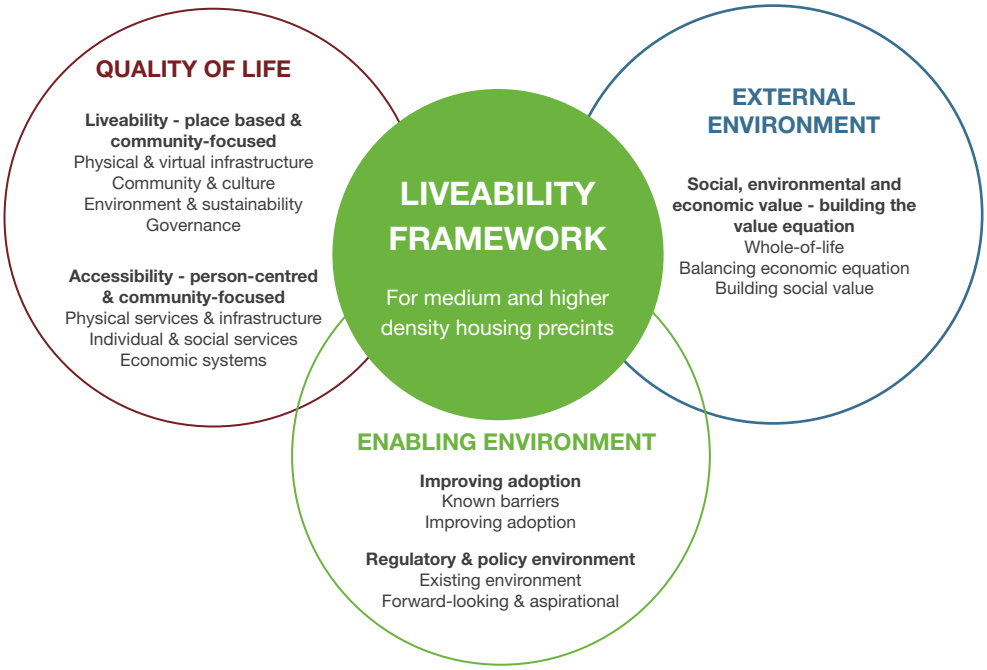
This research is informed by previous SBEnrc research, which includes: the nine impact domains (below) (Rethinking Social Housing, Project 1.31); the composite return on investment (CROI) approach (Valuing Social Housing, Project 1.41); diversity in housing typologies and social procurement criteria (Procuring Social and Affordable Housing, Project 1.54); how to better leverage innovation through industry transformation (Integrated Project Environments, Project 2.24); network groupings and elements (Mapping the Australian Social and Affordable Housing Network, Project 1.61) and the precinct design framework (Sustainable Cities of Tomorrow, Project 1.62).

The previous research also established a productivity-based conceptual framework, which highlighted potential productivity benefits through four lenses: individual; macroeconomic; fiscal; and non-economic such as social and environmental capital.

This industry-led research aims to ensure its uptake and ongoing impact through working collaboratively with government, and not-for-profit and private sector partners.

67 Bennett Street, East Perth, Western Australia
(Source: Foundation Housing)

Developing a Liveability Framework for Social and Affordable Higher Density Housing



The Liveability Framework targets the delivery of social and affordable higher density urban housing and precincts, responsive to both person and place. It integrates findings from a 2020 review of government, academic and industry literature[1] and case studies including 23 interviews from key sector stakeholders in Queensland and Western Australia.

The five components and associated sub-components fall under the three key groupings of quality of life, the external environment and the enabling environment. The framework also aligns directly with the nine domains, enabling the selection of organisational outcomes and indicators from a variety of sources.[2]

Quality of life	1. Liveability 2. Accessibility	Community and culture Education Employment Social engagement Urban amenity
External Environment	3. Social, economic and environmental value	Economy Education Employment Environment Social engagement
Enabling Environment	4. Regulatory and policy environment 5. Improving adoption	Economy Housing Urban amenity

[1] Kraatz JA, Mancini F, Perugia F, Glusac T, Reid S, Venable J and J Owen (2020) Liveable Social and Affordable Higher Density Housing: Review of Literature and Conceptual Framework, SBEnrc, Australia

[2] Kraatz JA, Thomson G and H Shearer (2017) Valuing Social Housing Final Research Report Attachment A – Domain Tables, available at hiips://sbenrc.com.au/research-programs/1-41/

Key Alignments

A significant array of government regulations and government and industry guidelines exist around maximising the liveability and accessibility of housing in Australia. This information was distilled by the research team and is available at the project website. It was then used to develop and test a draft framework and inform discussions with industry stakeholders.
Key documents which have informed the development of the Liveability Framework include:

- Australian Building Codes Board (2019a) Accessible Housing Options Paper hiips://www.abcb.gov.au/initiatives/accessible-housing
- Queensland Department of Housing and Public Works (2017) Social Housing Design Guide: Minimum standards and requirements hiips://www.hpw.qld.gov.au/__data/assets/pdf_file/0026/9719/socialhousingdesignguide2017.pdf
- Queensland Department of Health and Office of the Queensland Government Architect (2019) Healthy Places, Healthy People: Creating great places to keep Queenslanders healthy
- Livable Housing Australia (2017) Livable Housing Design Guidelines hiips://livablehousingaustralia.org.au/design-guidelines/
- Queenslanders with Disability Network (QDN) (2017) Going for Gold – Accessible, Affordable Housing Now – QDN position paper on housing for people with disability
- hiips://qdn.org.au/wp-content/uploads/2018/06/QDN-Going-for-gold-position-paper.pdf
- Design WA, WA Department of Planning and Heritage, and WA Planning Commission (2019). State Planning Policy 7.0: Design of the built environment. Perth, Australia.

Drummond Precinct, Ellenbrook, Western Australia
(Source: Now Living)

Of note also is the approach taken by Norway, with its Norway universally designed by 2025 initiative. In the 1960s and 70s, housing policies in Nordic countries began to change to better integrate people with disability into 'ordinary environments'.[3] In 2009, the Norwegian government adopted an integrated, cross-sectoral approach involving 16 ministries working on detailed action plans and strategies to define action plans to achieve nationwide universal design and increased accessibility by 2020.[4] Legislative, market and administrative powers were mobilised to achieve this outcome. This approach targeted building and construction, planning, outdoor areas and transport, along with cross-sector reforms. Since July 2020, the Norwegian Ministry of Children and Equality has been developing a new five-year action plan, that will present actions on most relevant sectors of society including housing and the urban and social infrastructure'.[5]

The above example is provided to illustrate that a nation-wide, long-term, cross-sectoral approach to implementing change could overcome some of the known barriers to the adoption of accessibility features in our homes and precincts. The table below draws on this to highlight how change can be addressed across these traditional boundaries.

Identified Barriers	Technical	Social	Regulatory	**Possible levers for change**
Design and Construct efficiencies and risk	*			L/M/A: skills development, industry training, best-practice examples, pilots
Regulatory burden	*		*	L/A: long-term integrated, cross-sector strategy includes all levels of government, led by the Australian Government
Costs burden (i.e. who pays the cost)	*	*	*	L/M/A: broader assessment of ROI (e.g. the Composite Return on Investment approach)
Costs impact (i.e. how much something costs)	*	*	*	M: economies of scale. Build community acceptance
Industry perceptions of need	*	*		L/M: broader education – whole-of-life needs, best-practice examples, pilots
Market demand - accessibility not aspirational	*	*	*	L/M: broader education around whole-of-life needs, best-practice examples and pilot projects
Societal attitudes, aspirations and acceptance	*	*	*	L/M: long-term integrated, cross-sector strategy (e.g. best-practice examples and pilot projects)
Aesthetic impact	*	*		M: build market share to enable greater product availability. Innovation in design/construct, best-practice examples, pilots

Notes: L – legislative powers; M – market powers; A – administrative powers

[3] Bringa, OR (2019) "Moving Towards the Universally Designed Home: Part 1", Retrieved 20 July 2020, from hiips://www.betterlivingdesign.org/post/design-a-stunning-blog.

[4] Norwegian Ministry of Children and Equality (2009) Norway universally designed by 2025 – The Norwegian government's action plan for universal design and increased accessibility 2009-2013, Norway.

[5] Bringa, O. R. (2020). Liveable and accessible high density housing. Email correspondence with J. Kraatz.

Case Studies

The case studies below have informed the Liveability Framework and were supported by a series of interviews with key stakeholders from government, industry and not-for-profit organisations with knowledge of the selected precincts:

- 5 Green Square Close, Fortitude Valley, Queensland – developed and managed by Brisbane Housing Company Limited – established 2010
- 67 Bennett Street, East Perth, Western Australia – developed and managed by Foundation Housing – established 2016
- Drummond precinct, Ellenbrook, Western Australia – medium-density affordable living – developed by Now Living – established from 2014

These case studies were used to test, provide evidence and identify gaps as the framework was developed. They highlighted common characteristics such as inclusive spaces (for example, onsite community spaces), connectedness (for example, green spaces, communal areas and wi-fi access) and safety (for example, access, community awareness) – all of which influence the wellbeing of residents.

5 Green Square Close, Fortitude Valley, Queensland
(Source: Brisbane Housing Company Limited)

Selected Key Stakeholder Interview Insights

The following pages provide highlights of some of the feedback provided by stakeholders in the 23 interviews conducted in Perth and Brisbane to test and develop the Liveability Framework, addressing each of the five components.

Quality of Life: Liveability

For *integrated and inclusive place-based planning,* stakeholders noted the value of meeting places and green space, with accessibility being important (for example, level thresholds, compliant ramps), along with other mechanisms for creating accessible spaces. Community engagement and buy-in is key, along with engagement with multiple stakeholders to help deliver sustainable and green outcomes.

The *value of connectivity to nature, social networks, and the physical and virtual realms* was highlighted. Access to internal green space and significant cross-ventilation, along with alternate circulation routes provide significant benefit. Mesh security doors provide a transition to the unit, moderating ventilation, privacy and access. Gardens on private balconies and communal areas can provide residents with opportunities to choose their own plants. The benefits of generous open and communal spaces, and access to support services and activated spaces, were also noted. Virtual access is problematic, with wi-fi being unaffordable among many residents on support pensions.

Design for and awareness of safety is crucial, with secure entry, lift and floor access, via swipe card, important features. Mechanisms discussed include onsite management and staff (24/7 preferable), cameras, access passes and gates. Building a relationship between residents and local police to talk about personal and community safety is also a benefit.

Community and social wellbeing benefits from having access to mental health support services onsite, and demonstrating an understanding of liveability, and providing dignified opportunities for residents. A central hub or ‘go-to’ housing support agency is needed.

Continuous improvement is an important element in a changing environment. Evidence of the need for improvement can be gathered via post-occupancy surveys, regular resident surveys, informal feedback and incident reports. Effective ways of managing such data, however, remains a challenge.

Quality of Life: Accessibility

This research was in part informed by the *Australian Building Codes Board Regulation Impact Statement* consultation process and the *Accessible Housing Options Paper.* [6] [7]

Accessibility is a critical characteristic for social and affordable housing to achieve inclusive outcomes. It is considered across a range of life stages, including temporary or permanent disability, ageing and the elderly, and young residents.

Stakeholders highlighted the need for accessible and easy-to-negotiate ground planes and footpaths to help enhance *walkability* in higher density precincts.
A universal design approach needs more consideration. Siting housing precincts close to train and bus services, community services or other resources to enable easy access for residents, particularly for those with no cars, is needed.

Walkability can also help reduce passive commute times and facilitate *access to employment* to improve quality of life. Car parking spaces are needed to enable drop-off/collection points for those needing support to get to shops, transport or work.

Equitable, clear and obvious access, for people in wheelchairs, and also the hearing and vision impaired, is important. It was highlighted that Specialist Disability Accommodation (SDA) options available through the National Disability Insurance Scheme (NDIS) needs clarity, with accessible housing options remaining problematic.

Precinct access to services including health facilities, diverse social support services and free inner-city transport were highlighted, particularly in the context of site selection.

Visitability can be improved with dual lifts access, easy access to public transport, and access to parking for visitors, disability and support services and maintenance workers.

[6] hiips://www.abcb.gov.au/Initiatives/All/Accessible-Housing

[7] A submission was made by the research team to the Australian Building Codes Board review process highlighting this and previous SBEnrc research.

Social, Economic and Environmental Value

The value of a potential liveable, social and affordable higher density housing development depends heavily on who would (or who perceives they would) receive that value. Stakeholders highlighted some of the difficulties of balancing upfront costs with whole-of-life benefits as the challenge.

A *whole-of-life benefits assessment* in the business case stage is important, especially in mixed-use developments. This is often easier if the asset owner retains the asset for the long term, where the opportunity exists to lead by demonstration. Everyone knows it is more costly to retrofit, therefore more information is needed to highlight the upfront cost versus the cost of adapting homes. There will, however, be different value equations for different projects, so it can be difficult to demonstrate because the value to be derived will vary significantly among different stake-holder groups.

Healthier environments and healthy people can take the burden off the system over time, helping to *balance upfront costs* that may be spent providing more liveable and accessible environments.

Recent research shows a direct correlation and financial return between health and urban outcomes. Cost-benefit analysis is difficult, however, for discrete infrastructure such as a housing development, with benefits accruing over the long term (for example, 30 years). The difference in returns between residential and industrial/retail/commercial managed investments is also a disincentive to invest, along with land taxes on build-to-rent assets.

Social and economic participation need to also be considered as a part of these equations.

Long-term sustainability can be improved in several ways. Floor space on lower levels for commercial gain can help balance the cost of housing above. Issues with building vitality if spaces are not occupied can present difficulties. For not-for-profit organisations, financial sustainability can be a challenge. A fund to help not-for-profits scale up and plan mid-term more effectively, rather than on a project-by-project basis, would assist.

Enabling Environment: Regulatory and Policy Environment

With increasing housing prices and economic uncertainty, many Australians are seeking more affordable housing options. This demand is placing significant pressure on the government and not-for-profit and private housing organisations.

Specific to *regulatory and policy issues,* stakeholders noted that continued advocacy is needed for social and affordable housing to be of an accessible standard. Advocacy is difficult in terms of how to operationalise, as it depends on how it is valued. Building synergies between the local outcomes and federal funding is important, with political cycles potentially presenting opportunities. Project-specific negotiated outcomes in terms of liveability (for example, internal street, hanging gardens and natural ventilation) need to be embedded in future regulations.

To establish a *whole-of-life business case,* government agencies need to provide advice at the earliest opportunity (even before the business case stage). This would be easier when the asset owner has a longer time perspective. A whole-of-life business case includes embedding diversity into the community, leading to better outcomes for everyone.

The NDIS and SDA were highlighted as *key priority areas* which are problematic, with clarifications needed in terms of investment linked with independent living options. The link between eligibility for public housing and community housing was also noted as problematic. Conflict between town planning requirements and the various state development codes was also highlighted as an area requiring attention.

5 Green Square Close, Fortitude Valley, Queensland
(Source: Brisbane Housing Company Limited)

Enabling Environment: Improving Adoption

Insights from the stakeholder interviews also revealed the following with regards to improving adoption.

Mixed tenure is currently seen as a missed opportunity, especially in the Central Business District, where partnerships are being driven by others with a potential contribution back via social and affordable housing opportunities. Struggles exist, however, in terms of leasing or selling commercial and retail space.

Economic barriers exist in delivering accessibility in the broader issue of liveability; for example, spending money on common outdoor spaces (though this discussion has changed in light of COVID-19). The issue arises because a higher proportion of outside space lifts the cost per dwelling. The adoption of sustainable technologies, such as new ways of storing renewable energy, is also important and requires more capital investments to become affordable. Also, financial hardship impacts residents on low incomes, such as their ability to access services like wi-fi, as many residents do not have disposable cash. The need for increased social and affordable housing stock was also highlighted.

Regulatory barriers noted include those around fire regulations and the creation of internal streets and some development codes (for example, if property is near train lines, heavy glazing is required). Management plans rather than prescriptions are considered the way forward. Better provision of information on accessibility features and their value, even if not immediately needed, may increase demand. Tax incentives may also increase demand for accessibility features.

A lack of evidence and tools to aid decision-making was noted in budgets for accessibility and liveability features and is considered a barrier. Best-practice examples can help change lifestyles and can orient consumers towards investment in sustainable and affordable living.

Attitudinal and behavioural barriers are evidenced in people not wanting to think that a regulatory authority can dictate what their house looks like. There is behavioural resistance to grab rails and the like unless you need them: people do not want to live in a home that looks like a hospital. There also remains a lack of willingness to pay upfront for intangible benefits in terms of sustainability. In terms of resistance to higher density, some still want low-set housing with access to gardens. Anti-social behaviour is also a deterrent for social housing, with people not wanting to be a part of it due to such behaviours.

Securing development opportunities and suitable sites remains a *barrier to market*. Unless quantifiable, then accessibility is not included in the equation. In terms of the NDIS, high physical support needs can be funded as part of packages; however, if modifications are to be useful and helpful, they need to be tailored to the needs of the individual. Awareness among plan designers of the NDIS SDA needs improvement.

Liveability Framework Components and Guidelines

The following 5 tables detail the five liveability framework components and 53 sub-components and related guidelines. These are intended to be used as a checklist to assist those developing policy and housing projects to consider a broader array of issues which can impact the liveability and accessibility of higher density social and affordable housing. Ideally, these issues would be considered as part of strategy planning within an organisation, in terms of site selection and business case development.

The five components, 53 sub-components and related guidelines of the Liveability Framework

Liveability: place-based and community-focused

Physical and Virtual Infrastructure	Physical connectedness to social infrastructure	Prioritise appropriate site selection. Connection for informal and formal opportunities (e.g. meeting places, green space, active recreation). Onsite community spaces (each level and whole building) are important.
	Virtual connectedness	Wi-fi considered an essential service.
	Asset maintenance	Low maintenance for physical durability, yet resident-friendly materials and fixtures. Minimise disruption to residents of maintenance works through building design. Cost-effective consumables (e.g. light bulbs).
	Healthy by design	Connection to active and passive exercise options – walkways, bike ways, public pools. Design to allow for social distancing without undue isolation. Healthier environment, healthy people and takes burden off the system over time.
	Safety by design/safety awareness (addressing anti-social behaviours)	Screen entry doors to enable ventilation, security and connection. Safe environment (e.g. sight lines, no dead ends, no traps – especially external fire stairs – and no blind corners). Controlled access to building and floor. Community engagement and buy-in. Onsite management. Build relationships and engagement with local police. Minimise possible impacts via design. Follow Crime Prevention through Environmental Design Guidelines (e.g. those developed for Queensland).[7]
	Future-proofing	Access to passive ventilation and natural lighting. Sell affordable living, not just affordable housing. Ability to modify for unknown future needs.

Community and Culture	Integrated and inclusive place-based planning	Resident and community engagement and buy-in. Prioritise appropriate site selection
	Community, character and culture	Use of design to create places/spaces which enable resident engagement (e.g. planting). Create desirable spaces and places. Economic diversity is important in spatial planning of larger precincts
	Community and social wellbeing	Opportunities for informal interaction, and protection from unwanted interaction. Designing for privacy. Community and social support opportunities in building. Onsite building management and support.
	Community in mixed tenure environments	Further research needed. Critical to not create class structure (e.g. in entry and onsite facilities).
	Social connectedness	Community spaces for resident-led activities. Precinct-based spaces are important (e.g. access to youth space, libraries).
Environment and Sustainability	Carbon neutral-positive approach	Passive design, appropriate orientation and access to natural daylight. Ready access to public and active transport options. Issue with solar and becoming an energy provider.
	Climate resilience	Moderate building and precinct microclimate (e.g. irregular design enabling shade). Access to fresh air, open spaces, ventilation and sunlight. Choice between active and passive systems. Brisbane City Council's Buildings that Breathe initiative captures key issues.[8]
	Connectivity to nature-loving and biodiverse spaces	Immediate access to resident-based planting/gardening options; internal planting options (e.g. balconies, internal green streets). Precinct access to biodiverse green space.
Governance	Addressing overcrowding	Building owners/managers to align resident needs to homes offered
	Equality and equity	Critical in a mixed-tenure environment – further research needed. "The means by which people use the building should be the same…if it cannot be identical the several means provided must be equivalent in terms of their privacy, security, safety and convenience." [9]
	Pandemic responsiveness	Circulation to enable social distancing. Access to green space from a unit/in building. Access to Wi-Fi. Enable safe social connection. Touch-free entry. Role of onsite manager is important. Inner-city precincts challenged by COVID-19 in terms of loss of workers/economic activity.
	Collaboration	Onsite managers and service providers. Build relationships with neighbours and community. Provide easy access for service and social support providers (e.g. OZHarvest, BlueCare, Second Chance).
	Cohort-appropriate environment/community	Match resident needs with locations. Maintain diversity.

[7] hiips://www.police.qld.gov.au/sites/default/files/2018-08/CPTEDPartA.pdf

[8] hiips://www.brisbane.qld.gov.au/planning-and-building/planning-guidelines-and-tools/neighbourhood-planning-and-urban-renewal/new-world-city-design-guide-buildings-that-breathe

[9] Danford, GS and B Tauke, Eds. (2001) Universal design New York, New York, Center for Inclusive Design and Environmental Access, School of Architecture and Planning, University at Buffalo. The State University of New York, p. 21.

Accessibility: Person-centred and Community-focused

Physical Services and Infrastructure	Whole-of-life accessibility	More consumer education around NDIS and SDA. Clear and obvious entry points and equitable access. Vehicle access/parking/drop-off and collection points essential for support services, maintenance people and visitors. Dual lifts (minimum) required, with no step-ups. Accessibility to become part of the commercial cost model.
	Precinct safety	Consider for both day and night. See CPTED guidelines. Swipe-card entry to resident level. Build relationship with police.
	Precinct accessibility	Accessible ground plane (e.g. level thresholds, compliant ramps, extended ends of balustrades and wayfinding elements). Choice of site and traffic planning to enable accessibility. Access to public, active and passive transport options. Going beyond the wheelchair is important (e.g. consider hearing and vision impaired).
	Integrated service provision	Onsite housing and support services management. Integrate with offsite providers (e.g. OZHarvest, BlueCare).
	Access to vital services	Include food outlets and supermarkets, onsite and offsite community, social and health support services, wi-fi.
Individual and Social Services	Walkability	Accessible footpaths including for motorised wheelchairs, walkie-wheelers, tactile markers and other wayfinding aids.
	Universal design / equitable access	Improved housing options for those with disability, visitors and service providers, and for general population (e.g. short-term incapacity, child rearing, ageing in place). Clear, obvious and equitable access – beyond wheelchair is important (e.g. to include hearing, sight loss, dementia).
	Visitability	Vehicle access/parking/drop-off and collection points essential for support services, maintenance people and visitors.
	Simple, intuitive and perceptible elements	"Make it easy for everyone to understand the purpose of each design feature and how to use it ... means of use should be intuitively obvious". [10]
	Local shared mobility	Access to public, passive and active options (e.g. bikes and hire scooters limited by need for smartphone app).
Economic Systems	Tracking accessible housing in marketplace	Up-to-date online data, especially for specialist disability accommodation, needs improvement. Need a specific element of the market that captures accessible housing. Targeted approach for advertising required. Increased demand for accessible housing will lead to improved ROI.
	Accessibility to employment	Diversity of employment in proximity, enabling residents to commute to work easily. Access via public transport is critical. Transit time to employment/childcare/schools is important. Work from home options increase participation.
	Spaces for learning and working	Work/study from home options to be facilitated to improve engagement (issues around lighting, noise and wi-fi need to be considered).

[10] Danford, G. S. and B. Tauke, Eds. (2001). Universal design New York. New York, Center for Inclusive Design and Environmental Access, School of Architecture and Planning, University at Buffalo, The State University of New York. (p.22)

Social, Environmental and Economic Value – Building the Value Equation

Whole-of-life	Whole-of-life accessibility	Increased demand for accessible housing can improve ROI and drive down costs. Accessibility features need to be integrated in the design phase to maximise cost-effectiveness. Adaptive design can assist where accessible design is not considered viable/desirable. Good management is integral to financial success.
	Balancing upfront costs with long-term benefits	Cost-benefit analysis is difficult on a discrete, small-scale pieces of infrastructure that will provide benefit over 30 years. Composite ROI approach required. Government incentives needed to convert assets to accessible housing and demonstrate long-term opportunities and benefits.
	Property diversity	Mixed-tenure, mixed-use development, as partnership among government, not-for-profits and private sector provides opportunities to increase supply of social and affordable housing. Investment framework required. Need to ensure viability of mixed-use option. Examine different housing options within medium- to high-density precincts. Diversity of choice for residents essential (e.g. location to match needs). Adding social diversity to local communities can improve system value and performance.
	Asset maintenance	Cost-effective, robust and people-friendly materials, fixtures and fittings for physical durability and low maintenance. Maintenance with minimal disruption to residents.
Balancing economic equation	Value capture	Unlock underutilised government land for social and affordable housing outcomes. Careful capitalisation of investment during the planning/design essential. Revenue-generating models of the investment can help with opportunities. Planning relaxation for private investors incorporating social and affordable housing important.
	Property affordability	Need for a targeted investment framework enabling both private and government investment. Funding mix is important to ensure long-term viability. Construction techniques, materials and fixture selections are important.
	Composite ROI	Includes social return, wellbeing valuation, rich narratives and value of equity to society and Gross Domestic Product. Research and operationalisation required to build on conceptual framework from previous SBEnrc research.
Building social value	Economic stimuli for local community	Creating people-oriented local environments to enhance social diversity and housing is important, including community spaces and cafes. Role for mixed-use and mixed tenure.
	Improving social and economic participation – creating demand	Need to take account of the social benefit of economic participation and people being able to work/study from home. Build partnerships to facilitate. Social service provision aids in increasing liveability in these precincts.

Regulatory and Policy Environment

Existing Environment	National regulatory and policy issues	Clarify NDIS and SDA in terms of investment in appropriate independent living options. Adoption of innovation, environmental impact reduction strategies can generate a point of difference in the market. Impact of upfront costs needs addressing. See Australian Building Codes Board for further details.[11] Performance guidelines rather than mandatory prescriptions can improve behaviour and lifestyle.
	State regulatory and policy issues	Role of states/territories vary across Australia. Liveability outcomes negotiated on a case-by-case basis – successful innovation needs embedding.
	Local regulatory and policy issues	Greater local government involvement is desirable. Not-for-profit organisations would benefit from council engagement, as they work to improve outcomes.
Forward- looking / aspirational	Managing jurisdictional conflicts	Address conflicts between state development codes and local government planning requirements. Operationalise synergies between the local level and federal funding.
	Enabling diversity of outcomes	More clarity around NDIS SDA, with investment linked with independent living options. Take advantage of mixed-tenure opportunities. Whole-of-life business cases.
	Evidence for continuous improvement	Embed successful innovative outcomes into regulations. Integrate results of resident surveys.

Adoption improvement

Known barriers	Barriers to uptake of liveability features	Not being part of mixed-tenure and commercial centre opportunities. Need to negotiate on a one-off basis for liveability outcomes (e.g. fire compliance, opening windows). Issues of vitality if commercial spaces not leased.
	Barriers to uptake of accessibility features	Residents do not want to live in a home that looks like a hospital. People do not want regulatory authority dictating what their home looks like.
	Economic barriers	Delivering accessibility in terms of a broader issue of liveability (e.g. common outdoor spaces and lifts). Willingness to pay upfront costs for long-term benefit.
	Attitudinal and behavioural barriers	Ageing and disability is not aspirational. People not willing to pay upfront for intangible benefits in terms of liveability and sustainability.
Improving adoption	Adoption levers and market update	Nationwide, long-term, cross-sectoral approach to implementing change.
	Building mixed-tenure environments	Decision-making tool required. Research into maximising benefits and minimising risks (social and financial) required.

[11] hiips://www.abcb.gov.au/resource/report/options-paper-accessible-housing-2018

Conclusions

Broader thinking is needed for the liveability and accessibility of our urban housing precincts to be more successful in terms of providing safe and fulfilling environments, especially for the most vulnerable in our community. A whole-system thinking approach is essential to provide more resilient environments in the event of currently unforeseen disruptions.

The three different levels of the above framework can be used at different time points and for different purposes across the policy, planning, delivery and review process. For example, the quality of life liveability and accessibility components can be used as a design checklist; the external environment components can be used to help maximise or demonstrate value in the planning phase; and the enabling environment components can be used for policy improvement.

Thus, while some of the framework components may be seen as aspirational, the impact of not considering these features can be very real for those living in these environments – for example:

- Car parking – dedicated, accessible parking is needed: for example, for visitors with disability; for the drop-off and collection of residents with disability; for support services that may be providing daily care for residents; for OZHarvest deliveries; and for maintenance workers
- Wi-fi access – needs to be considered as an essential service to ensure social connection and enable working/schooling-from-home options
- Night-time safety in higher density precincts – needs to be better considered through planning and designing for better community surveillance and physical design, and to ensure physical safety and emotional wellbeing
- Site selection – needs to maximise opportunities for liveable and accessible design outcomes, and while clever design can sometimes resolve these issues, every opportunity for successful living needs to be maximised.

Benefits that would be derived from applying key accessibility/liveability components include:

- Opportunities for resident-generated activities and engagement through building management and design, and through access to vibrant precinct life
- Access to private and public green space within the building and the adjacent precinct
- Provision of a more resilient and liveable environment through natural ventilation and microclimate moderation, using design and planting
- Privacy and security through building design and management, which also promotes community acceptance, neighbourhood building by floor and resident ownership
- Ability to quickly address and resolve issues through an onsite building manager as a part of the community
- Embedded outcomes of innovative thinking, achieved via public, private and not-for profit partnerships, in regulation and future delivery.

While the uptake of liveable and sustainable design outcomes is starting to take hold in the industry and community, issues around the uptake of accessibility remain problematic. One stakeholder noted that liveability is aspirational, accessibility is not. Other stakeholders supported this view, noting that many do not want accessibility features in their homes. This is compounded by the ongoing debate around increased upfront costs of provision.

"Market-based demand is problematic because ageing and disability are not aspirational … market demand for accessible/liveable features is [therefore] not a reliable measure of the need for these features." Australian Building Codes Board 2020, p. 40

Somerset, Western Australia
(Source: Now Living)

Moving Forward

Along with other project resources, the Liveability Framework will be available as a template to download at our project website. It is suggested for use as early as possible in project development, or for completed projects to inform strategy and delivery moving forward.

Further SBEnrc social and affordable housing research is proposed, building on this theme. Partner discussions are underway for research which will develop a social and affordable housing investment tool. The research team will draw upon past SBEnrc research and engage with state agencies (housing and treasury) and industry to develop a tool responsive to both person and place. It will identify and measure broader co-benefits across a number of agreed social and affordable housing developments, using medium and higher-density urban housing case studies to test and develop the final tool.

Quotes from our partners

Queensland Department of Housing and Digital Economy – "The research is helping to inform us on ways of delivering more 'people and place' responsive social and affordable housing solutions, in higher density urban areas".

BGC Australia - "The Liveability Framework provides a logical and intuitive platform which should be considered in all social and affordable higher density housing. These are workable, practical ideas which can underpin developments of this nature. This will add value to BGC for construction and as an excellent tool for interaction with clients. We will look to developing the framework from here to improve internal processes, and for our broad client base such as the WA Department of Communities, for low cost housing. And as outputs are broader than initially thought, all the way through to the higher end residential section of BGC."

Creating Positive Futures - "Work produced in this research has distilled the key attributes of more successful and needed social housing outcomes. This is particularly useful to our investigation of higher density projects and to validate design and development management activities considerations and work with a broad stakeholder group. It also validates benefits of investment - required in today's frameworks for accessing State Government funding."

Brisbane Housing Company – "The Liveability Framework for medium to high-density social and affordable housing has been especially germane to BHC's long-standing interest in creating liveable communities. It was stimulating to draw on the wisdom of such experienced stakeholders in the dynamic community of practice that this project afforded. BHC looks forward to sustaining its relationship with the SBEnrc network to continue enhancing the liveability experience for all our tenants".

TRIDENT
MARINA

Find out more:

Project webpage (including link to YouTube video):
hiip://sbenrc.com.au/research-programs/1-71/

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DOI: hiips://doi.org/10.25904/1912/4241

Recommended citation:

Kraatz JA, Reid S and Caldera S (2021) A Liveability Framework for Social and Affordable Higher Density Housing – Final Industry Report Project 1.71, Sustainable Built Environment National Research Centre (SBEnrc), Australia.

Cover Image Acknowledgement:

5 Green Square Close, Fortitude Valley, Queensland
(Source: Brisbane Housing Company Limited)

Sustainable Built Environment National Research Centre AUSTRALIA

This research would not have been possible without the ongoing support of our core industry, government and research partners:

BGC
WESTERN AUSTRALIA
Queensland Government
Curtin University
Griffith UNIVERSITY
RMIT UNIVERSITY
WESTERN SYDNEY UNIVERSITY

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