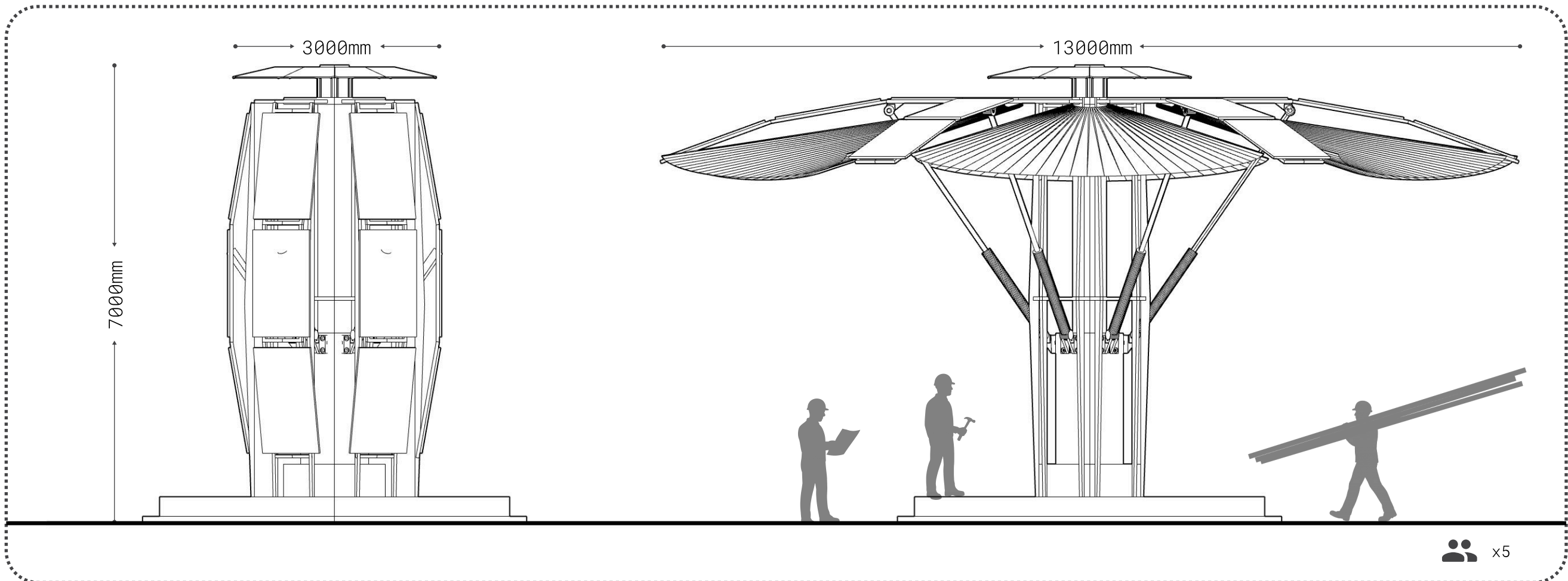
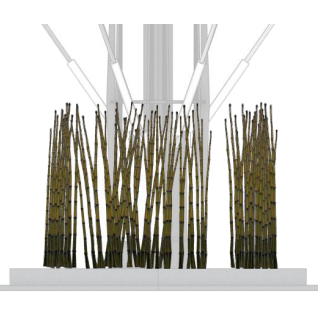
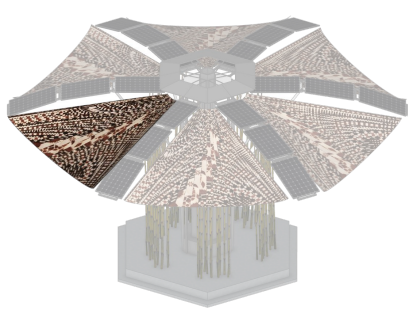
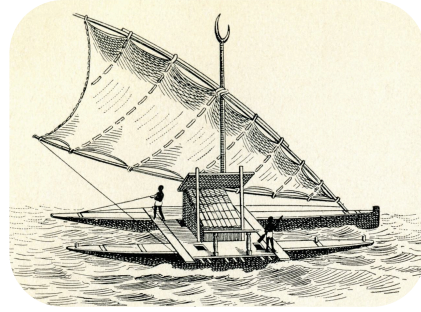
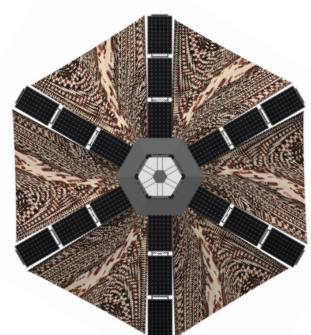


Inspiration

- The solar module's hexagon shape features **Fijian Masi patterns**, honoring local art and cultural heritage.
- The canopy, made from **recycled sailcloth**, mimics traditional **Drua sails**.
- The bamboo fence, made of local bamboos, is inspired by **local bamboo construction and raft**.



Easy On-site Assembly

1

Tools and Site Preparation

2

Central Support Pole and Lighting Installation

3

Hydraulic Rod Installation

4

Canopy Frame Assembly

5

Solar Panel Installation and Electrical Wiring

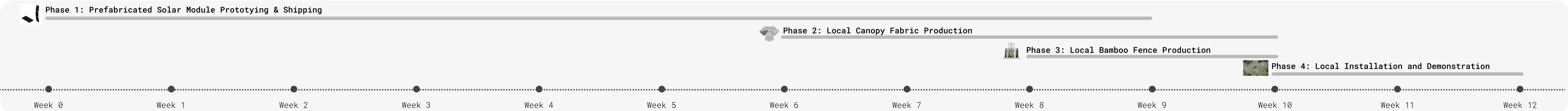
6

Canopy Fabric Installation

7

Bamboo fence Installation

Prototyping timeline



Structure and Materials

Estimated Total Cost: \$15,838

Manufacturing: \$13,788

1 x 1 = \$500

2 x 6 = \$1,500

3 x 18 = \$6,750

4 x 6 = \$1,000

5 x 1 = \$1,875

6 x 1 = \$313

Manufacturing = \$850

Shipping = \$1,000

Local Production: \$2,050

7 x 1 = \$1,150

8 x 1 = \$500

9 x 1 = \$400

Estimated Total Embodied Carbon: 51,294 CO₂e (kg)

Manufacturing: 19,029 CO₂e(kg)

1 x 1 = 65 CO₂e(kg)

2 x 6 = 2310 CO₂e(kg)

3 x 18 = 6300 CO₂e(kg)

4 x 6 = 225 CO₂e(kg)

5 x 1 = 8950 CO₂e(kg)

6 x 1 = 20 CO₂e(kg)

Manufacturing = 894 CO₂e(kg)

Shipping = 265 CO₂e(kg)

Local Production: 32,265 CO₂e(kg)

7 x 1 = 13,100 CO₂e(kg)

8 x 1 = 39 CO₂e(kg)

9 x 1 = 98 CO₂e(kg)

*Cost and embodied carbon estimates are based on mass production assumptions. Prototyping costs and embodied carbon are expected to be higher.

Pre-fabricated parts

1.Light Fixture

2.Main Canopy Frame

3.Solar Panel

4.Hydrolic Rod System

5.Central Support Pole

6.Fasteners & Hardware

UV-resistant polycarbonate housing

Marine-grade aluminum (6082 T6)

Standard monocrystalline silicon panels

316 stainless steel

316 stainless steel

316 stainless steel and other marine-grade materials

Local maintenance

Six-Month (180 days)

Six-Month (180 days)

Bi-weekly (14 days)

Six-Month (180 days)

Six-Month (180 days)

Local workers

Local made parts

7.Concrete Base

8.Canopy Fabric

9.Bamboo Fence

Reinforced concrete with additives and sealant

Recycled PET from old sailcloth

Local bamboo

Local workers

Local artists

Local villagers