

## Courtyard House Plug-In

James Shen SM '07  
MIT Alumnus

Founding Partner  
People's Architecture Office | [web](#)



**Venice Project:**  
Courtyard House Plug-In  
Beijing, China

**Locations:**  
China Pavilion  
EMG Art Foundation at Zen Palace

Designed by the The People's Architecture Office, including MIT alumnus James Shen SM '07, the Courtyard House Plug-In project will be featured in exhibitions at the China Pavilion and the EMG Art Foundation at Zen Palace.

The Courtyard House Plugin is essentially a house within a house. It is a prefabricated modular system designed to bring modern living standards and energy efficiency to buildings that are centuries old while keeping them fully intact.

The Plugin at Courtyard 72 is part of Dashilar District's Urban Regeneration Pilot. Located in the center of Beijing, Dashilar is an historic area dotted with traditional Chinese courtyard houses that are partially occupied. These courtyards were once filled by multiple families. Today, old and dilapidated, the courtyards are vacated for newer housing in the suburbs.

In Dashilar the costs of renovating or rebuilding courtyards often outweigh the financial benefits to their owners. These old structures lack modern insulation and private bathrooms and can be permanently damaged from new interventions. More importantly, parts of these courtyards are still occupied by other families, and structural upgrades may infringe upon their space or privacy. Thus, neglected courtyard structures that have fallen into disrepair are common sights in Dashilar.

The Courtyard House Plugin provides an alternative to this problem through a new type of prefabricated panel made of a composite that incorporates structure, insulation, wiring, plumbing, windows, doors, interior and exterior finishes into one molded part. Panels are light, easy to handle, and cheap to ship. They snap and lock together with the use of a single tool, a hex wrench.

The entire Plugin structure can be assembled by a few people in one day, and requires no skill or special training. And because they are mass-produced, Plugin panels can be made in high quality, yet remain inexpensive. 'Plugging in' is half the cost of renovating an old courtyard house and about a fifth the cost of tearing down and rebuilding a new courtyard.