A. High Density
Traditional Kampung
Density 32,000 km/2
Low to mid-income

1 Layer - Batawi house
Traditional single layer house build from wood and cheap bricks. Usually with a garden. From 2 to 12 inhabitants.

2 Layers - Kampung chop house
Low mid-income family with a shop (warung) at the ground floor. Build from cheap bricks and steel-plating.

3 Layers - Mid income house
Expansive mid to higher mid income house as found in the inner-city kampungs. Usually build from a combination of a concrete structure with brick walls. Side walls are always closed due to neighbors attaching their houses onto these walls.

3 Layers - Shop house
Larger shop house build from a concrete structure with brick walls. Build by mid-income entrepreneur with a large warung.

2 Layers - New kampung house
Build from cheap bricks and steel-plating. Houses one or two families.

2 to 4 Layers - Kost
A kost is a housing complex for the Jakarta workforce. Houses immigrants, people that live in the suburbs and other people from outside Jakarta. A kost can have many rooms, like this one with around 16 rooms for 1 to 2 people.
The Kampung has a lot of livestock, mainly chickens, goats and birds.

Every house has a privacy gradient, the deeper into the house the more private it gets.

Commercial functions are interwined with living in the kampung.

Streets are covered with metal sheeting and other materials to prove shading as a protection from the sun.

Streets are decorated with plants, some people also have gardens.

The local Mashid calls for pray 4 times a day.
Density need, capacity and capability

Density need according to Jakarta’s goals

**ADD NUMBERS**

Capacity of the Kampung

A new Density spread.

Density need, capacity and capability

Hypothesis:

The bottom-up designed kampung has a limit to its size of roughly 1.3x its current size. Therefore, top-down Kota should provide assistance to allow a doubling of density to happen, as a new form of the kampung improvement program (KIP). This KIP 2.0 should consist of various rules, infrastructural tools and architectural elements, a toolbox for densification.
Tools on the Large scale

Streetview Needed volume for Jjakarta

Streetview new infrastructural system

Streetview sewage systems

Streetview Electric Ojek Highway

Overview 1:500

Tools on the Large scale

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Overview 1:500
Current situation Site A

Required Density spread and capacity

Future situation site A
1. Current plot division
2. Future plot division, Goal to increase the amount of open space and semi-public streets
3. Windcatchers
4. Vertical Kampung House, Base by Government
5. Vertical Kampung House, filled in by kampung
6. Service buildings and cultural heritage
7. Vertical Family House, Construction by government, filled in by large kampung families
8. Rooftop additions
9. Split buildings
Communal Roof
Exploded Axonometrie

Legends

1. Current plots
2. Concrete base structure
3. Communal elements in central core including toilets, stair and vertical shafts
4. Kampung houses build into the roof structure
5. Wooden main structure
6. Floors by kampung inhabitants
7. Roof structure
8. Option 1. Wing Wind Catcher
9. Option 2. Solar Chimney
Details Communal Roof

- Corrugated iron
- Beams 24x60mm
- Beams 120x400mm

- Warungs and other commercial functions are found on the ground floor.

- Construction detail of the main wooden construction. Secondary beams are held in place by steel plates mounted in between the main columns, keeping the beam lengths short.

- Bamboo walls and roofs
- Solar Chimney
- Wooden framework with glass planes
- Black coated steel panels
- Optional PV panels
- Wooden framework
- Glass planes

- 500 liter water tank for rainwater collection used for grey water system.
1. Communal Roof (low to mid-income 14 x 25 m²)
2. Individual Vertical Kampung House (low to mid-income 40 m²)
3. Family Vertical Kampung House (low to mid-income 5 x 25 m²)
4. Street Extension House (mid-income 2 x 40 m²)
5. Split House (mid & high-income 80 m²)
6. Shop House (low and mid-income 3 x 30 m² / 1 x 60 m²)

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Concrete base, cast in site concrete columns and pillars
Wooden roof

Prefab stairs. Build-in toilet and shaft. Wooden roof

Concrete base, cast in site concrete columns and pillars
Prefab stairs. Build-in toilet and shaft
Wooden secondary structure. Prefab roof from rumah material

Concrete base, cast in site concrete walls. Main beams concrete, secondary beams wood.

Prefab steel beams. Wooden secondary structure on top of a concrete slab casted in site
Wooden secondary structure.

Concrete or concrete secondary structure
Wooden or concrete secondary structure

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Total
Sun & Ventilation
Kota Structure
Kota Kampung Structure