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Affordable housing in innovation-led employment strategies



From the AHURI Inquiry: Urban productivity and affordable rental housing supply

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Affordable housing in innovation-led employment strategies
—Executive Summary

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Executive summary

Key points

- Smart city governance is becoming increasingly common across Australian cities. Smart city planning involves innovation-led employment strategies, particularly mobilised through innovation districts.
- There is a paucity of peer-reviewed research on successful links between smart cities, innovation, and affordable housing. Internationally, innovation-led employment strategies that recognise the place of affordable housing are likewise rare; those that do, however, prioritise what is termed ‘inclusive innovation’.
- Innovation-led employment strategies, including the development of innovation districts, should engage with questions of housing, particularly around affordability, availability and diversity.
- Models of successful innovation districts and innovation-led employment strategies are highly dependent on context. Attention needs to be paid to innovation that is holistic and place-based, leveraging anchor institutions and built through strong and inclusive collaborative networks, appropriate land uses and smart thinking.

Key findings

Urban economies and policy are being transformed by digital technologies. As cities continue the shift from manufacturing to knowledge and innovation economies, emerging 'smart city' strategies are making growing use of digital information and communication technologies (ICT) while reshaping the urban fabric. In Australia, smart cities are oriented around economic development and regeneration, with a key focus being 'innovation-led' employment growth. Through 'smart city'-based strategic planning, this innovation-led employment growth has been targeted in specific agglomeration areas – innovation districts (or 'precincts'). Yet, very little research has focused on how this shift in the urban fabric may intersect with affordable housing. To address this gap, this report investigates the role of affordable rental housing in supporting innovation-led employment growth in Australia's metropolitan and satellite cities. In particular, it explores what possibilities for affordable housing are provided by innovation districts (and hence by smart city strategies), especially for regional and outer metropolitan areas. This report is part of a wider inquiry into the role of affordable housing in the labour market and urban productivity with reference to innovation and smart city policy and planning.

International evidence

Affordable housing underpins models of the smart city. International evidence shows that successful innovation districts require mixed land uses and are socially, culturally, and economically diverse, with a diverse range of housing types, tenures and prices. Now, however, a more nuanced picture of the relationship between affordable housing supply and innovation is emerging.

The negative impact of innovation districts on housing affordability is widely recognised. Prosperous technology-based innovation districts such as Silicon Valley (US) or high-tech clusters near downtown cores are markedly linked to a rise in dwelling prices and rental costs (Katz and Wagner 2014). In attracting knowledge and creative workers, and the services they desire, these linked-in districts are gentrified further as they become even more attractive to well-paid workers. In this respect, innovation districts are known to reduce housing affordability and displace many lower-income earners and long-term residents. If workers – particularly fledgling entrepreneurs – in innovation sectors are unable to secure housing in, or within easy reach of, such innovation districts they are less likely to seek employment there; this deterrent, in turn, reduces the economic competitiveness of said districts (Moonen and Clark 2017).

Regulatory and planning interventions commonly used to mitigate the negative effects of these rising housing costs in innovation districts include inclusionary zoning, tax subsidies, new zoning frameworks and provision of land or subsidies for low-income housing providers. Inclusive planning is central to urban productivity; innovation districts require an ecosystem of established firms, startup and emerging businesses, and public anchor institutions to thrive. Diversity in housing provision is, therefore, an important mechanism when responding to the needs of innovation workforce. A lack of housing diversity is one of the major pitfalls in developing the integrated environments most conducive to supporting innovation (Pancholi, Yigitcanlar et al. 2017). A growth in different housing models, including co-housing and 'live-work' districts, reflects the increasing diversity in housing.

Affordable rental housing, labour market constraints and business location

Innovation sector firms in Australian metropolitan suburban locations and satellite cities face the barriers and opportunities summarised below (Table 1). Startup firms, typically headed by younger people, prioritise the businesses success imperative. Availability of affordable rental housing is thus a secondary, albeit complementary, requirement for the growth of these businesses. Housing that is easy to secure, available for shorter-term rental and close to employment is valued. As indicated by the literature however, this complementary requirement for startup growth becomes a growing challenge as innovation districts prosper, meaning those districts that have addressed housing early in their development will avoid economic stagnation in the longer term.

Younger innovation sector workers in metropolitan locations also advised that they seek to minimise their housing costs by living with parents or extended family members. This support from family networks is key to reducing housing costs for many individuals. In some outer-metropolitan and regional locations the affordability of housing is taken for granted, and factors such as connections to other businesses or entrepreneurs and the affordability of workspaces is given greater priority.

Regional and non-metropolitan areas that are well connected and have the necessary infrastructure to accommodate innovation districts may therefore hold significant potential to contribute to innovation-led employment strategies due to a larger supply of affordable housing. However, this affordability, and in particular its longevity, is not assured, and planning for such areas should include measures for anticipated shifts in housing demand.

Table 1: Key barriers and opportunities for innovation sector employees across inner-city and regional and outer-metropolitan housing

	Barriers	Opportunities
Inner-city housing locations	<ul style="list-style-type: none"> • Poor transport connections across the city • Lack of super-fast Internet or poor digital connectivity • High cost of living • Lack of housing types amenable to startup/mobile workforce lifestyle 	<ul style="list-style-type: none"> • Agglomeration of other businesses in the sector/networking opportunities • Access to co-working spaces • Greater concentration of accelerator programs and funding opportunities • Access to CBD • Lifestyle amenities e.g. restaurants, arts etc. • Anchor institutions provide resources and collaborations
Regional and outer-metropolitan housing locations	<ul style="list-style-type: none"> • Poor transport infrastructure; • Poor digital and telecommunications infrastructure; • Lack of funding relative to population/potential workforce; • Wage differentials cf. cost-of-living; • Student retention; • Non place-based innovation growth 	<ul style="list-style-type: none"> • Major infrastructure developments e.g. Aerotropolis, Sydney Science Park; • Existence/development of 'eds and meds' anchor institutions; • Context specific innovation foci; • Innovative low-cost and green housing options; • Environmental amenity

Source: author interviews

Emerging models of innovation districts

The international evidence review identified nine examples of innovation districts in which affordable housing and innovation-led employment strategies were considered simultaneously. Across these there is no discernible single approach to affordability. Measures include inclusionary zoning (e.g. Kings Cross, UK; Tonsley, SA), provision of land or subsidies for low-income housing providers (Barcelona, Spain; Cleveland, USA), or new zoning frameworks (South Lake Union, Seattle USA; Chattanooga, Tennessee USA). Also important is an orientation to diversity in housing provision, including, most innovatively, live-work districts (Tonsley, SA; Byron Bay, NSW) or co-housing (Boston, USA). Lessons from these and other case studies informed the development of a model for fostering innovation-led employment prioritising four key areas:

- **Land use:** interventions into supply and access of land and housing, including, for instance, through zoning and funding arrangements and innovative housing typologies;
- **Anchoring:** leveraging the considerable economic weight of local anchor institutions – those embedded in place such as hospitals, universities and cultural institutions – for community-wide benefit; this may include local procurement strategies, collaborative governance, company incubation, workforce training, and social enterprises;

- **Collaboration:** stresses the benefits of a clear and inclusive vision developed and implemented through structured public, private, and not-for-profit partnerships and civic participation; and
- **‘Smart’ thinking:** incorporates smart society and smart technology, leveraging technological advantages for inclusive, place-based planning.

Nurturing a mixture of firms – from startups to larger corporations and public anchor institutions – is crucial to the success of innovation districts. Without the provision of appropriate housing, including public, social, affordable and mid-range housing, as well as other infrastructure for affordable and connected living, innovation districts are unable to retain this critical mix.

Affordable housing has an essential role in maximising productivity in innovation districts. This is particularly true when it is part of a suite of people and place-based planning elements that intersect to allow for fuller and more inclusionary participation through innovation-led employment strategies, leveraging unique regional and suburban advantages.

Policy development options

Through a focus on innovation, smart cities, and affordable housing provision this research found a strong disconnect between policies on innovation and policies on housing. This disconnect – while rendering the drawing of specific policy conclusions somewhat problematic – was found to be the source of many of the issues and challenges facing innovation districts, their housing affordability and productivity. A key policy implication then is simple: that innovation-led employment strategies should explicitly consider their housing foundations and consequences for housing at formulation stage and readdress these as innovation districts emerge and continue to grow.

‘Inclusive innovation’ with a focus on equity was a common factor across successful international cases. As the case studies – such as Barcelona (Katz and Wagner 2014), Cleveland, and Chattanooga (see chapter two) – demonstrate, housing affordability and diversity is a critical element facilitating the varied skill-sets that support sustainable innovation districts. Planning innovation-led employment strategies that can provide an environment conducive to working and living may enable the growth of knowledge sector firms in high-amenity, satellite city locations. Policies linking housing and smart city initiatives are not yet embedded in Australian metropolitan planning. However, models emerging internationally provide a starting point for emulation.

Two sets of policy implications follow: the first relating to innovation-led employment strategies, and the second to the specific housing elements of those.

Innovation strategies

Australian evidence indicates that there is potential for mobilising significant and new economic opportunities for innovation districts. Strategies to develop these take time however, and success is contingent upon a number of factors, including:

- Strong locational advantages, such as proximity to key existing knowledge clusters, for instance universities or hospitals;
- Access to attractive natural amenities and cultural facilities; and
- Digital and physical connectivity, suggesting the need for digital equity strategies.

Land use planning frameworks may, therefore, support the development of innovation districts through models such as live-work zones, while strategic place-based funding interventions could prioritise connectivity (physical and digital) to enable new firms to operate beyond established central city areas. Providing quality amenities valued by innovation sector workers (local cycle/pedestrian networks, distinctive and sustainable urban design) should also be considered.

Housing strategies

Preserving and providing affordable rental housing is a key challenge for innovation-led employment strategies, depending on strong up-front strategies to embed affordability before districts ‘take off’ and requiring ongoing adaptation as they develop. Specific affordability strategies are required for emerging innovation districts, particularly those around transformative infrastructure projects. Targeting early-career innovation sector workers through particular housing typologies that cater towards flexible tenures, accessible locations, and high-quality amenities is often a key success factor. Renegotiating regulations and developmental incentives—such as flexible floor space index or relaxation in height controls—can help as potential strategic tool to encourage the growth of diverse housing options at the site. However, maintaining affordability requires added interventions.

Adapting of zoning and taxation should be readily considered in emerging innovation districts as mechanisms to preserve affordability. Policy settings should be flexible to ensure infrastructure, housing and service capacity meets need. This flexibility includes taking seriously innovative models for financing affordable and diverse housing. Smart innovation should be leveraged to improve urban planning systems and productivity losses, including addressing affordable housing provision and availability. Using ‘big data’ effectively could help to improve urban systems modelling and intergovernmental processes for more inclusive growth. While there has been extensive work on smart houses, smart housing has been a tangential (at best) focus. The Australian Government’s *Smart Cities and Suburbs Program* could be more effectively targeted to address housing affordability.

The study

The research presented here is part of a wider AHURI (Australian Housing and Urban Research Institute) Inquiry into urban productivity and affordable rental housing supply. This report orients around the role that affordable rental housing plays in supporting innovation economies, productivity and growth in metropolitan and satellite cities. The research focused on four cities and regional areas: Wollongong New South Wales (NSW), Central Sydney, Western Sydney and Geelong, Victoria.

Digital and innovation strategies are increasingly recognised for their potential to improve city productivity and provide new sources of employment growth (Katz and Wagner 2014). In Australia, the national *Smart Cities Plan* for instance, anticipates the potential for smart technologies to better connect the location of homes and jobs, through the ‘30 minute city’ (Department of Prime Minister and Cabinet 2016: 11). For regions such as Western Sydney in NSW, where there is an estimated deficit of around 200,000 jobs (Saunders 2013), the notion of a ‘30 minute city’ depends on structural changes in the urban and housing system. Where lower paid Q2 workers (including innovation sector workers such as software developers and startup entrepreneurs) are unable to access affordable housing options near work, they and the firms that employ them will relocate to other labour markets or change their patterns of employment, reducing urban productivity.

Conversely, international evidence suggests that localities offering relative housing affordability, particularly when connected to central markets by transport and ICT infrastructure, are starting to perform well in attracting and fostering new economy jobs, for instance in ‘health-tech’, ‘edu-tech’, and ‘auto-tech’ fields (Kurutz 2017; Moonen and Clark 2017).

This research project address three key questions:

1. What is the international evidence on the role of affordable rental housing in supporting digital innovation and employment growth across different urban and regional areas and housing / economic settings?
2. To what extent are Australia’s digital and startup firms affected by labour market constraints that relate to the availability of affordable rental housing, and to what extent do these constraints influence their business location decisions?
3. What models of digital and innovation-led employment developments are emerging within new urban and residential development projects, and within renewing suburban and regional settings, and how could such models be fostered?

The research progressed in three stages of data collection and analysis, consistent with its exploratory and preliminary intent. The fieldwork and analysis was conducted in 2018 and 2019. The report findings are derived from the following methods:

- Stage 1: an international evidence review, of significant developments in the United States, United Kingdom and Europe, to identify not only cases where affordable housing was incorporated in innovation-led employment and smart city policies, but also the mechanisms used. The review drew upon academic literature and the grey literature and was iteratively added to when interviews from Stage 2 yielded additional examples. The review examples were analysed in terms of policy, approach to housing and housing affordability, and outcomes.
- Stage 2: an empirical stage consisting of 29 semi-structured interviews held with local and state government strategic planners, local economic development officers, senior state government bureaucrats, and a variety of small businesses and umbrella organisations from across the four case study areas.
- Stage 3: an analytical stage to determine the key barriers and opportunities for innovation sector employees across inner-city and regional and outer-metro housing locations.



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