2I OTHER MAKOKO BUILDING PROJECTS

Hope Floats project:
Makoko Amphibious Clinic

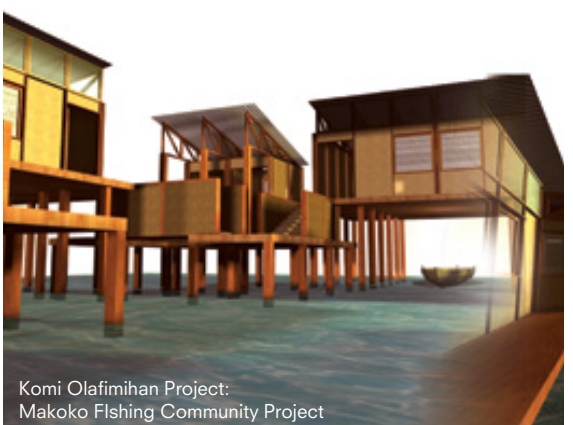
Isi Etomi:
Canoe Stop

Student project:
Water Hyacinth Harvesting

Student project: Empowering Makoko
Wale Falde

Earth Architecture Project:
The Oil Barrel House

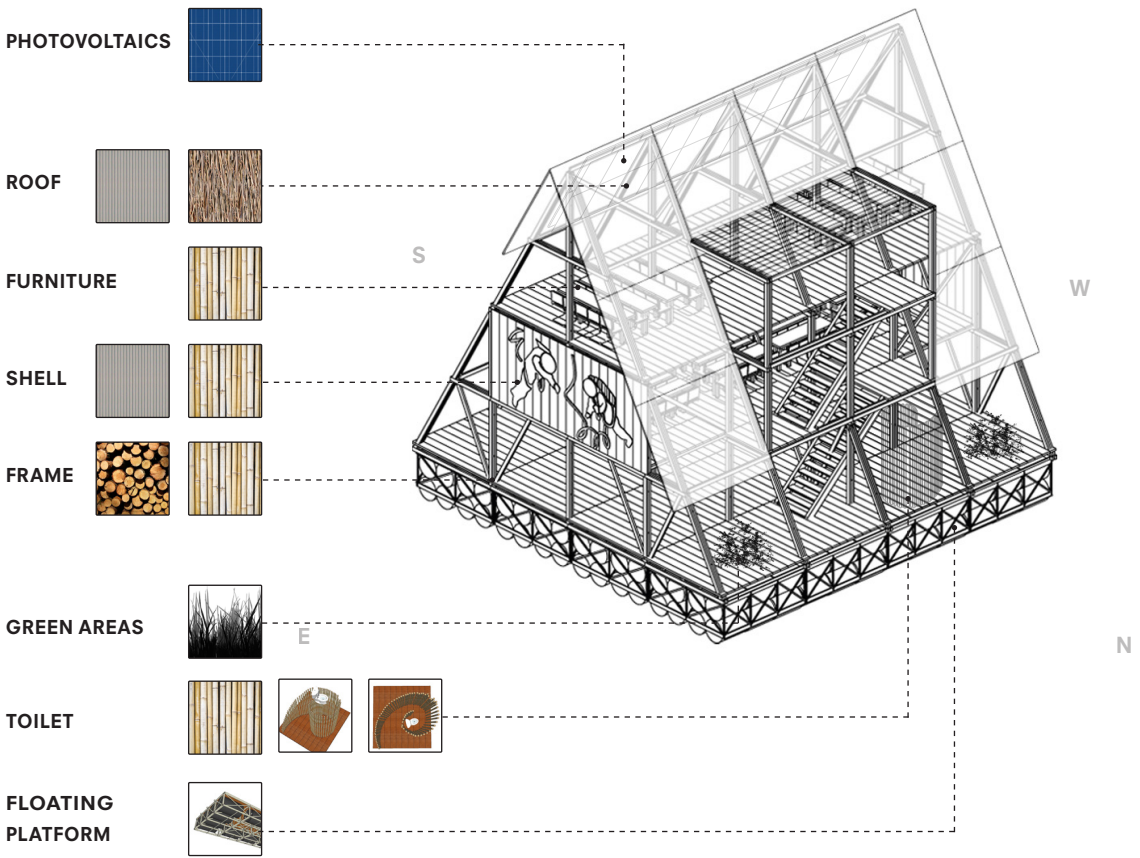

Student Project:
Amphibious Dwelling


Komi Olafimihan Project:
Makoko Flshing Community Project


Student project:
Amphibious Dwelling

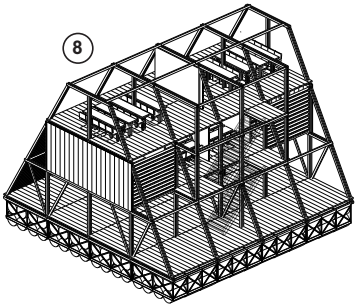
2J CONCLUSIONS

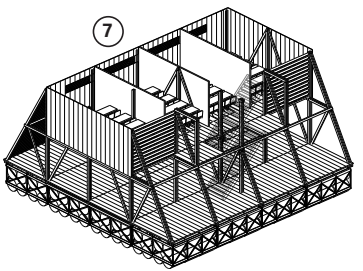
FLOATING BUILDING

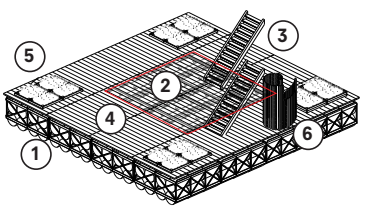


PROGRAM DISTRIBUTION

1. FLOTATION PLATFORM
2. SERVICES AREA
3. ACCESSIBILITY
4. OPEN GREEN SPACE
5. PLANTING AREAS
6. TOILET
7. CLASSROOMS
8. OPEN AIR CLASSROOMS

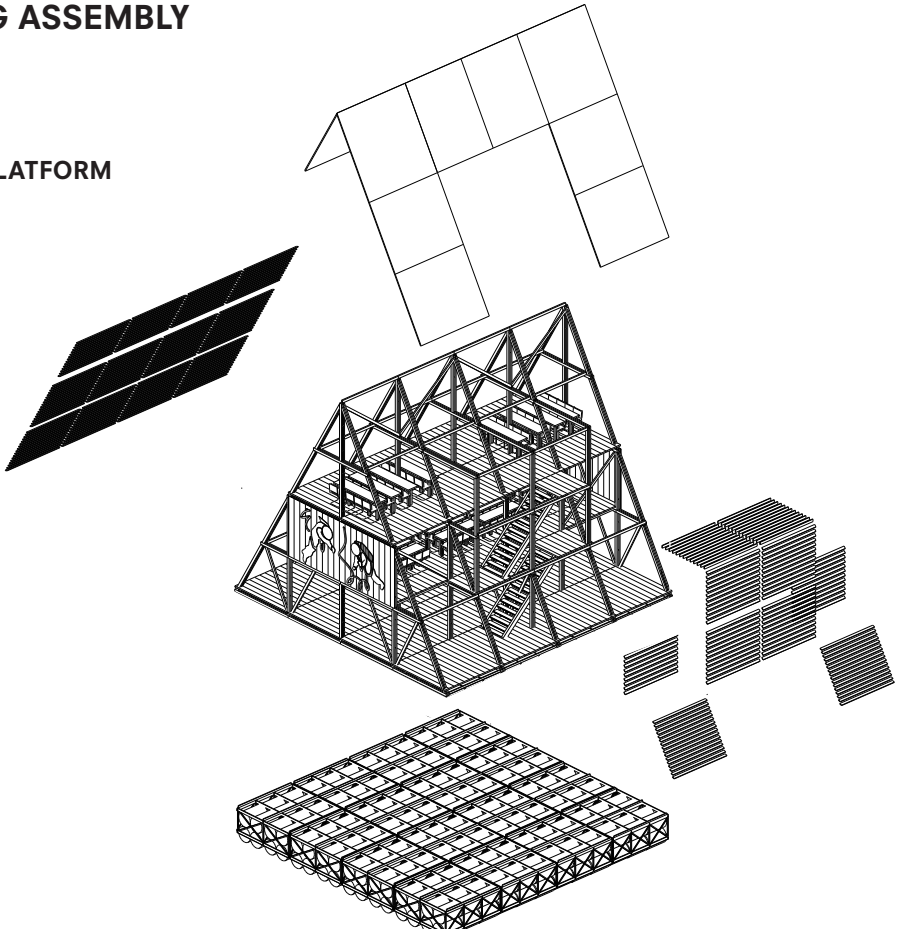






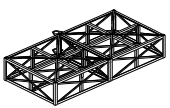
BUILDING ASSEMBLY

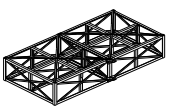
SITE
ROOF
FLOATING PLATFORM
FRAME
SHELL



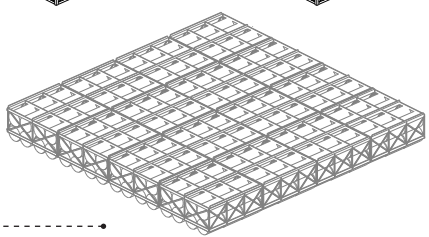
SITE

ANCHOR POINTS
Aluminium



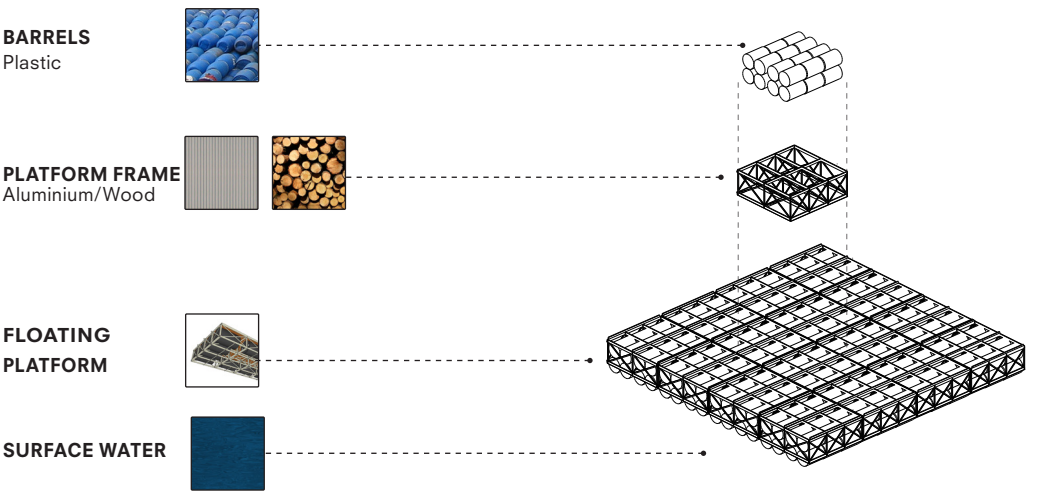


FLOATING PLATFORM



SURFACE WATER

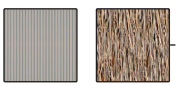
FLOTATION PLATFORM



ROOF

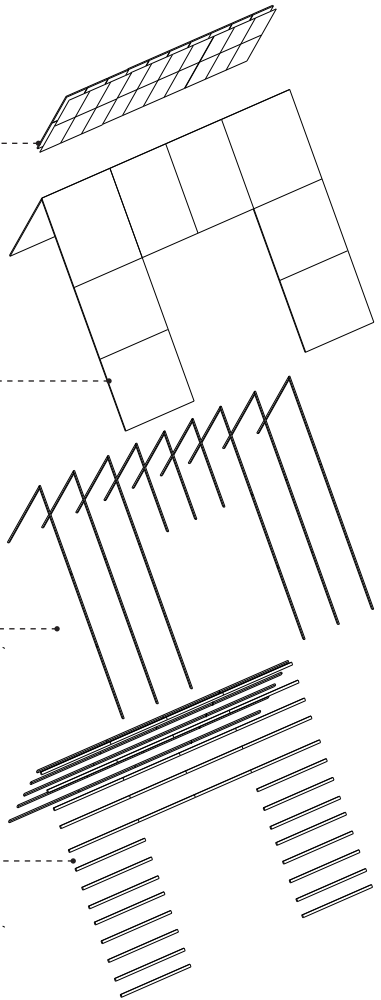
PHOTOVOLTAICS
20 panels 174Wp

ROOF 03
Aluminium/Thatch

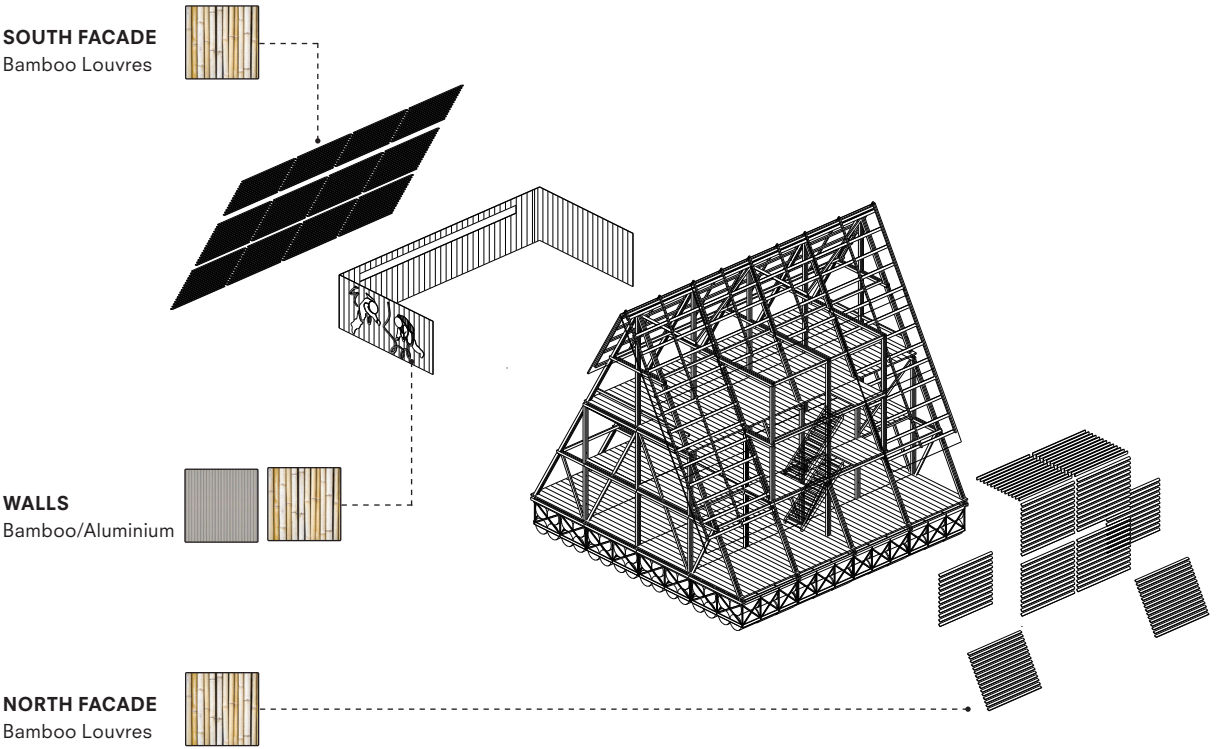


ROOF 02
Bamboo joists

ROOF 01
hardwood beams

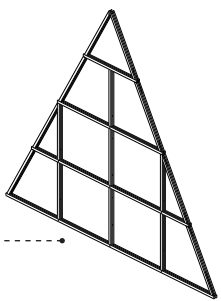


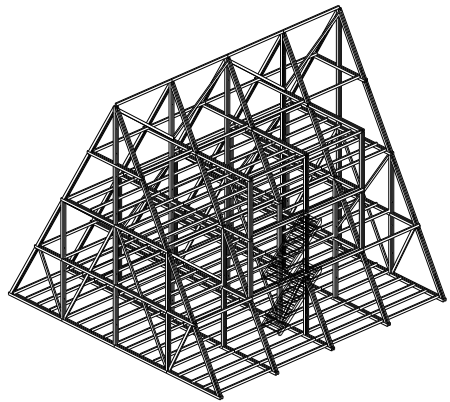
SHELL

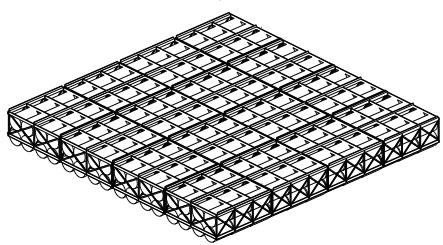

SOUTH FACADE
Bamboo Louvres
WALLS
Bamboo/Aluminium
NORTH FACADE
Bamboo Louvres

FRAME

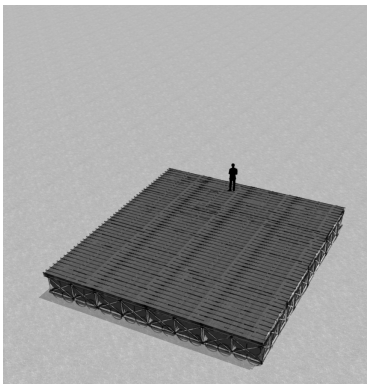
FRAME
hardwood



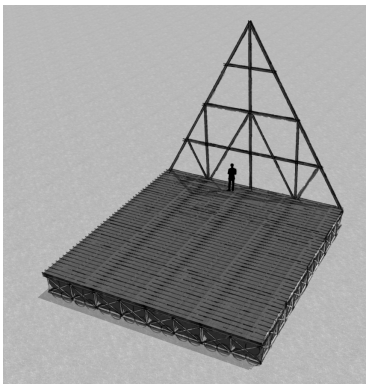




CONSTRUCTION PROCESS



1



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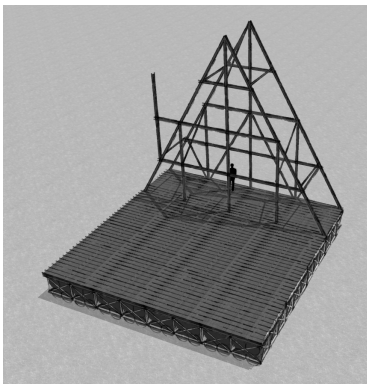

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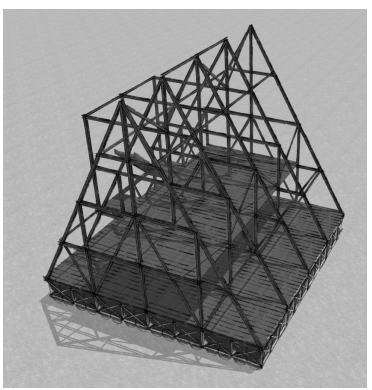

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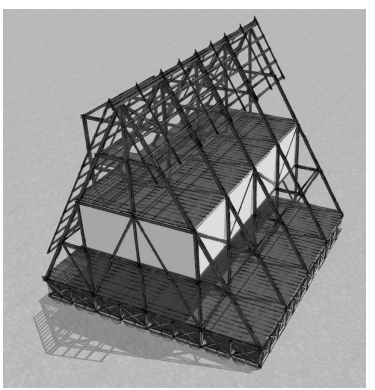

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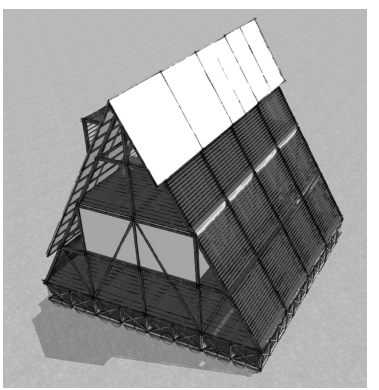
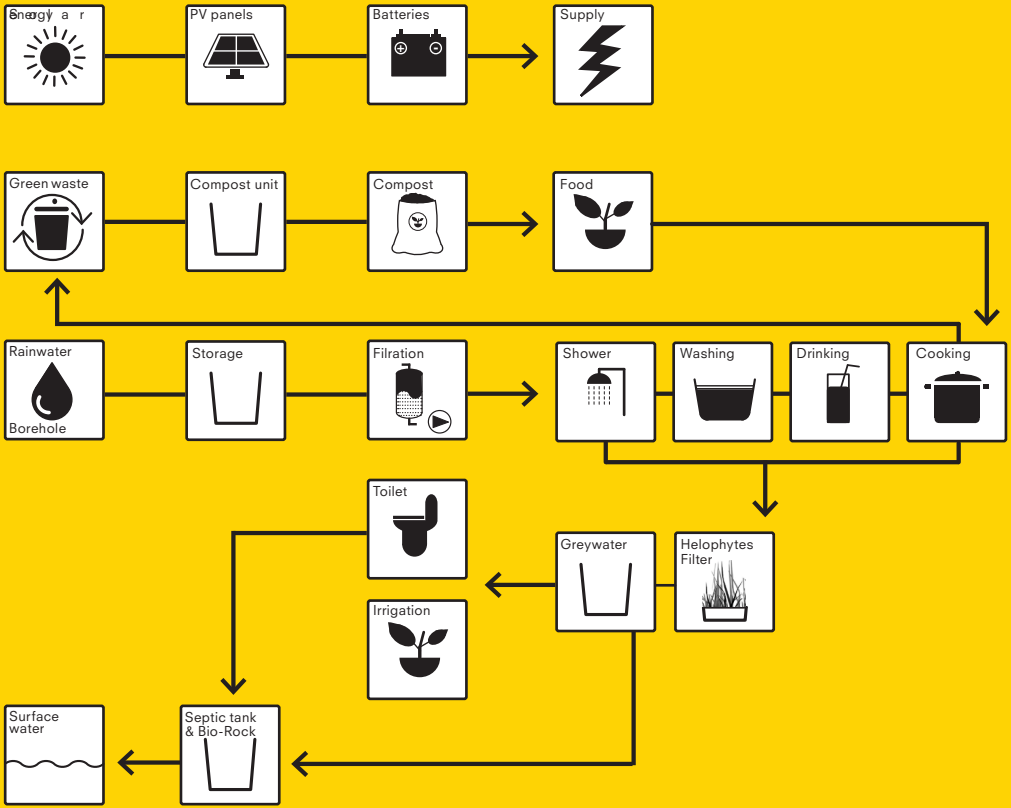


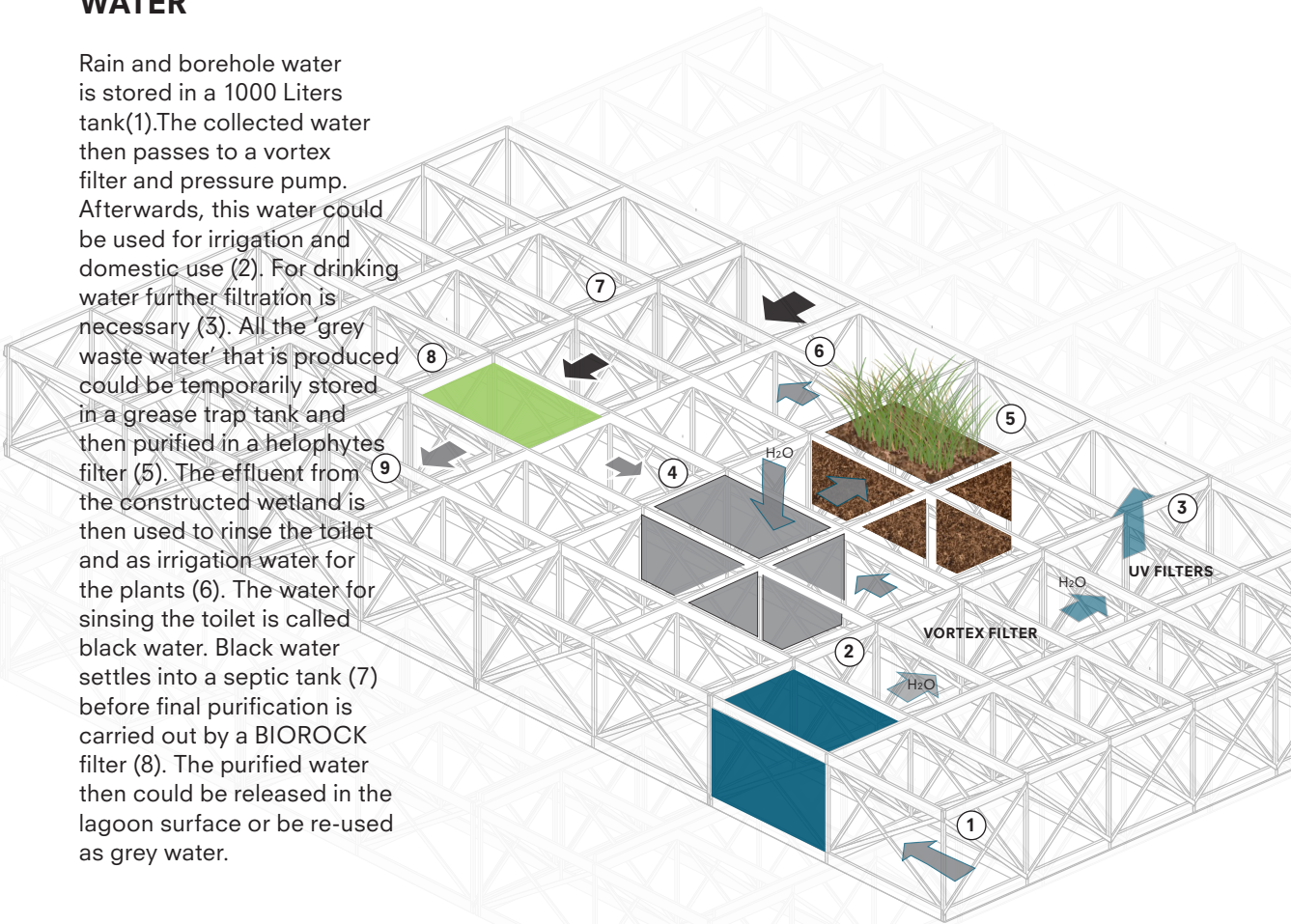
6

RENEWABLE ENERGY SYSTEMS DIAGRAM



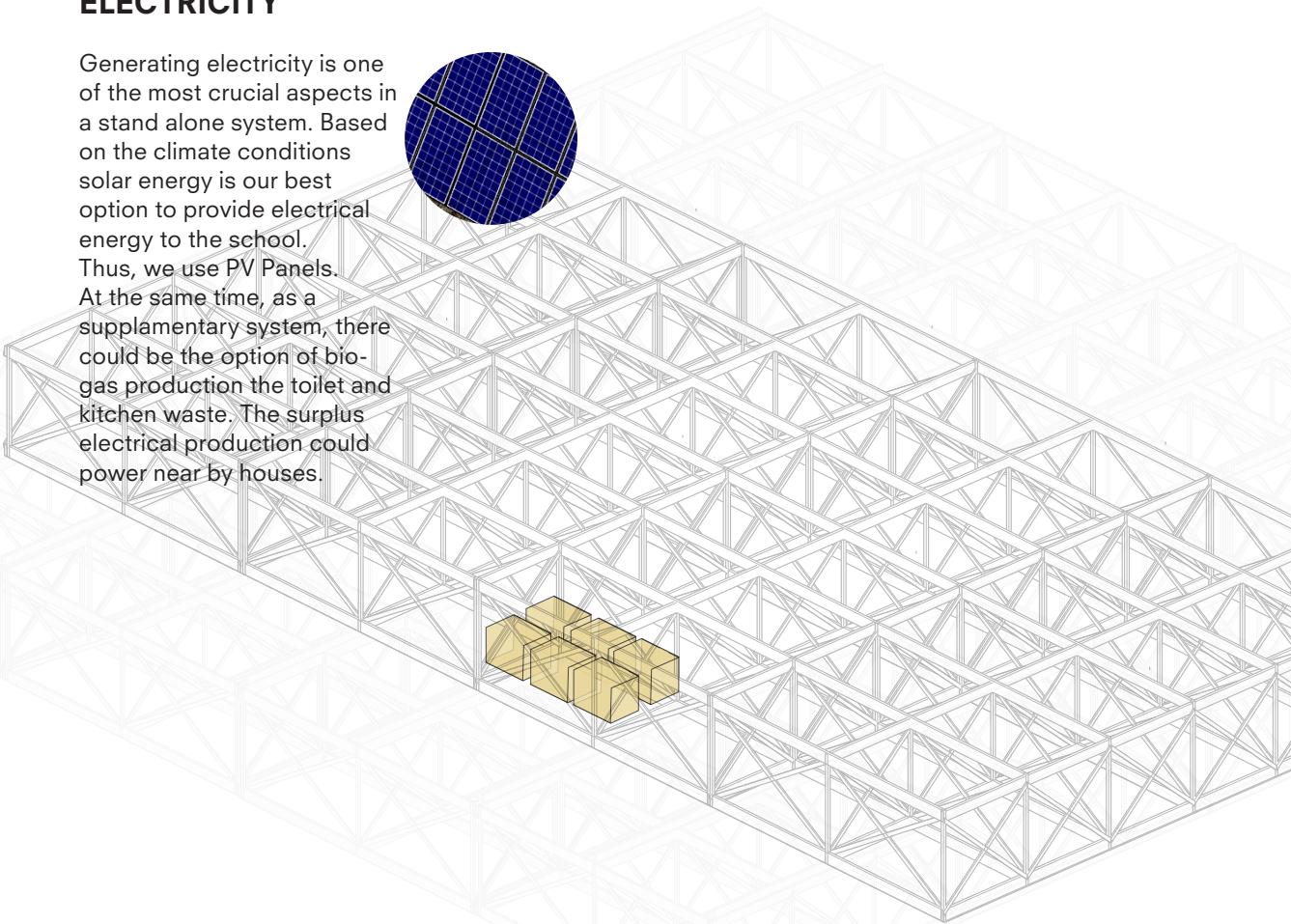
WATER

Rain and borehole water is stored in a 1000 Liters tank(1).The collected water then passes to a vortex filter and pressure pump. Afterwards, this water could be used for irrigation and domestic use (2). For drinking water further filtration is necessary (3). All the 'grey waste water' that is produced could be temporarily stored in a grease trap tank and then purified in a helophytes filter (5). The effluent from the constructed wetland is then used to rinse the toilet and as irrigation water for the plants (6). The water for sinsing the toilet is called black water. Black water settles into a septic tank (7) before final purification is carried out by a BIOROCK filter (8). The purified water then could be released in the lagoon surface or be re-used as grey water.



ELECTRICITY

Generating electricity is one of the most crucial aspects in a stand alone system. Based on the climate conditions solar energy is our best option to provide electrical energy to the school. Thus, we use PV Panels. At the same time, as a supplamentary system, there could be the option of bio-gas production the toilet and kitchen waste. The surplus electrical production could power near by houses.



FOOD

The idea is that the platform could funtion as a food production are (vegetables agriculture). The plants are watered with ‘grey water’ (1) filtered by the helophytes filters (2). If insufficient stock tain water can be made of use (4). The organic waste together with a portion of the waste water are collected in a 1000 Liter tank (5) in which methane is captured for biogass production for the possibillity of cooking (6). The combination with black water is possible but could make the system significally complex and harder to use the remaining effluent as a fertilizer for the vegetable garden.