Materialisation: Materials stand at the core for a circular building. By thorough research, materials have been carefully selected. This involves availability in the context but also materials that are seen as waste material like plastic and tire waste.

Disassembly: The connections of the different materials and functions are designed to assure ease of assembly and disassembly. The building can be taken completely apart from the foundations to the infill.

Flexibility: The building is flexible in use which makes the building future proof. Dwellings start as narrow open units and grow vertically by incremental growth and self-building.

Location: Bandung Indonesia

Strategy

Prototyping - Design for disassembly

Column designed for easy assembly and disassembly and apply safer self building with less materials and tools.
Impression rooftop garden

Impression interior workspace
Impressions

Impression public green space

Impression impact on Kampung
Community roof farming

Rainwater is collected from the big roof surface in reused oil barrels. The barrels have an integrated filter system and water can be used in the dwellings. Waste water is put through a septic tank system which cleans it before it ends in the river.

Sunlight enters the roof garden through the transparent glass with PV panels and creates a good environment for the growing food source in the city.

Form follows climate

A modern interpretation of the traditional Joglo roof. Designed to increase the vertical ventilation of the dwellings. Big cantilevers allow for protection from both sun and rain.

Water harvesting and filtration

Septic tank system
Upcycled plastic roof tiles
Building elements

- Upcycled clay bricks
- Reused timber panels
- Engineered bamboo column structure
- Bamboo roof structure
- Upcycled rubber tiles
- Removeable foundations
- 70% recycled aggregate

Column consist out of elements connected with a friction fit connection.

Reused timber panels
Dwellings are narrow and small making it affordable for the relative low income community of the kampung. However through selfbuilding vertical incremental growth is possible to almost double the dwellings in size.
Cross laminated engineered bamboo (CNC milled)

Recycled concrete (70% aggregate)

Upcycled clay bricks

Integrated gutter water runs in trench

Reused timber facade slats

Engineered bamboo pegs

Engineered bamboo truss beam

Upcycled rubber floor tiles

Bamboo poles (Gadua) tied and hardwood pins

Cross laminated engineered bamboo

Upcycled plastic roof tiles

Bamboo poles roof construction

Upcycled plastic roofing battens

Upcycled ridge tile

Upcycled rubber glass connection

PV cells on glass

Quadruple bamboo pole construction

Stakeholders and cooperation system

Project startup and coordination with local RT

Takung / local entrepreneurs.

From the bank or government

Building products sold and used in the rest of Kampung

Building products earned if in a rest of Kampung

Kampung residents rent dwellings and buy the materials with a reduced price

Cooperation of the Kampung inhabitants with local RT

Building products used for self-building

Building products used if in a rest of Kampung

Upcycled building products used for self-building

Upcycled building products used for self-building

Kampung + local entrepeneurs run the building material lab

Upcycled ridge tile

Reused timber floor beams

Reused timber flooring

Upcycled plastic gutter
Cross laminated engineered bamboo (CNC milled)

Recycled concrete (70% aggregate)

Upcycled clay bricks

Integrated gutter water runs in trench

Recycled concrete (70% aggregate)

Cross laminated engineered bamboo (CNC milled)