What's Now. What's Next.

Housing

↳ Affordability & Accessibility

Housing: Affordability & Accessibility

Welcome to our **What's Now. What's Next.** series – an exploration of resilience, adaptation and antifragility in the context of an increasingly complex world.

In this paper, we look at new, unexpected developments tackling the affordability and accessibility of housing.

Tackling a perennial problem

Housing affordability and accessibility seems to be a perennial problem, with each new generation bringing with it a different movement to tackle the issue – from the Bauhaus of the 1920s to the socially-conscious designers of today. Part of the difficulty in 'solving' the housing issue is its complexity and multi-faceted nature. Statutory planning, tax interventions and government incentives can attempt to fix components of the issue on the supply or demand side – but often result in unintended consequences, such as artificially inflated housing prices. Public policy can be a blunt and ineffectual instrument in tackling the delicate issue of housing affordability – with people being the collateral damage. Communities are often left out of the debate about the future of housing altogether, leaving their expectations both unheard and unmet.

Another layer of complexity is the inherently emotional nature of housing as a fundamental enabler to feelings of psychological safety. It's this emotional element that is often overlooked in considering the full spectrum of housing solutions, particularly in assessing the requirements of vulnerable or special needs groups, such as low-income households, key workers and people with a disability.

Economists, designers, social scientists and engineers all need a seat at the table to reset the housing debate, ensuring no one is left out of the discussion wherever practicable. However, with new players entering the market and new ways of tackling the housing problem on the horizon, how we approach the interconnected challenges of housing accessibility, affordability and sustainability is being reimagined.

01

Housing affordability and accessibility

02

Inherently emotional nature of housing as a fundamental enabler to feelings of psychological safety

New players shaking up accessibility

Non-traditional entrants to the housing market such as transport providers, educational institutions and superannuation funds are having a greater influence in creating connected and inspired communities. Transport for London provides an interesting example. Looking to diversify its asset portfolio, Transport for London plans to build 20,000 new homes over the next decade, significantly boosting local supply and helping to ease the housing crisis. As the third largest landowner in the capital, it aspires to become a major player in office development and housing for decades to come.

In the field of education, Cambridge University in the United Kingdom has begun the first phase of a residential development to address a lack of affordable accommodation for its staff and students. The vision for the development is to build a sustainable community, creating 1,500 homes for staff, as well as accommodation for 2,000 postgraduate students and a hotel.

As part of a plan to tackle the ballooning housing supply shortage, the Australian Government has turned to the superannuation sector to invest in social and affordable housing. While discussions are still in their infancy, identifying models for investment that benefit both the government and fund members will be key to adding much-needed new housing stock to the local market and providing housing for those who need it most.

These new, unconventional investors, landholders and housing providers are adding diversity, while also appealing to and bringing together different demographics. The co-location of different typologies and mix of housing products to respond to diverse needs and expectations will be a critical lever to underpinning thriving communities that support social cohesion and equity in the future.

1,500

homes for staff

2,000

accommodation for postgraduate students and a hotel

Cambridge University, UK

Counting the true cost of housing

To make housing truly accessible – and affordable – cost savings must be embedded across the full lifecycle of a home. While materials play a large part in the base cost of a house, energy and water efficiency must also be built into homes to reduce the operational costs to residents. This particularly applies in the social and affordable housing space, where rising energy bills can mean the difference between choosing to heat or cool a home, or not.

Initiatives like the Nationwide House Energy Rating Scheme (NatHERS) in Australia and the Standard Assessment Procedure (SAP) in the United Kingdom provide benchmarks for new dwellings, giving homeowners or tenants transparency around the true cost of their home. Consumer demand for higher energy efficiency standards has had the benefit of driving innovation across the industry, in both the social and private housing markets. A great example of this is a new social housing development of 105 homes in the United Kingdom. Being built to stringent *Passivhaus* environmental standards has led to energy cost savings of around 70% for residents. The development demonstrates that it is possible for leading providers to design and build both sustainable and socially conscious housing – and that the real challenge is scale.

When we look at the true cost of housing, we also need to consider not only the hard cost of raw materials, but the environmental cost of transportation. Wood is often perceived to be 'green', however, when sourced from overseas and shipped internationally, it comes with a significant environmental impact. The shipping of freight is a huge polluter with a sizeable carbon footprint, accounting for 3% of the world's total emissions. With a growing understanding of scope 1, 2 and 3 emissions, sustainable, low-carbon and locally sourced materials will need to be prioritised in the future.

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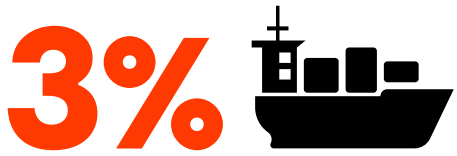

Building for an uncertain future

The focus on sustainability also extends to thinking about housing that is resilient to future climate shocks and threats. With the effects of climate change and supply chain disruptions being felt globally, the need for more adaptive housing is only expected to intensify in coming years. In many countries faced with increasingly severe weather events, governments have struggled to deal with the challenges of displaced peoples. To accommodate communities fleeing from flood or fire affected areas, emergency relief housing that is low-cost, easy to transport and quick to assemble will be vital.

Building codes can also be leveraged to adapt housing to changing conditions. For the safety of communities, rethinking how, or even if, housing should be built in vulnerable areas has become a pressing topic for planners and regulators. More than 30 million homes in the lower 48 states are at risk of being hit by a wildfire, in part because some are close to forests, shrubs lands and grasslands. In California, courts have blocked developer's plans to build in fire-prone areas, arguing that wildfire risk and evacuation safety was not fully considered. Getting the balance right to provide housing for growing populations while also keeping communities safe is key. This could mean a mix of temporary or even relocatable housing in the future, enabling communities to move out of harm's way in advance of emergencies.

Mobile and pop-up structures are another approach to the temporary provision of disaster relief shelters and services. For example, Doctors of the World enlisted the help of architects and environmental design consultants to develop a mobile health clinic that is easy to deploy and assemble without special tools or previous construction experience. Similar solutions can also be applied to emergency housing. Deakin University's School of Architecture and Built Environment collaborated with FormFlow to develop Prefab21, a prototype one-bedroom unit, designed to provide comfortable and sustainable emergency housing for people affected by natural disasters. The project demonstrates the positive social outcomes that can be achieved through collaboration between academia and industry.

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New housing models and materials

New models and materials are also emerging to help tackle housing accessibility and affordability head-on. Modular solutions, for example, lend themselves to repetition, making them a quick-to-assemble and low-cost option for hotels, schools and retirement living. Proving the versatility of modular construction, our architects delivered a modular complex in remote Australia that includes a community centre, police station, courthouse, health centre and residential accommodation. In this example and others, machine processes, local manufacturing and volume production are key to keeping overall costs down.

There are numerous opportunities to learn from the international community in tackling local housing issues. Build-to-rent is a mechanism that is still emerging in Australia and the United Kingdom but has been used successfully in the United States for decades. Build-to-rent offers tenants the flexibility of renting with the security of long-term tenure (and in some models, eventual home ownership). This has the potential to support a greater sense of community as people tend to live in the area for longer, allowing them to make deeper connections with their neighbours.

Reimagining our suburbs and repurposing existing assets post-COVID will also create more affordable and available housing options moving forward. To improve liveability and housing accessibility, suburban shopping malls in the United States that fell into decline through the pandemic have been repurposed into mixed-use developments. The urban renewal project, Meriden Green, is an excellent example of a best practice project with potential universal application to any flood-affected shopping centre. In Australia the re-imagination and design of existing social and affordable assets to create mixed-use communities that are accessible is an ongoing focus of governments and the community housing sector.

01

Machine processes, local manufacturing and volume production are key to keeping overall costs down

02

Build-to-rent offers tenants the flexibility of renting with the security of long-term tenure

03

Re-imagination and design of existing social and affordable assets to create mixed-use communities

Turning the housing issue around

Housing will be a key enabler of our ability to respond to, and mitigate the impacts of, climate change and other disruptive forces.

Housing is a key contributor to the fabric of any city, suburb, regional town or rural community. Affordable, energy-efficient housing can also be inspiring, creating a sense of place, community and belonging. An open-minded, inclusive and holistic approach can encourage diverse neighbourhoods that benefit the whole community, across all demographics. And increasingly, housing will be a key enabler of our ability to respond to, and mitigate the impacts of, climate change and other disruptive forces. Progress across all these measures bodes well for a housing future that supports thriving, sustainable communities and puts people first.

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About GHD

GHD recognises and understands the world is constantly changing. We are committed to solving the world's biggest challenges in the areas of water, energy and communities.

We are a global professional services company that leads through engineering, construction and architectural expertise. Our forward-looking, innovative approaches connect and sustain communities around the world. Delivering extraordinary social and economic outcomes, we are focused on building lasting relationships with our partners and clients.

Established in 1928, we remain wholly owned by our people. We are 10,000+ diverse and skilled individuals connected by over 200 offices, across five continents – Asia, Australia, Europe, North and South America, and the Pacific region.

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