

## Abstract :

House me Tender- total precast cell systems for mass customized housing in China

Mass produced precast elements are increasingly favoured by the housing sector in Hong Kong and China largely to minimize construction time and labour on site and to ensure greater building quality of industrialized components. These elements often consist of semi-precast slabs, partition walls and façade plug-ins that externally embellish a still rudimentary cast in place column-slab system. The aspirations for such housing models are more aimed at maximizing real estate profits for developers than to reduce the construction cost for affordable housing. They often fall short to internally offer better spatial and living qualities to its prospective residents and to generate a vibrant community structure from within. The scale of these current housing models directly address the large scale of the surrounding urban context while bypassing the human scale altogether. A relentless repetition of the same living units across great heights portrays these glazed monoliths as socially isolated on large commercial podiums.

While remaining competitive and efficient against current models, the paper proposes new environmentally enhanced housing prototypes developed at incrementing scales that reassert the individual as the main protagonist for the making of their own living environment. This is achieved through mass customization of precast volumetric units. Prospective residents are able to choose from a catalogue of variants, customized units that conglomerate into unique three dimensional living entities that makes up for the overall identity of the building. Choices for each type of units are based on the desired types of openings, amount of semi outdoor terraces, location of glass enclosure and shaded and well ventilated spaces.

To seek to implement mass customization in precast housing puts forward greater flexibility and adaptability over time in accommodating various types of living units for various social needs and ultimately challenges the supported tendency to segregate housing types for specific social groups.