HEXACHROMA

CONCEPT

HexaChroma is a modular canopy system designed as a replicable unit, inspired by the geometry of nature and the practicality of community infrastructure. Each unit features a **hexagonal funnel-shaped canopy** constructed with integrated polycarbonate panels and **high-efficiency silicon photovoltaic cells.**

The funnel shape serves a dual purpose:

-**Maximizing solar exposure** on all faces for power generation

-**Optimally capturing rainwater**, which is channeled through the structure and stored in a base reservoir

Each canopy module has a surface area of 51 square meters, producing approximately 10.2 kW of clean electricity. To meet the competition's minimum requirement of 75 kW, the proposal includes **8 HexaChromas units**, together generating 81.6 kW.

The harvested rainwater is collected and stored at the base of each unit. A l**ow-energy pump system** transfers the water to a centralized storage tank used by Marou Village, while the electricity feeds into the local power grid. This integrated design provides both e**nergy and water resilience**, especially critical during the region's dry season.

Designed as **a puzzle-like modular system**, HexaChromas allows for easy assembly, flexible expansion, and community involvement during implementation. It offers not only functionality but a vibrant public space where people can quite literally cool off in the colorful shadows of clean energy and freshwater security.
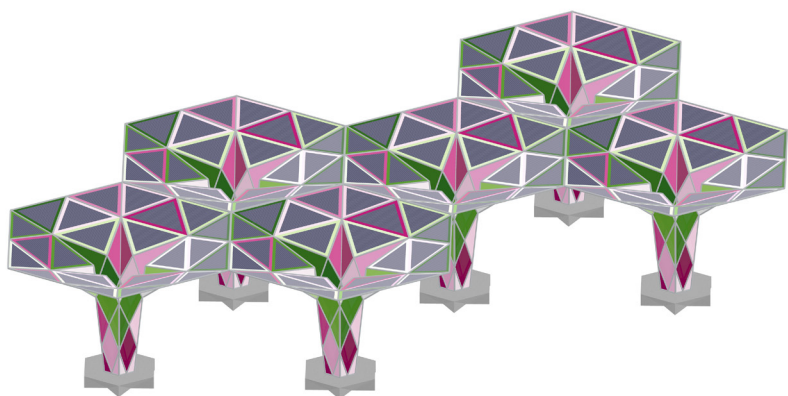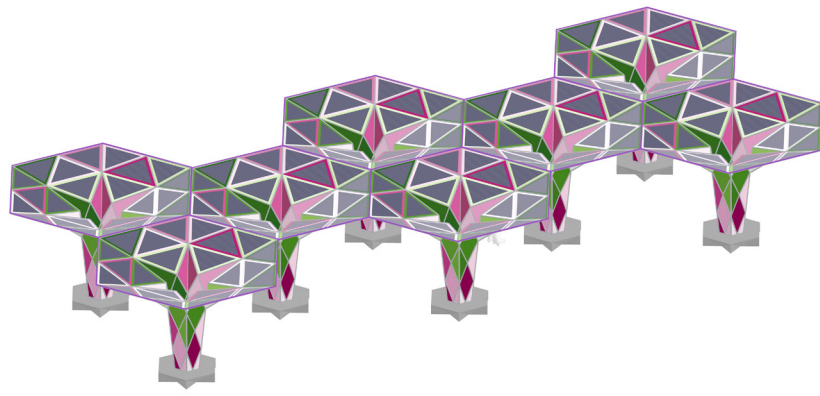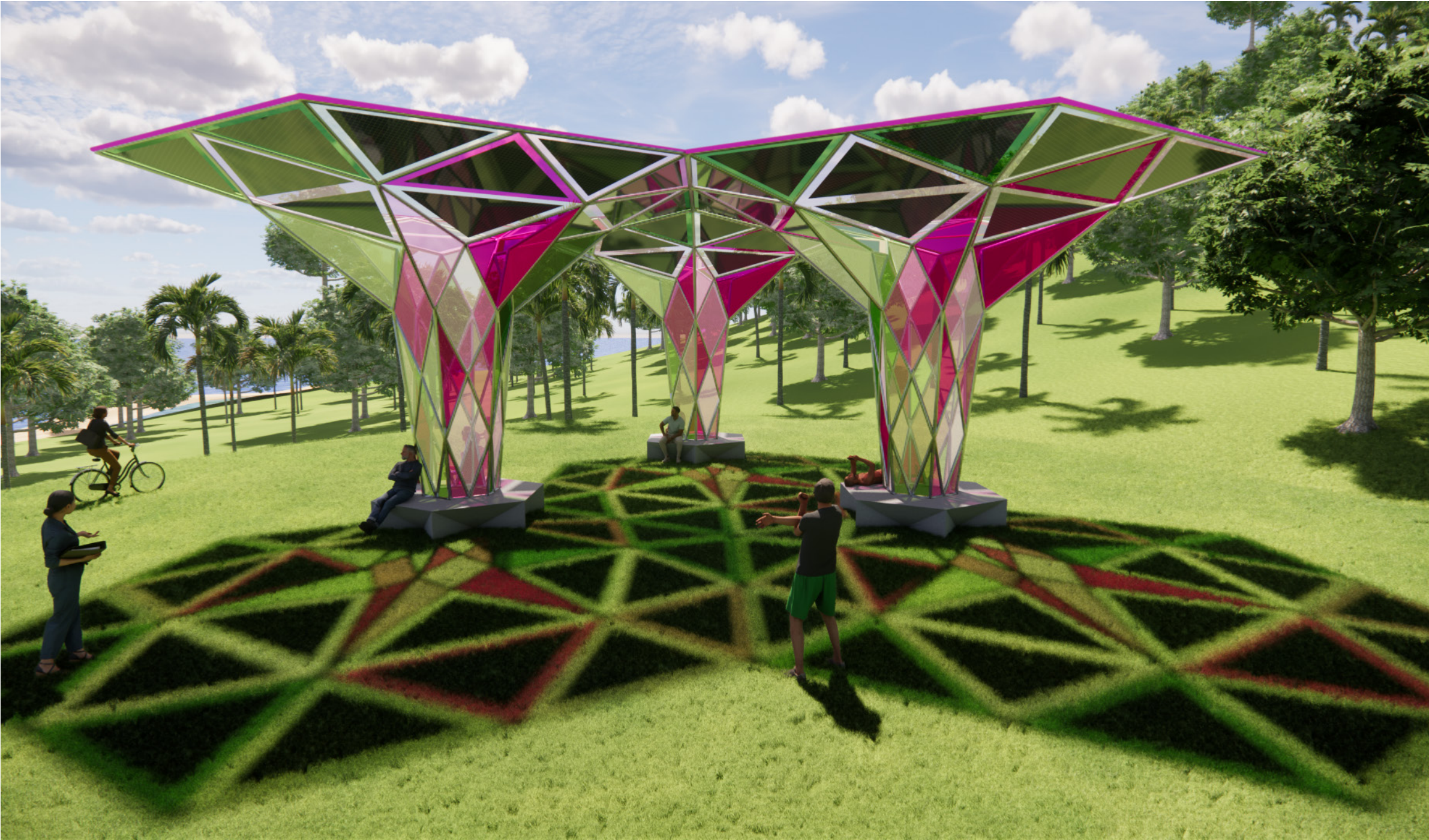
MODULAR SYSTEM
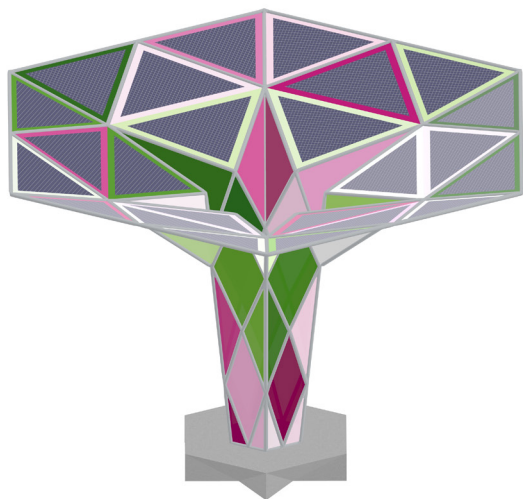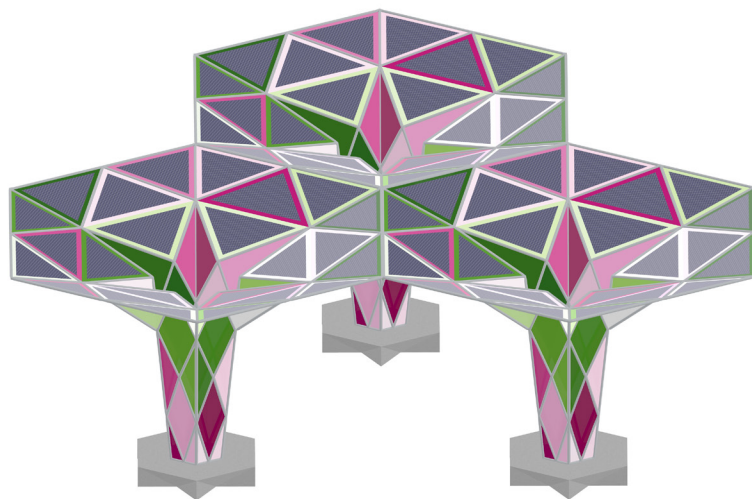
One piece | 3 pieces | 6 pieces | **8 pieces = 75kW**

The solar panels are placed at the top to store the sun light enrgy to generate electricity

The shape of the structure will allow the water to store in the central tank of each structure

MATERIALS

PV PHOTOVOLTAIC

STEEL STRUCTURE

POLYCARBONATE PANELS

Solar Lights Cables Path that will connect to the electricity storage

the water tank will be connected to the water pump