Future Cities Laboratory

Architecture Asia features Expandable House

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Architecture Asia featured Tropical Town project's expandable house, *rumah tambah* , as a new approach to housing designed in response to rapidly-developing cities like Batam, Indonesia.


portfolio | INDONESIA | RUMAH TAMBAH (RUBAH) | FUTURE CITIES LABORATORY

the expandable house

A new approach to housing design is being developed as a response to the challenges of rapidly developing Southeast Asian cities. BY URBAN-RURAL SYSTEM, FUTURE CITIES LABORATORY

(FCL) FUTURE CITIES LABORATORY 未来城市实验室

About

Tropical Town

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Batam was named the fastest growing city in the world in 2015. As a result major planning problems surrounding its rapidly increasing population emerged. **The Expandable House**, as featured in Architecture Asia (pg. 44), introduces a planning strategy by the Tropical Town project at the Future Cities Laboratory. The **Tropical Town** project at FCL aims to develop environmentally sustainable settlements that can develop and adjust to the growth of population or region.

The Expandable House, or *rumah tambah* or 'rubah' in Bahasa Indonesia, is designed in response to the challenges of rapidly-developing cities like Batam, in Indonesia's Riau Archipelago.

There are five principles that form the foundation of the *rumah tambah*.

Firstly, the "sandwich section" of the house is designed to allow flexible financing whereby the developer or state housing agency provides the roof and foundations which the residents can fill as their circumstances require and as their budget allows.

Secondly, the "domestic density" of the house can be easily adjusted as residents can easily expand the house vertically, reducing the settlement footprint on arable land, and the demand for expensive infrastructure.

Thirdly, the house is designed with "decentralised systems" that allow each unit to harvest rainwater and generate solar electricity. Sewage and septic tank systems, and passive cooling principles are also integrated with the house.

Fourthly, to provide "productive landscapes", food and building material production are incorporated into the planning of the house, diversifying the resource base of the house in urban areas with limited land.

Lastly, each house is designed as a "seed package" that catalyses the growth of environmentally sustainable and economically resilient settlements. The house contains technologies, material strategies and planning guidelines that can adapt to local social, cultural and environmental conditions, and result in diverse tropical towns.