POLICY EVIDENCE SUMMARY August 2020

Supporting employment in smart cities through affordable housing

Based on AHURI Final Report No. 333: Affordable housing in innovation-led employment strategies

What this research is about

This research investigates the role of affordable rental housing in supporting innovation-led employment growth in Australia's metropolitan and satellite cities. It explores what possibilities for affordable housing are provided by innovation districts (and by 'smart city' strategies), especially for regional and outer metropolitan areas.

The context of this research

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 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, targeted in specific agglomeration areas—innovation districts (or 'precincts').

The smart city movement, now more than a decade old, offers technological solutions to urban problems such as waste management, community engagement and environmental sustainability. Internationally, a key driver for the popularity of smart city initiatives has been their potential to deliver economic benefits for cities and their governments, businesses, and citizens, and their ability to increase a city's competiveness locally and internationally. The definition of smart city focuses on two elements: the provision of digital infrastructure, and the pursuit of technological innovation for economic purposes (the definition adopted for this research).

The key findings

International evidence

International evidence shows that without mandating spaces for low-/no-income earners through inclusionary zoning or other regulative measures, housing affordability in knowledge economies can quickly lose out to market pressure.

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 linked to a rise in dwelling prices and rental costs. In attracting knowledge and creative workers, and the services they desire, these 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.

Mitigating rising housing costs

Successful innovation districts require mixed land uses and are socially, culturally, and economically diverse, with a diverse range of housing types, tenures and prices.

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 as innovation districts require an ecosystem of established firms, startups and emerging businesses and public 'anchor' institutions (such as hospitals, universities and cultural institutions) to thrive.

Diversity in housing provision is an important mechanism when responding to the needs of the innovation workforce. A lack of housing diversity is one of the major pitfalls in developing the integrated environments most conducive to supporting innovation. A growth in different housing models, including co-housing and 'live-work' districts, reflects the increasing diversity in housing.

Innovation district developments such as Kings Cross in the UK and Tonsley in South Australia had inclusionary planning requirements of 22 per cent and 15 per cent respectively from the planning stages, meaning their diverse housing options are able to be utilised as intended. In Kings Cross, these options include student studios as well as four-bed family homes and supported housing for the elderly. In Tonsley, supported by high-speed Internet, smart homes have attracted scientists, 'techpreneurs' and startups as part of the 'affordable and connected' residential community. Although South Australia's lower base land values support the overall affordability of Tonsley, this type of inclusionary zoning is a critical step for new innovation-led employment developments, particularly when land-value appreciation is anticipated.

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 is not assured over time, and planning for such areas should include anticipated shifts in housing demand.

Support for younger workers

Younger innovation sector workers in metropolitan locations advised that they 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.

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	
• 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	• 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	
• Poor transport infrastructure • Poor digital and telecommunications infrastructure • Lack of funding relative to population/potential workforce • Wage differentials/ cost-of-living • Student retention • Non place-based innovation growth	• 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

"Younger innovation sector workers in metropolitan locations advised that they minimise their housing costs by living with parents or extended family members."

Support models

The research identified nine international 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 housing affordability, although there were intentions to supply diverse housing, including, most innovatively, live-work districts or co-housing. These lessons informed the development of a model 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 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
- **'smart' thinking:** incorporates smart society and smart technology, leveraging technological advantages for inclusive, place-based planning.

What this research means for policy makers

A key policy implication is that innovation-led employment strategies should explicitly consider their housing foundations and consequences for housing when starting out 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 demonstrate, housing affordability and diversity is a critical element to support the varied skill-sets that underpin sustainable innovation districts.

Innovation strategies

Success for innovation districts 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
- digital and physical connectivity, suggesting the need for digital equity strategies.

Land use planning frameworks may 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, particularly for transformative infrastructure projects. Targeting early-career innovation sector workers through housing that provides 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 (including zoning options and taxation settings).

Methodology

This research reviewed international evidence of significant developments in the United States, United Kingdom and Europe; conducted interviews with local and state government stakeholders, and businesses and umbrella organisations.

To cite the AHURI research, please refer to:

Dowling, R., Maalsen, S., Emmanuel, L. and Wolifson, P. (2020) *Affordable housing in innovation-led employment strategies,* AHURI Final Report No. 333, Australian Housing and Urban Research Institute Limited, Melbourne.

Available from the AHURI website at ahuri.edu.au/research/final-reports/333

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