SkyBlox Co-Living Housing

Submitted By: TKCA Architects Sdn. Bhd.



Organization Profile

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Practice Details

Country(ies): Malaysia

City(ies): Setapak, Kuala Lumpur

Start Year: 2023 **Ongoing:** No **End Year:** 2023

Main Adequate Housing Components:



Housing Thematic Areas:



Relevant SDGs:



UN-HABITAT

Problem & Context

Urban housing in Kuala Lumpur faces rising costs, limited land supply, and growing demand from young professionals, students, and low to middle-income groups. Existing affordable housing policies focus heavily on ownership and large-unit layouts, leaving a gap for “intermediate” living before individuals transition to larger family homes. Current schemes often produce compact units with underused living rooms, kitchens, and yards for residents who spend most of their day outside, resulting in inefficient space use, limited connection to nature, and high long-term financial commitments. Flexible, rental-based, and community-focused housing options are scarce, while compact urban rental models remain underrepresented in policy frameworks. This leaves a significant segment underserved, particularly those seeking affordable, well-located housing that matches their lifestyle needs without the burden of long-term loans or oversized, inefficient layouts.

Solution Developed

SkyBlox Co-living is a rental-based housing model where residents occupy private en-suite units within a shared environment, enjoying communal kitchens, lounges, and open courtyards. Designed as a high-density PPVC (Prefabricated Prefinished Volumetric Construction) complex, it delivers over 320 fully furnished rooms for young professionals, students, and low- to middle-income groups. The rental-only policy removes the burden of long-term loans and enables units to be upgraded, replaced, or relocated as needs evolve. Its long-term objective is to cultivate a strong, connected community that adapts and expands with residents’ lifestyles, while its short-term aim is to provide “intermediate” housing as a flexible, temporary option. The PPVC system ensures rapid assembly, high quality, and minimal site disruption, while the co-living approach promotes social interaction, efficient land use, and shared resources. Together, these innovations tackle affordability, land scarcity, and the demand for modern, adaptable urban living.

Implementation

SkyBlox was developed by SkyWorld Development in Setapak, Kuala Lumpur, with planning starting in early 2023 and completed within the same year. The initiative followed a bottom-up approach, led by consultants through research, design, and community engagement. Extensive market and ground studies were conducted with local residents to understand needs and inform an efficient building programme and space configuration. Engagements and town halls with local authorities, technical agencies, and stakeholders addressed requirements such as parking, public transport, and amenities. Sustainability and long-term maintenance efficiency were prioritised from the outset to reduce operational costs. During the COVID-19 period, most coordination was done online, with four months dedicated to detailed Revit modelling to integrate architectural, structural, and M&E systems, minimise site construction time and waste. The project adopted modular PPVC system, with prefabricated units manufactured off-site and

rapidly assembled on-site. SkyWorld led financing, design coordination, and construction management, supported by architects, engineers, and specialist contractors while local authorities facilitated approvals and compliance. Early procurement and bulk sourcing further reduced costs. From concept to completion, the process took around 12 months, excluding eight months of research, stakeholder engagement, and design coordination, achieving a QLASSIC rating of 86% for quality and precision.

Enablers & Obstacles

Key enablers included strong developer commitment, clear market demand for affordable rentals, and active community engagement through stakeholder meetings and town halls with local residents. Extensive research and interviews by the consultant team informed the design and expedited construction using PPVC, supported by early supplier partnerships that stabilised material costs. Strategic site selection in Setapak, with access to public transport and amenities, further boosted viability. Main obstacles were balancing diverse stakeholder requirements while introducing a new lifestyle and construction system unfamiliar to many, as well as ensuring precise on-site jointing for prefabricated components. These were overcome through transparent communication, detailed Revit-based coordination, and demonstrating the comfort, quality, and community value of co-living via fully furnished show units and shared spaces.

Results & Impact

The project delivered high-quality rental housing at prices 20–30% lower than comparable urban units, providing immediate financial relief to low- and middle-income groups who face limited affordable choices in Kuala Lumpur. Post-occupancy feedback shows over 85% resident satisfaction, citing convenience, comfort, and the balance between privacy and community. Modular construction cut on-site waste by more than half and reduced the construction period by several months, lowering both labour costs and carbon emissions. Operational data indicates a 15–20% reduction in shared utility expenses through energy-efficient lighting, rainwater harvesting for communal use, and water-saving fixtures. The development's strategic location near public transport has encouraged reduced car dependency, contributing to lower traffic and emissions. Socially, the design has increased daily interaction among residents, with communal areas used for study, work, and cultural activities, fostering inclusion and a sense of belonging. Longer-term, the flexible rental model and relocatable PPVC units enable the housing to adapt to changing demographic needs, supporting urban resilience while setting a precedent for scalable, sustainable housing policy reform.

Replication & Scale Up

Co-living housing is still a prototype in Malaysia, requiring time to prove its effectiveness and refine design. Direct replication is limited by differing regulations, codes, culture, climate, and

lifestyles. However, the PPVC modular system and high-density layout are adaptable for compact urban sites needing affordable, efficient housing. It has been successfully applied in Penang's SkyWorld Pearlmont project, where completed 3D modules were built off-site and assembled on-site, showing its potential with local adjustments.

SkyBlox can be scaled up through partnerships with government bodies, private developers, and prefabrication suppliers to deliver affordable, high-density housing in more urban areas. Its modular PPVC design can be adapted to different climates, regulations, and cultural contexts for broader acceptance. Bulk material sourcing, streamlined approval processes, and incentives for sustainable construction would further lower costs, speed delivery, and enable replication across multiple cities and regions.

Policy Uptake

This housing practice is a new or innovative practice that is not yet adequately or fully integrated into formal policy frameworks.

To embed SkyBlox into policy, authorities could establish clear guidelines promoting modular prefabricated housing for affordable, high-density developments. Incentives such as tax breaks, grants, and expedited approvals would drive adoption. Integrating modular IBS construction, including PPVC, into national housing and sustainability plans would align with goals for resource efficiency, climate resilience, and community well-being, paving the way for scalable, inclusive, and future-ready urban living solutions across regions.

Lessons & Takeaways

In hindsight, earlier and deeper community engagement could further align designs with local lifestyles and cultural nuances. Expanding passive and renewable energy strategies would strengthen sustainability, while refining modular methods could speed construction and reduce costs. Greater flexibility in PPVC unit customization would enhance adaptability to varied global contexts, ensuring the model can address urban regeneration, affordability, and safety challenges worldwide while inspiring broader adoption of sustainable, community-focused housing.