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Shift Space: A Circular, Adaptable, and Scalable Housing Solution

Submitted By: Container Living PH



Organization Profile

Organization Name: Container Living PH

Organization Type: Private sector

Website: http://www.containerlivingph.com

Practice Details

Country(ies): Philippines

City(ies): Silang, Quezon City, Lipa City, Paranaque City, Laguna, Makati City, Nasugbu, San Juan, Bauan, Tagaytay City, Angeles City, Pasig City

Start Year: 2014 **Ongoing:** Yes **End Year:** N/A

Main Adequate Housing Components:



Housing Thematic Areas:

Housing & Climate Mitigation

Housing & Climate Adaptation

Relevant SDGs:



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Problem & Context

The Philippines faces a backlog of 6.5 million homes, forcing families into unsafe informal settlements in flood- and typhoon-prone areas, where they risk displacement with every disaster. Conventional housing relies on concrete, which provides slow, costly, and carbon-intensive construction practices. Laws regulate affordability and buyer protection,but none addresses modularity, circularity, or embodied carbon. The Green Building Code primarily applies to commercial buildings, leaving affordable housing outside its sustainability standards. Broader frameworks such as the PDP 2023–2028, NDC, and NCCAP call for resilience yet lack tools to operationalize low-carbon housing at scale. These gaps leave vulnerable households with few safe options, underscoring the need for practices like Shift Space, which transforms decommissioned end-of-life shipping containers into scalable, circular, and resilient homes aligned with SDG 11 and the New Urban Agenda.

Solution Developed

Shift Space was developed to directly respond to the housing backlog and climate risks by upcycling decommissioned end-of-life shipping containers into the structural base for new homes. This approach shortens construction time by up to 50%, reduces embodied carbon by 60%, and lowers costs compared to conventional concrete. The primary beneficiaries are low- to middle-income families excluded from formal housing markets and forced into unsafe informal settlements, as well as communities in disaster-prone areas that require fast, resilient shelter options.

The objectives of the practice are to: deliver site-responsive housing that respects local contexts and constraints; ensure climate-responsive design that adapts to floods, heat, and storms; and promote ecological-responsive practices that minimize embodied carbon and support greener urban development.

Socially, the practice builds capacity among local fabricators and creates green jobs. Institutionally, it demonstrates a pathway for embedding circularity and embodied-carbon reduction into housing policy frameworks.

Implementation

Actions include sourcing and retrofitting decommissioned containers, site-sensitive design, fabrication, transport, and on-site assembly. Each build integrates passive cooling, elevated finished floor lines, and permeable landscaping to ensure site-, climate-, and ecological-responsiveness.

Actors and roles: Container Living PH serves as the lead implementor, managing design development, project oversight, and quality assurance. Licensed architects and engineers ensure compliance with the Building Code, while a permaculturist guides ecological integration.

Local fabricators and suppliers execute retrofitting and fit-outs under CLPH supervision. LGUs facilitate permits and site coordination. Communities are engaged as end-users. Organizational partners such as AIM–Dado Banatao Incubator, IFC–World Bank, and the Net Zero Carbon Alliance contribute to capacity-building, climate-alignment, and best practice integration.

Timeline: A typical cycle spans 6–8 months: 2–3 months for planning and permits, and 4–5 months for fabrication. Since 2014, 23 prototypes have been delivered.

Resources: Implementation has been supported by low-cost decommissioned containers sourced through shipping partners, skilled local labor, and client capital, with scaling potential through blended finance models and public–private partnerships. International collaborations provide technical validation and alignment with global green building standards.

Enablers & Obstacles

1Key enablers of Shift Space include strong leadership by Container Living PH with 11 years of circular construction experience, availability of decommissioned containers through shipping partners, and collaboration with licensed professionals ensuring compliance and safety. Partnerships with AIM–DBI, IFC–World Bank, and the Net Zero Carbon Alliance provided technical validation, while LGU permits and openness to alternative building methods enabled local implementation.

2. Obstacles included limited awareness of container-based housing, initial skepticism from clients and regulators, and the absence of embodied-carbon standards in Philippine housing policy. These were addressed through pilot prototypes that proved safety and performance, and alignment with global frameworks like EDGE, BRI, and SDG 9, 11, 12, and 13 to strengthen credibility. Upfront costs can be mitigated by phased construction and blended financing approaches.

Results & Impact

Key enablers of Shift Space include strong leadership by Container Living PH with 11 years of circular construction experience, availability of decommissioned containers through shipping partners, and collaboration with licensed professionals ensuring compliance and safety. Partnerships with AIM–DBI, IFC–World Bank, and the Net Zero Carbon Alliance provided technical validation, while LGU permits and openness to alternative building methods supported implementation. Modular retrofitting and passive cooling technologies accelerated construction and reduced carbon, while community acceptance grew as prototypes were occupied.

Obstacles included limited awareness of container-based housing, initial skepticism from clients and regulators, and the absence of embodied-carbon benchmarks in Philippine housing policy. These were addressed through pilot builds that proved safety and performance, and

alignment with frameworks such as EDGE and SDGs 9, 11, 12, and 13 to strengthen credibility. Upfront costs were managed through phased construction and blended financing approaches.

Replication & Scale Up

Across 23 prototypes, Shift Space has applied one primary design that is continuously iterated and enhanced through features tested in other builds. This adaptive model has been replicated in residential projects in Metro Manila, Batangas, and Pampanga.

Shift Space can be scaled through partnerships with LGUs, housing agencies, and private developers to build clustered housing projects rather than single prototypes. Scaling is enabled by the modularity of container units, which allow rapid assembly and adaptation to diverse sites. Access to decommissioned containers ensures supply, while training more local fabricators expands capacity. With blended financing and policy support on circular construction, the model can reach thousands of households in climate-vulnerable areas.

Policy Uptake

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

Prioritize AITECH accreditation to formally recognize container-based modular housing, enabling adoption by LGUs, SHFC, and Pag-IBIG programs. Align with the Green Building Code as a pathway for low-carbon, circular housing. Introduce embodied carbon benchmarks drawing from IFC EDGE and UN-Habitat frameworks. Expand access to blended finance and subsidies for AITECH-accredited projects. Institutionalize TESDA-led training to create green jobs, and mainstream container housing in the NDC and NCCAP as a resilience measure.

Lessons & Takeaways

In hindsight, if only capital resources were available, we would have engaged earlier with regulators and national agencies to attain formal recognition, such as AITECH accreditation, to accelerate acceptance and scaling. And while systematic data on costs, performance, and carbon savings would have strengthened evidence, such benchmarks were not yet available when we began. Moving forward, we are prioritizing data collection, financing partnerships, and stronger communication to broaden impact.