

This project has been developed based on the natural defence mechanisms proposed by Ilham Alarak. The goal is to protect the captured beings by providing them with a secure environment while preserving their natural behaviors and creating key points of projection. In nature, risks are perceived and evaluated anew over time; similarly, areas that were once considered safe can turn into danger zones. The system responds dynamically to this transformation.



**ARMADILLO**

When threatened, it rolls up and protects itself with its hard shell.

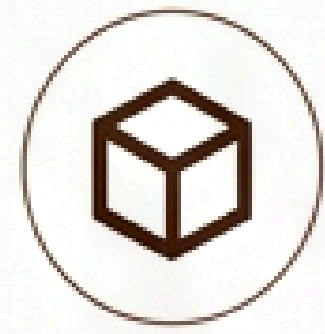
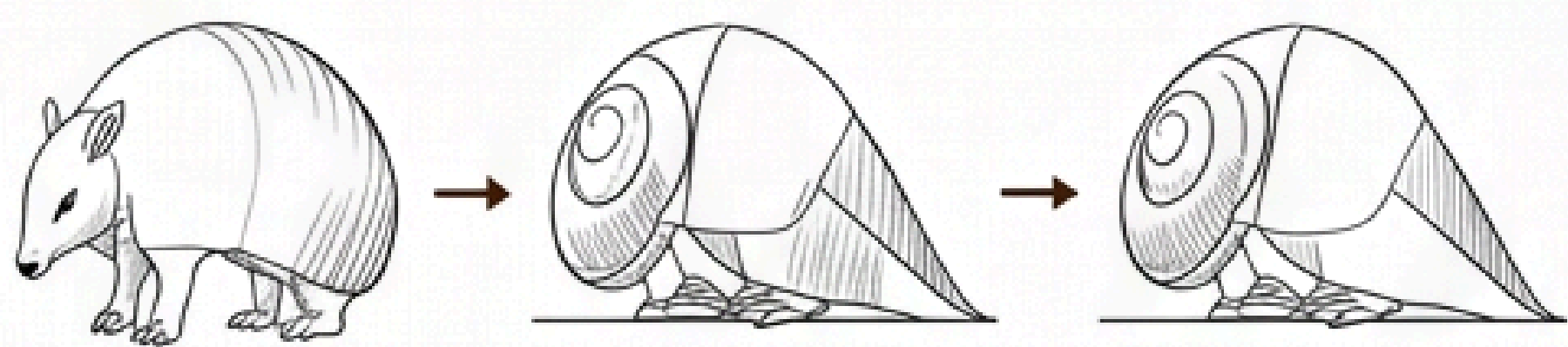


**SNAIL**

When threatened, it withdraws into its shell and reopens when it feels safe.

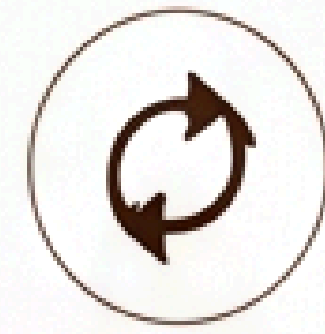


“Protect. Roll up. Open. Live.”



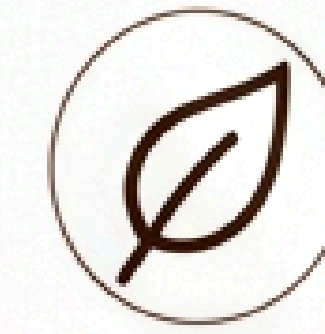
**ADAPTABILITY**

Provides spaces that can be opened and closed depending on needs and adapt to scenarios.



**MOBILE SYSTEM**

Modules emerge in response to threats in nature and their effects.



**SUSTAINABILITY**

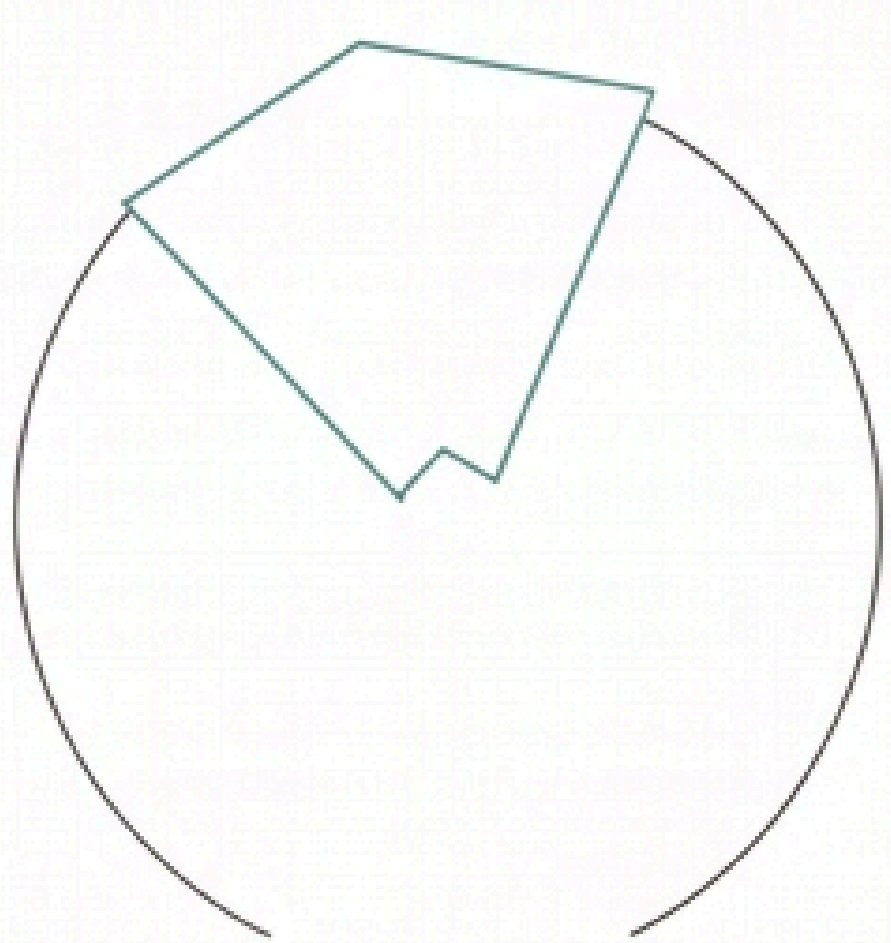
Offers an environmentally sensitive solution using recyclable materials.



**SOCIAL**

Supports social interaction, well-being, and the use of communal spaces.

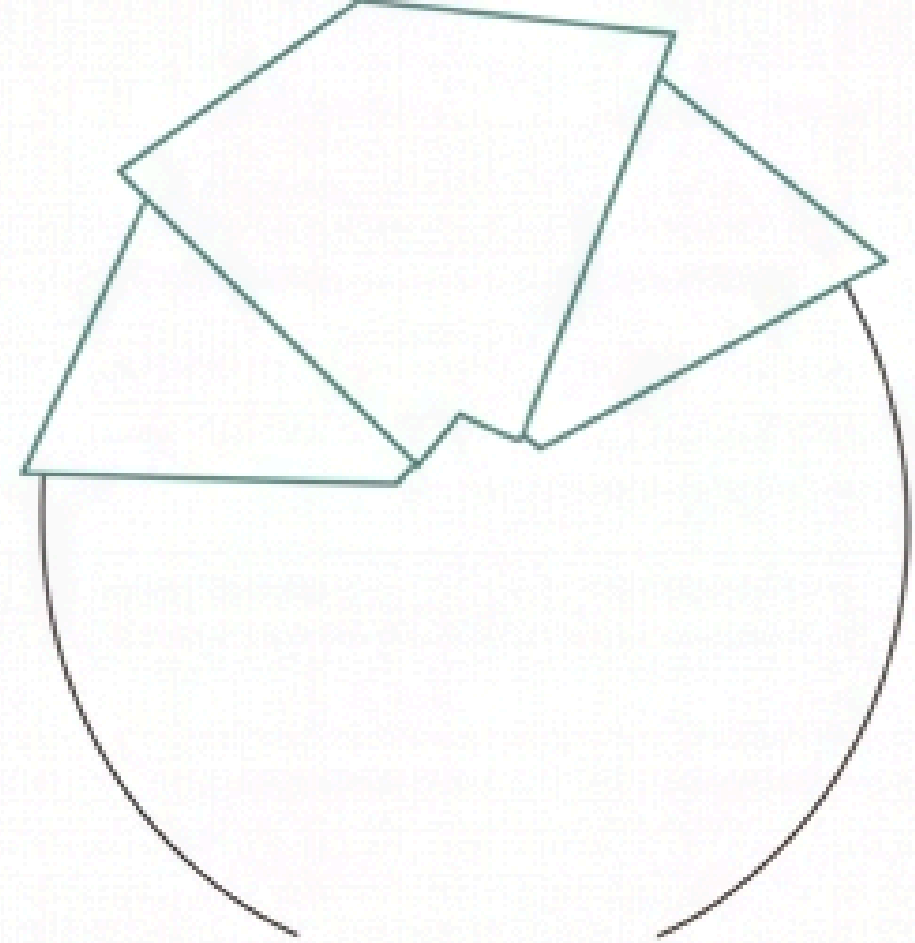
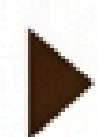
**TRANSFORMATION PHASES – FLOW DIAGRAM**



**1. PHASE**

**CLOSED FORM**

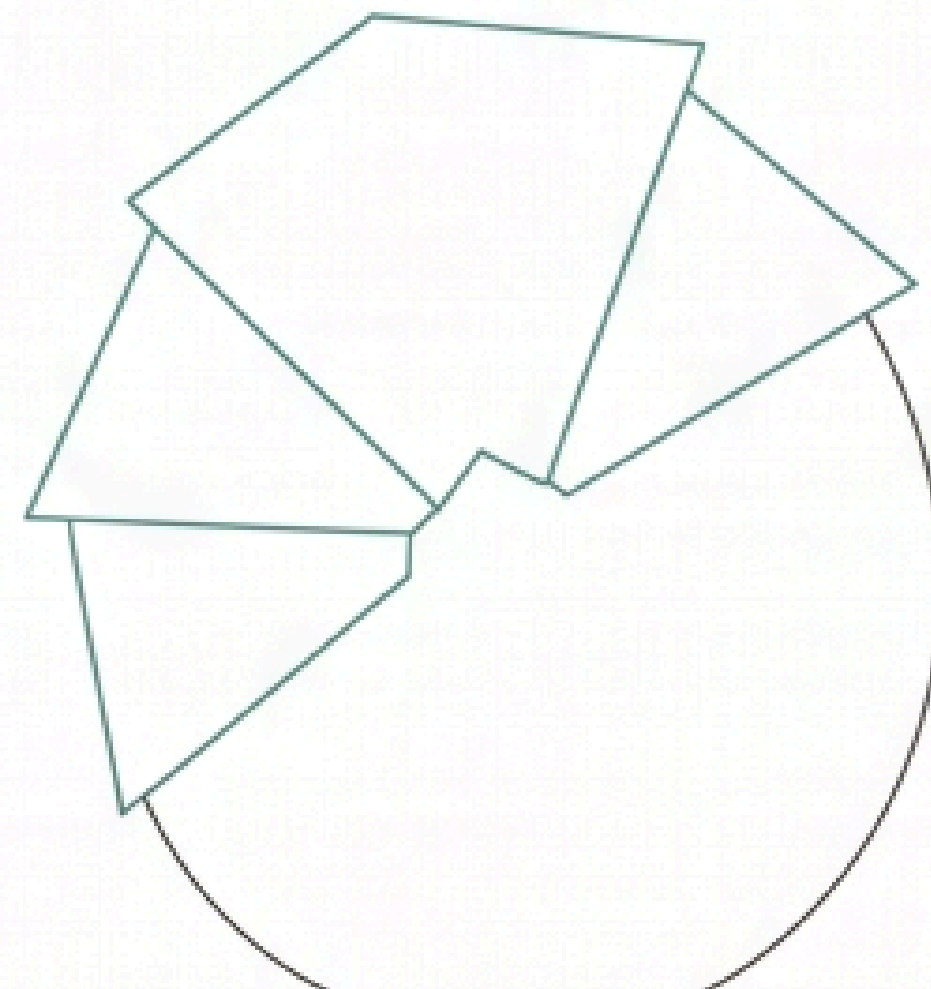
All modules are closed inward, in a compact state.



**2. PHASE**

**INITIAL OPENING**

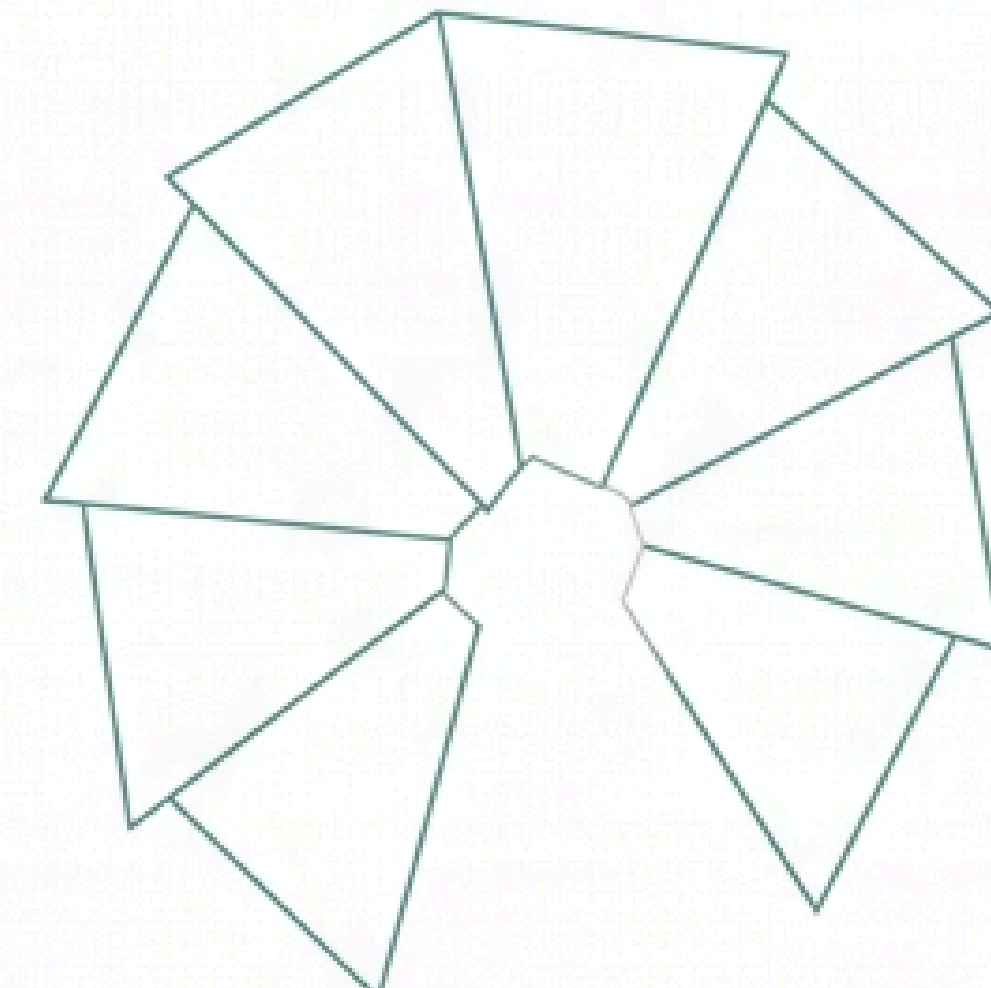
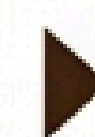
Modules start to open outward and the form begins to expand.



**3. PHASE**

**PARTIAL OPENING**

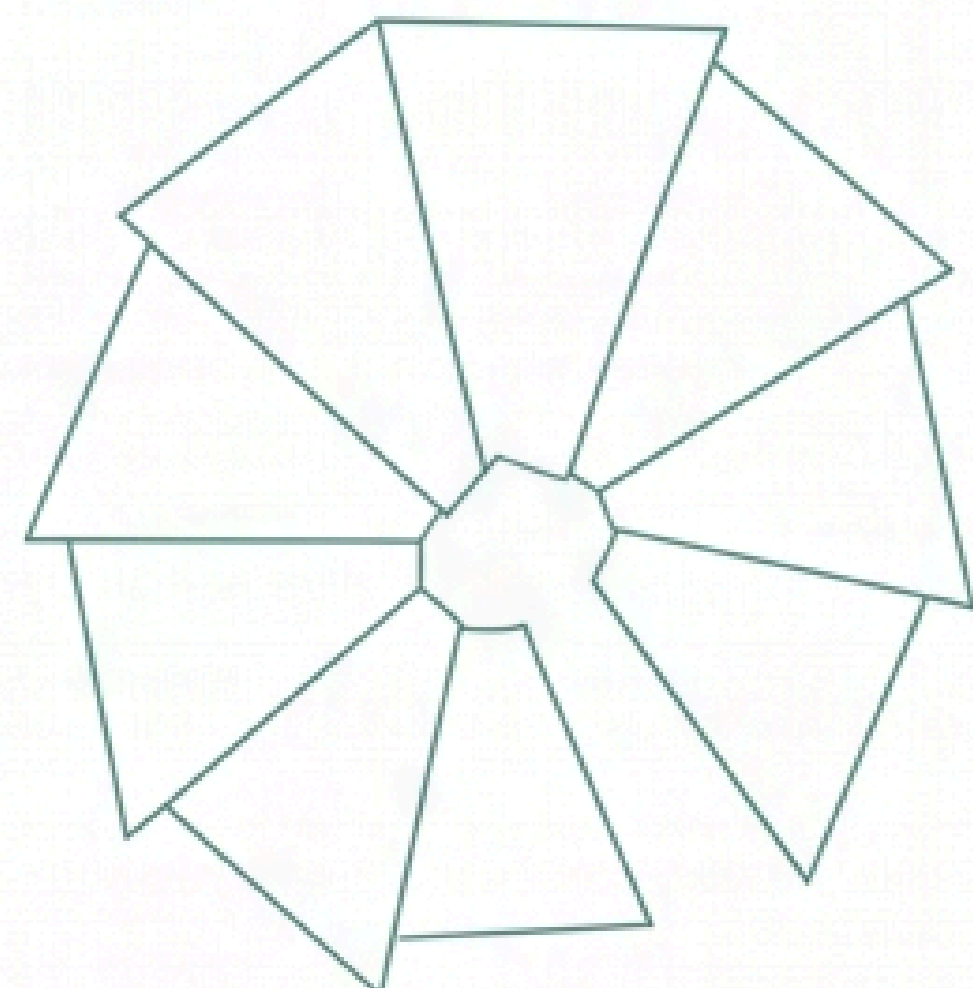
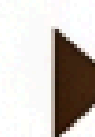
Modules continue to open outward, expanding the form further.



**4. PHASE**

**FURTHER OPENING**

Modules expand more clearly into a radial form.



**5. PHASE**

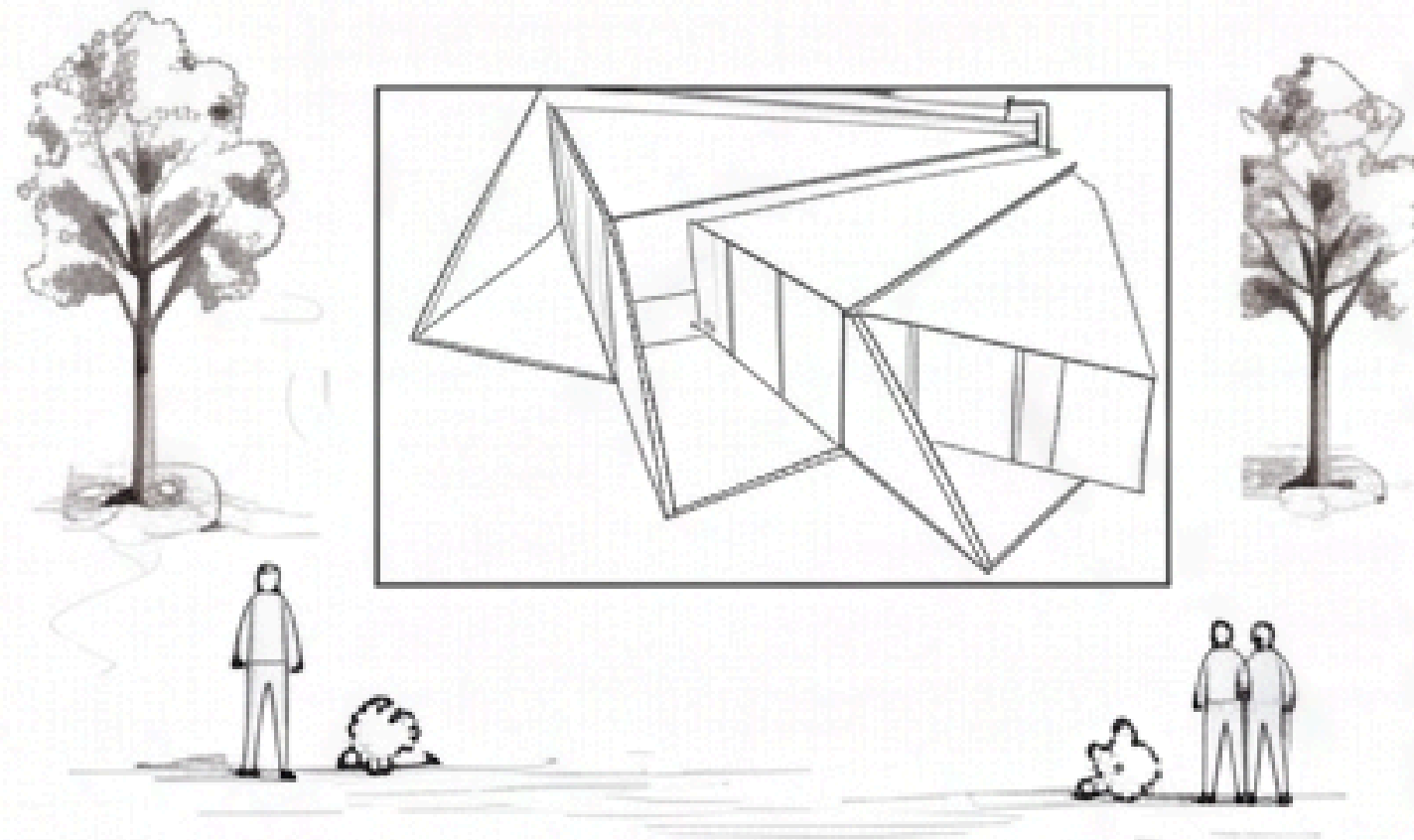
**FULLY OPEN**

All modules are open, achieving the final form.



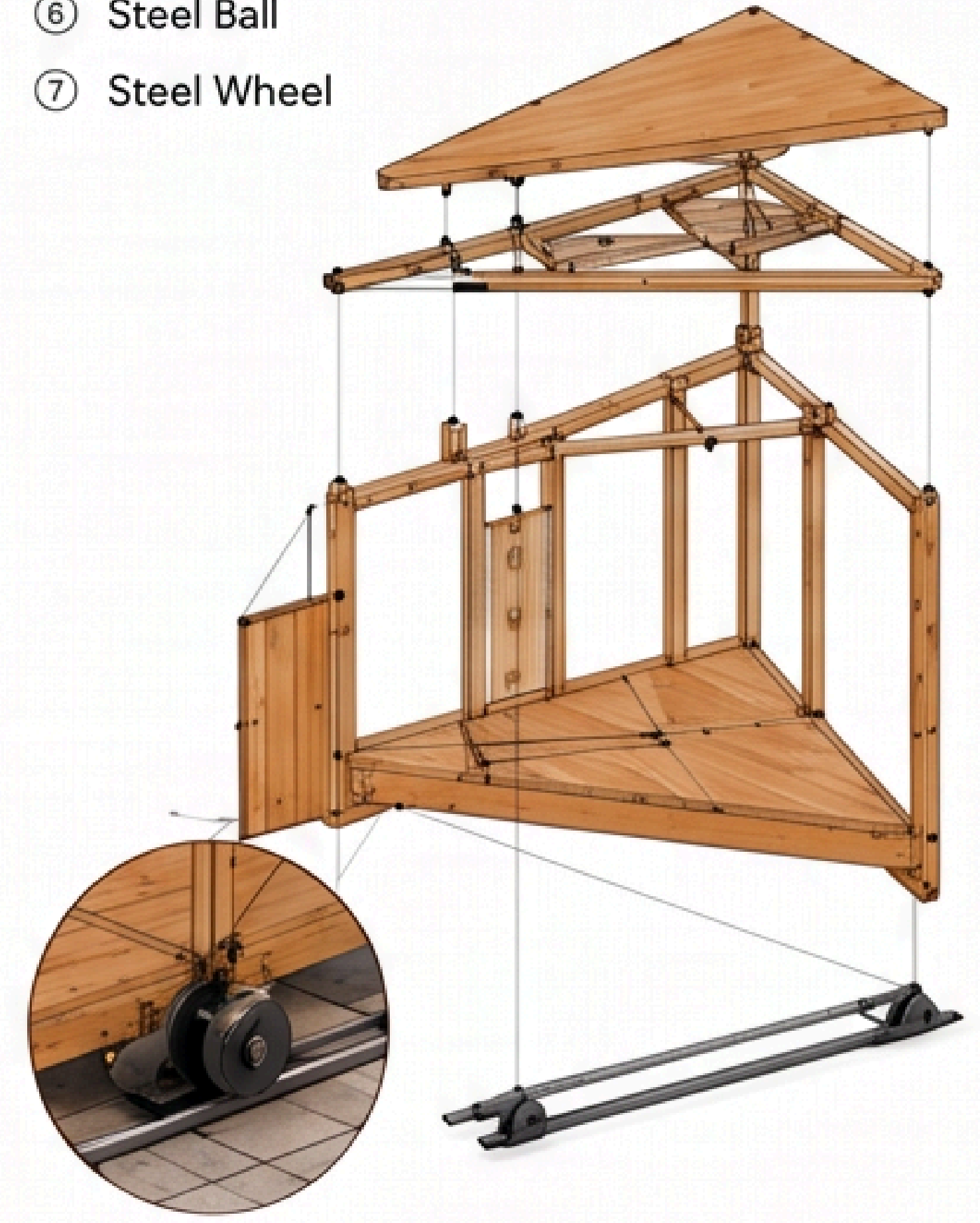
## SINGLE MASS – FOLDABLE SYSTEM

The system consists of modules that can rotate around their axes and open thanks to the joints between them, thus providing flexible transformation into various spatial formations.

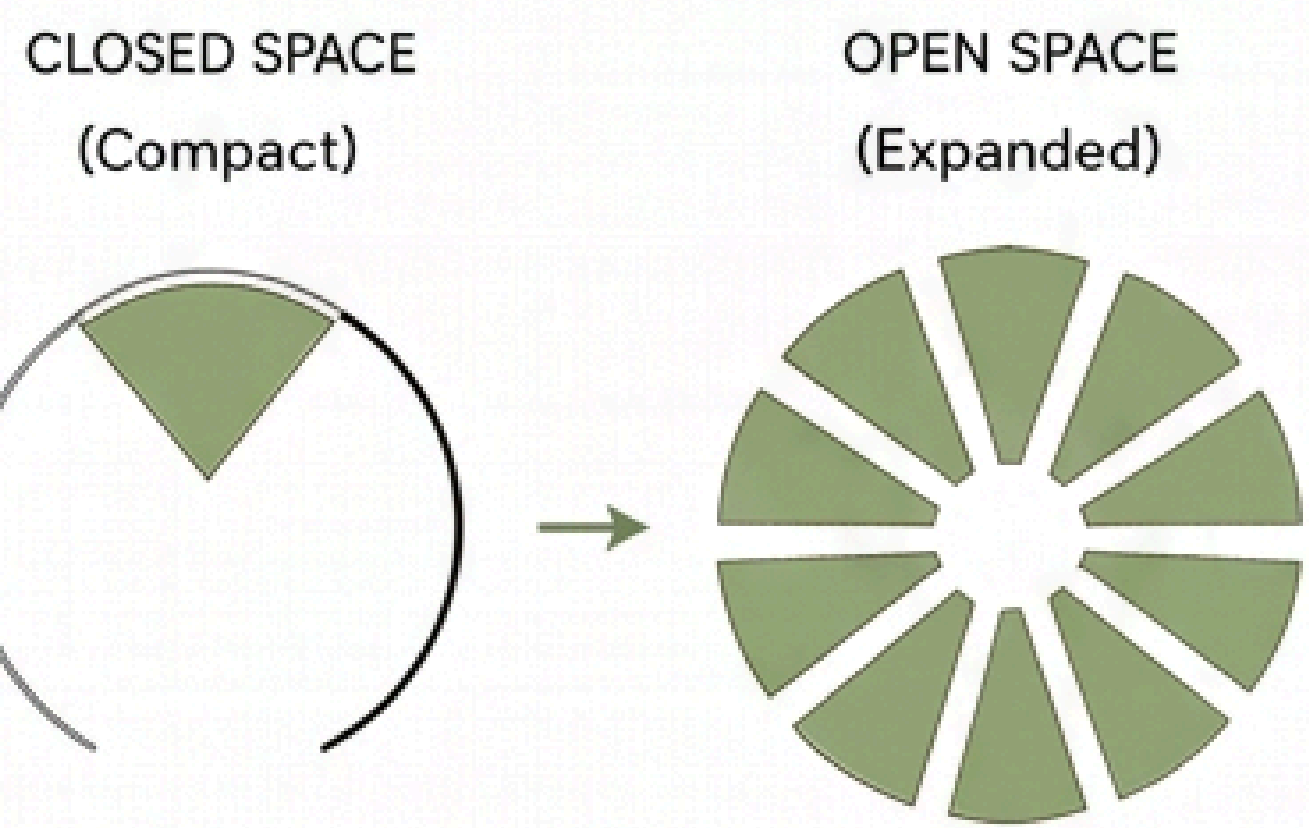


## TRANSPORTATION SYSTEM

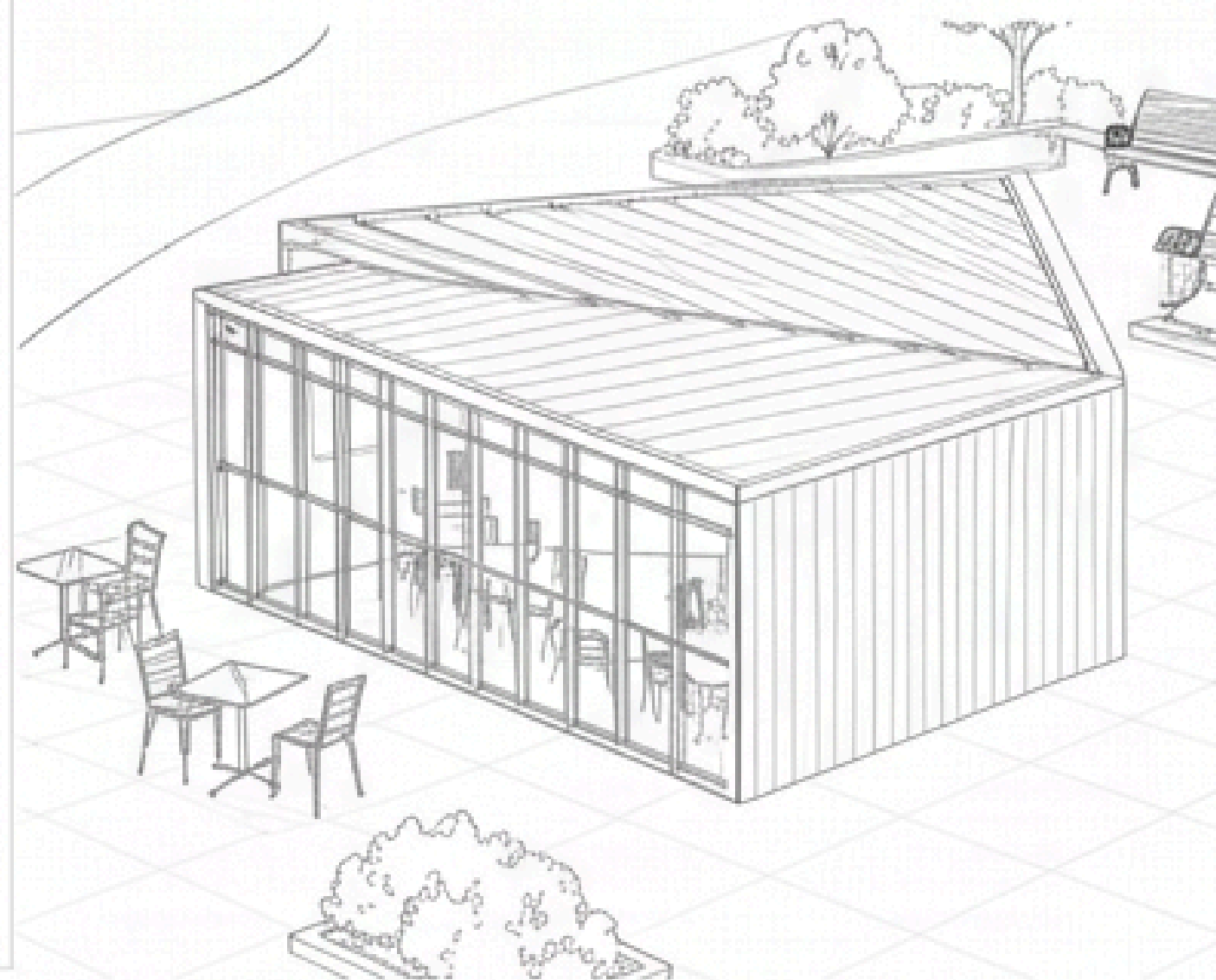
- ① CLT Ahzap Panel (Roof)
- ② Timber Hinge (Carrier)
- ③ Horizontal Timber Carrier
- ④ CLT Ahzap Panel (Well)
- ⑤ Timber Base Frame
- ⑥ Steel Ball
- ⑦ Steel Wheel



## CONCEPT DIAGRAM



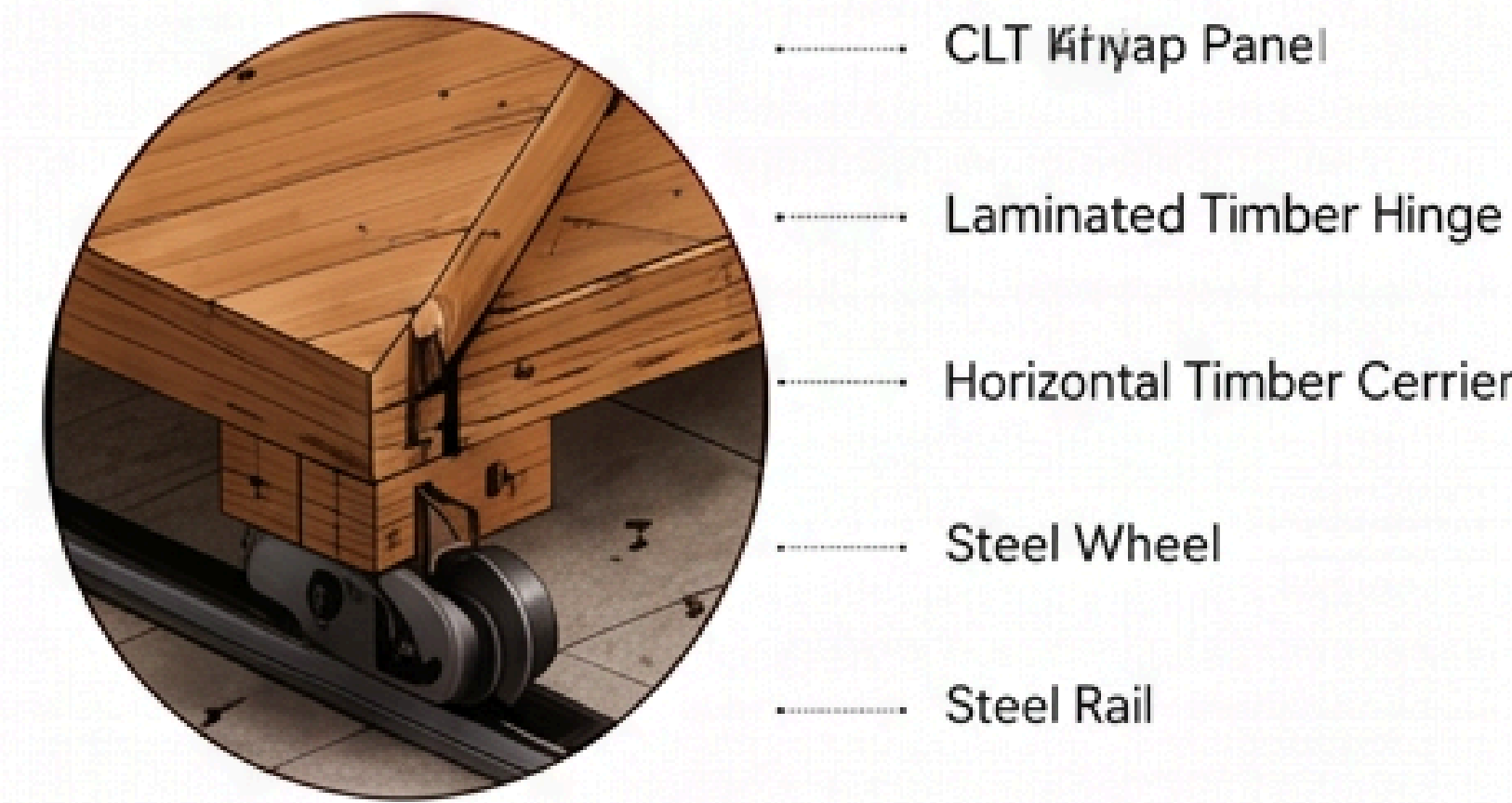
## CLOSED HALL (COMPACT)



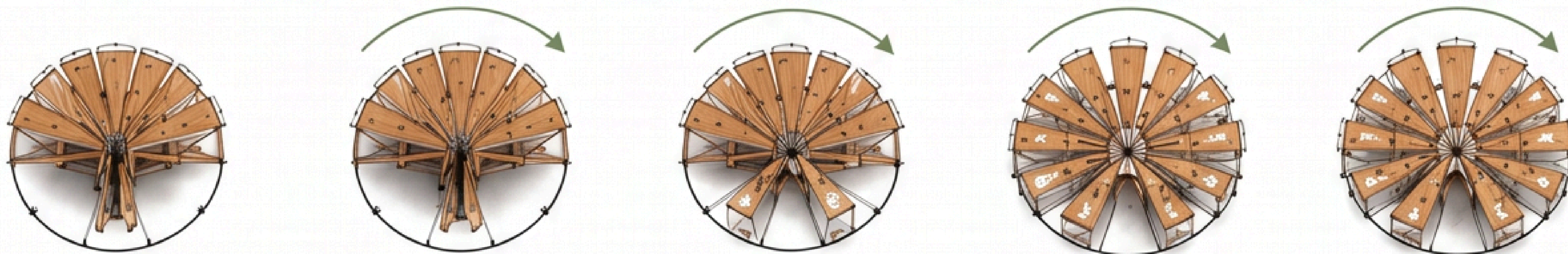
## OPEN HALL (EXPANDED)



## MATERIALS and JOINT DETAILS



## WORKING PRINCIPLE



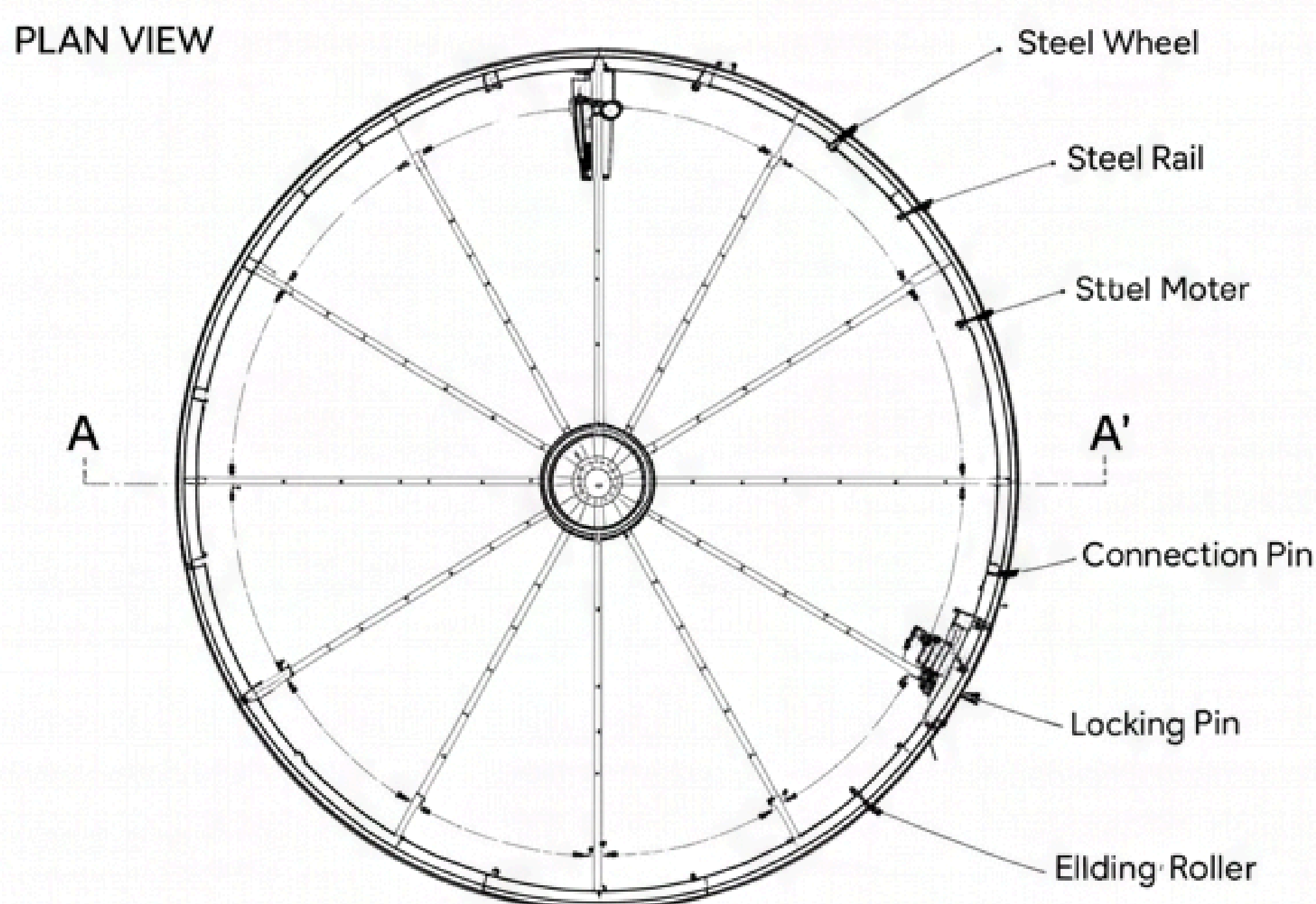
- ① Closed position. All modules are collected in the center.
- ② Rotation on the rail starts.
- ③ Modules open away from the center.
- ④ Expansion continues.
- ⑤ When fully opened, each module transforms into a living space.

## RAIL and WHEEL SYSTEM

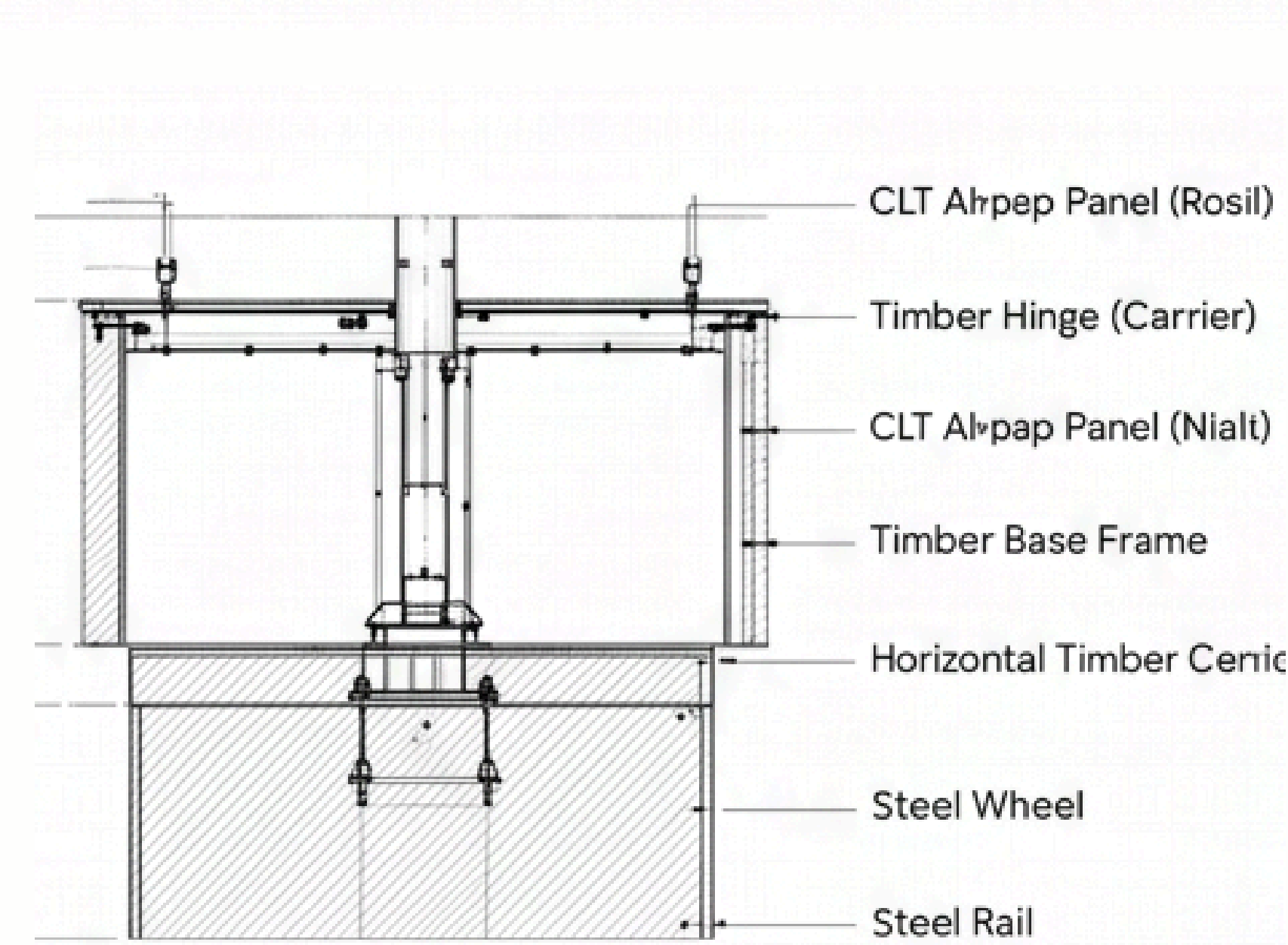
On the rails fixed to the ground, the steel wheels enable movement. With the help of the wheel motors, the modules are moved and synchronised.



## TECHNICAL DETAILS – RAIL SYSTEM

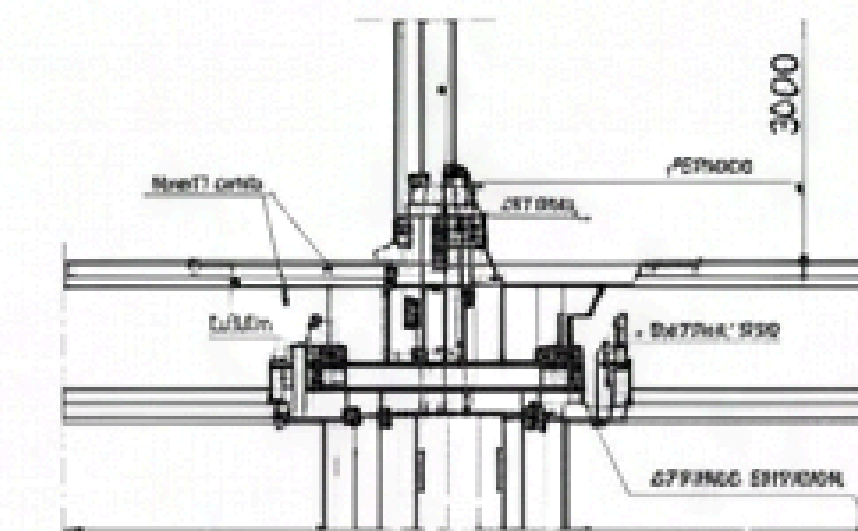


## SECTION A-A'

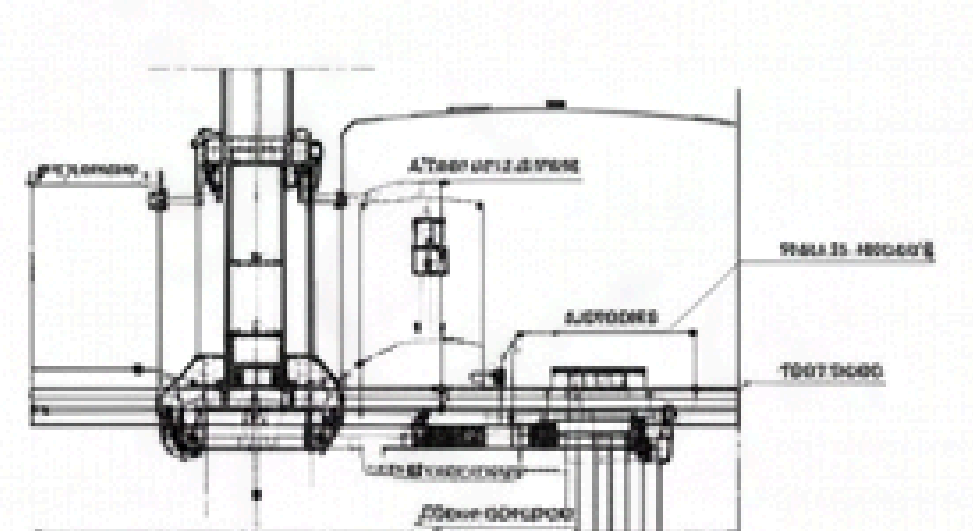


## SYSTEM DETAIL DRAWINGS

A – ROOF CONNECTION DETAIL  
SCALE 1/10

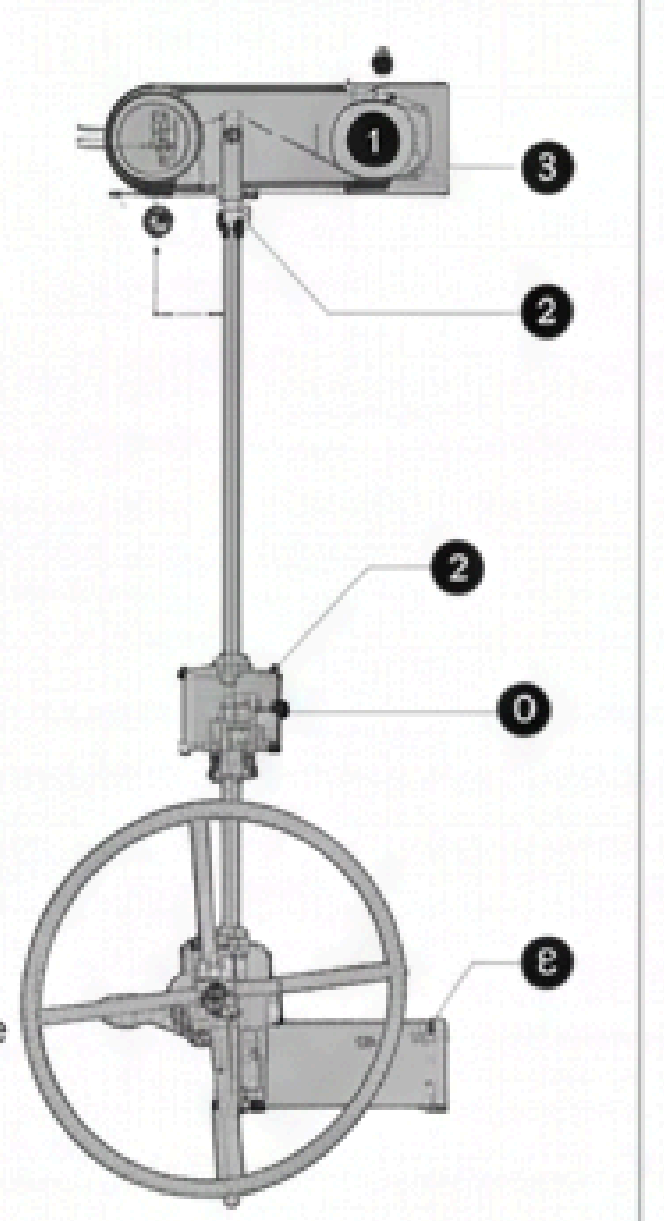


B – ELECTRICAL ELEMENT DETAIL  
SCALE 1/10

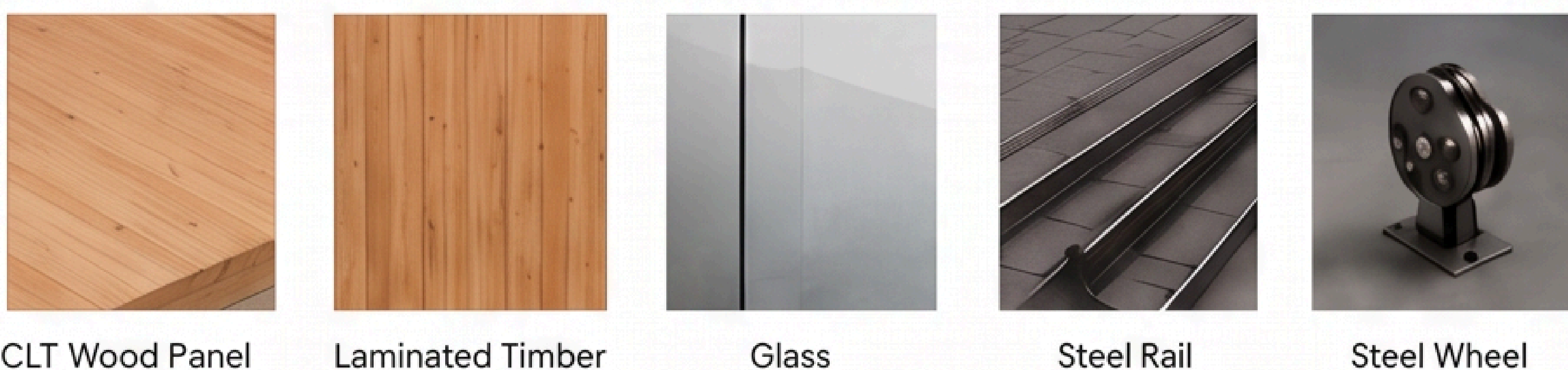


## MAIN COMPONENTS

- ① Roof Timber Panel (Overhung, 5 Cladding)
- ② Hinge / Janery
- ③ Art. Craft
- ④ Eline Motor
- ⑤ Eline (Eboel Doet)
- ⑥ Eline Wheel
- ⑦ E-Box
- ⑧ Carter / Transport Hante



## MATERIAL PALETTE



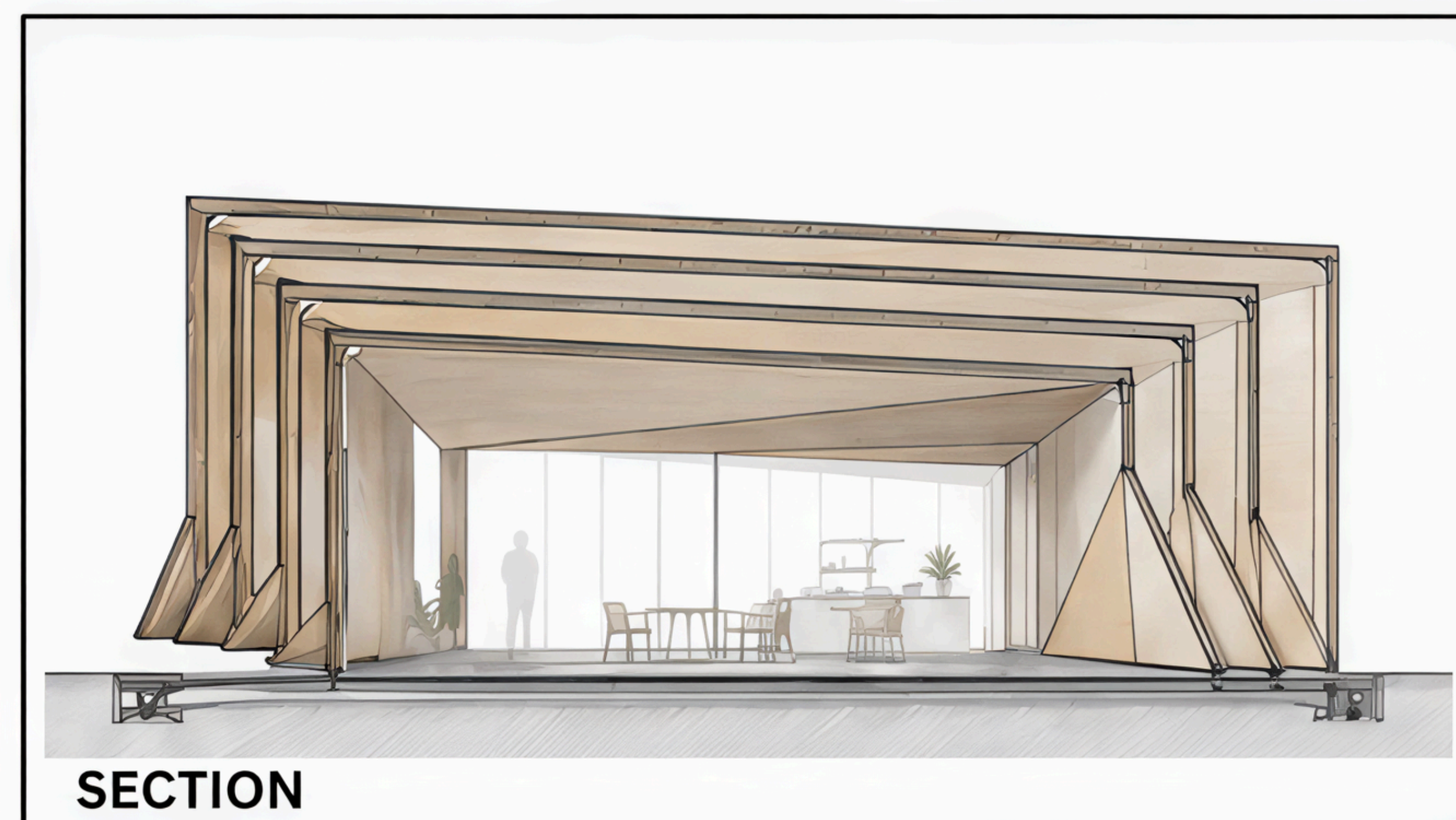
The materials used were carefully selected to ensure the project is durable, functional, and carbon-friendly, in addition to CLT wood panels preferred for their lightness and sustainability, laminated timber hinges, steel rails, and wheel systems support the mechanical movement. All components work together in harmony, ensuring the system is both secure and long-lasting.



SITE PLAN 1/500

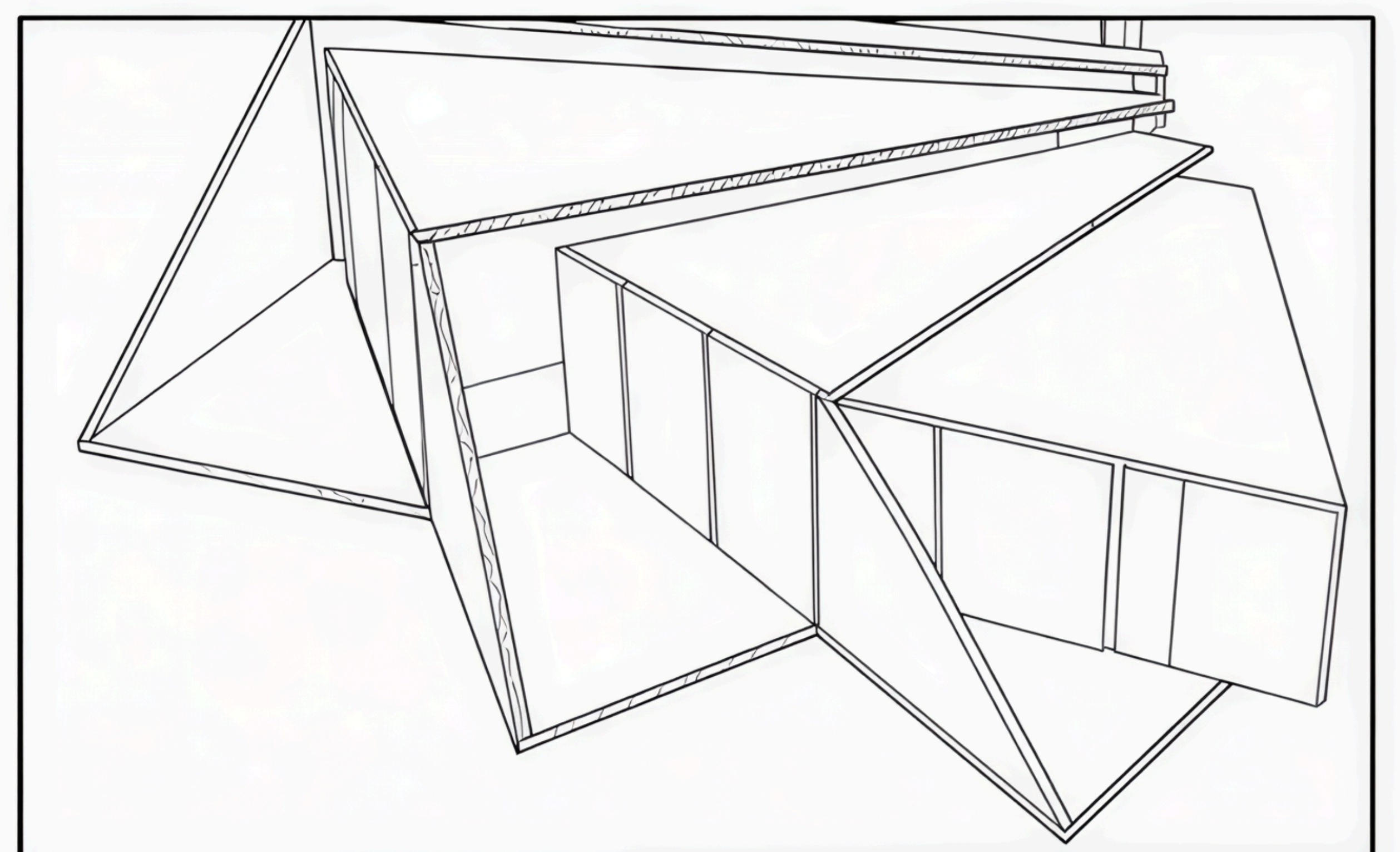
The structural system designed for Balikesir Republic Square produces a new social and cultural space for the city in daily life, functioning as a space for community interaction. It is a living space where people of all ages can spend time with various activities such as cafes, restaurants, children's play areas, and various seating areas. However, the project produces a significant social benefit by meeting the daily needs of the city and providing living areas in adapted conditions at any time if necessary.

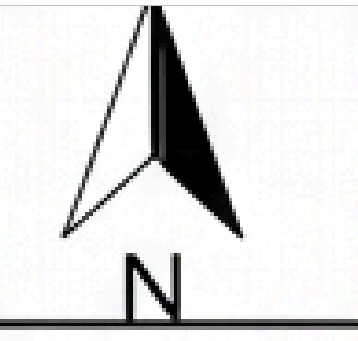
The project is not only a physical space but also an organization that can adapt to changing conditions and serve as a living space. Daily life is shaped by socializing, activities, and communication. The designed square also serves as a place to protect, shelter, rest, and spend time in emergency situations such as disasters. Moreover, with its flexible structure, it can quickly transform to address the needs of the society in cases of earthquakes and similar emergencies.



SECTION

One of the biggest challenges after a disaster is meeting the need for shelter. In this project, a system was designed that can be easily assembled within the square. Rapidly constructed structures provide temporary shelter and living spaces. These structures, made of light materials and modular design, can be quickly assembled by few people and transformed into living spaces. In this way, both the need for shelter and space can be quickly met after a disaster.





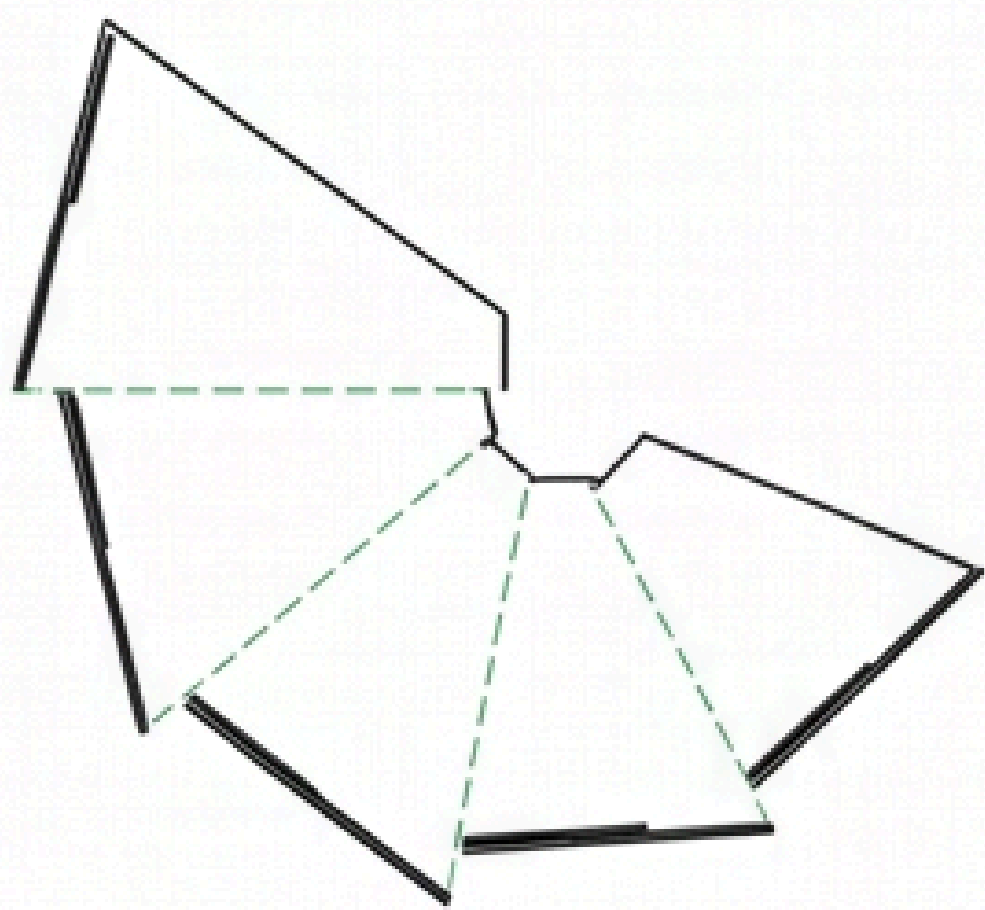
SITE PLAN 1/500

### OPENABLE WOODEN WALL SYSTEM

DIAGRAM - OPEN / CLOSED

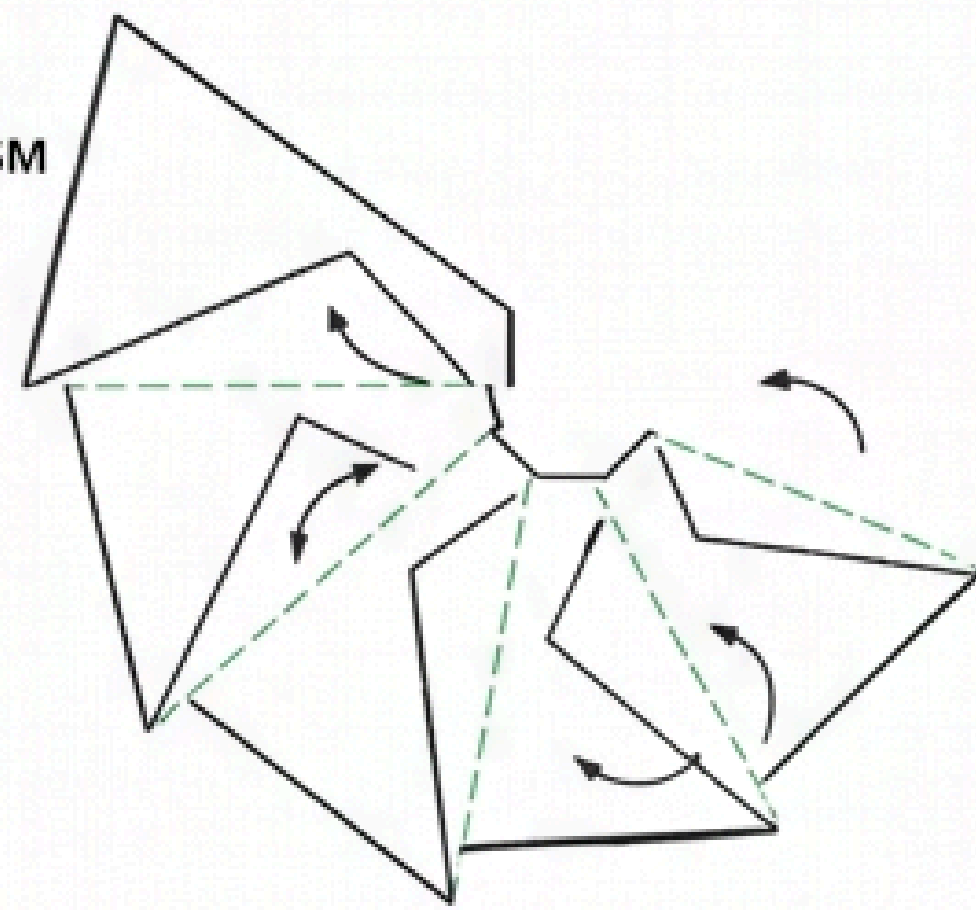
#### 01 | CLOSED STATE

The wooden panels are completely closed, enclosing the pocket and providing privacy. It protects against external factors and creates a private environment.



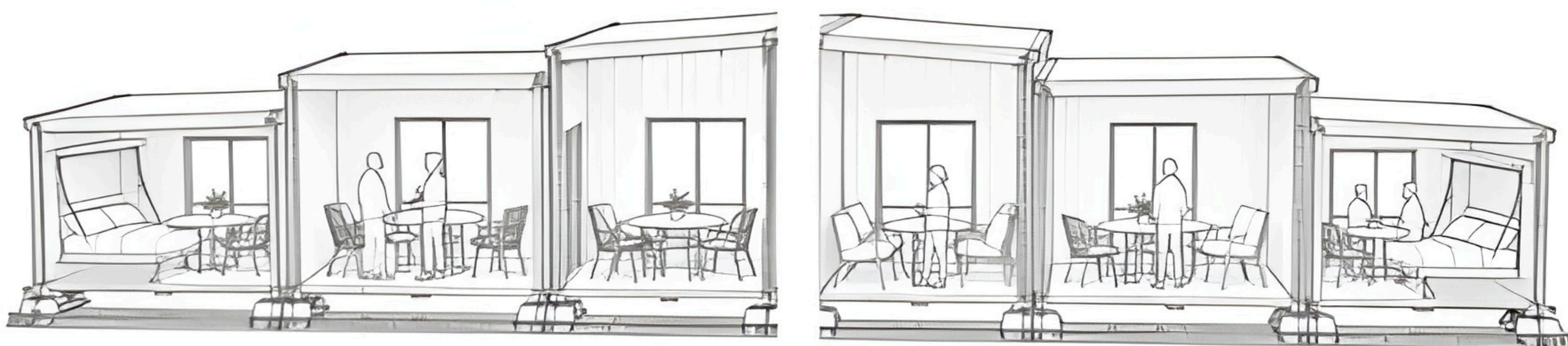
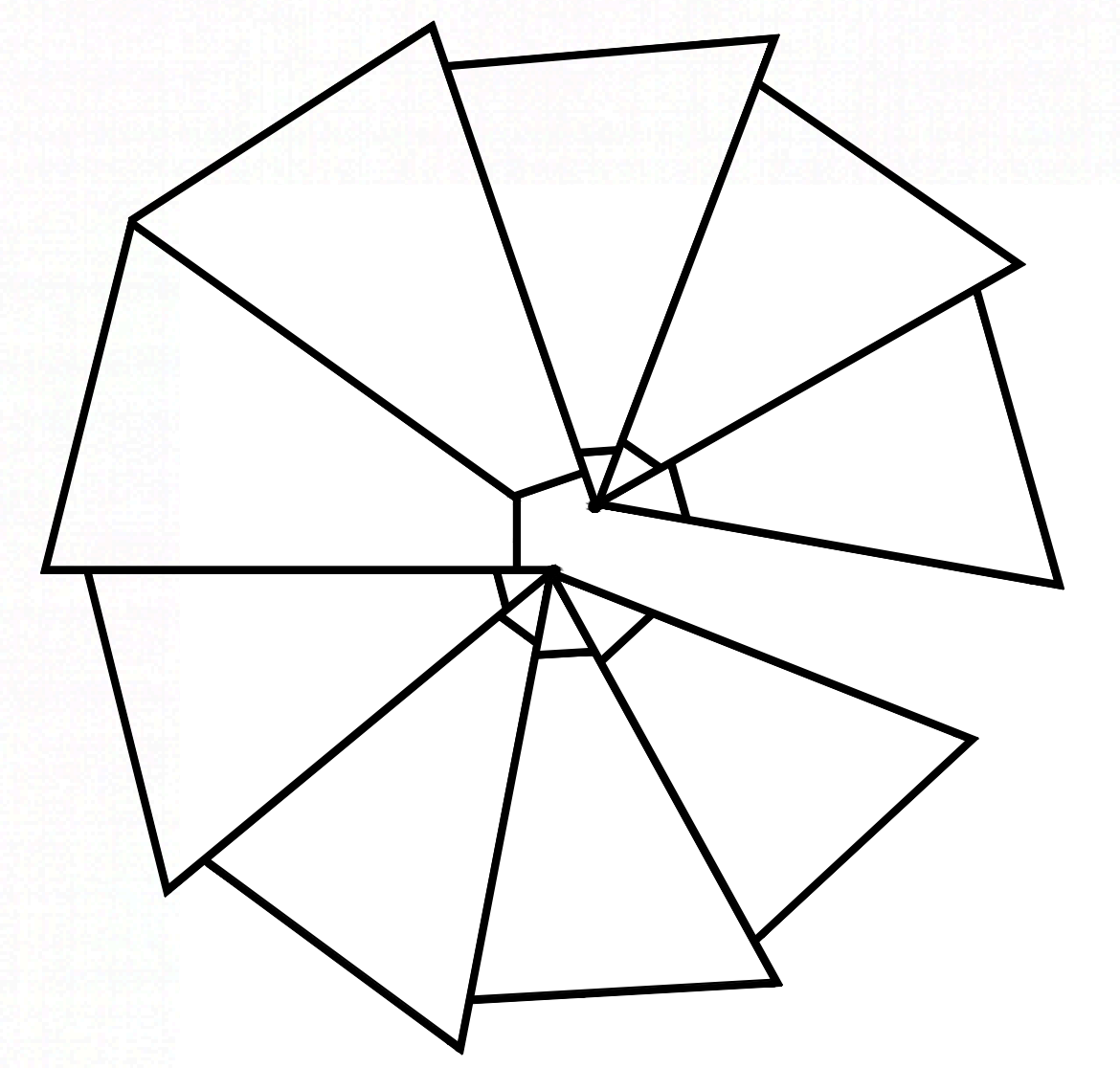
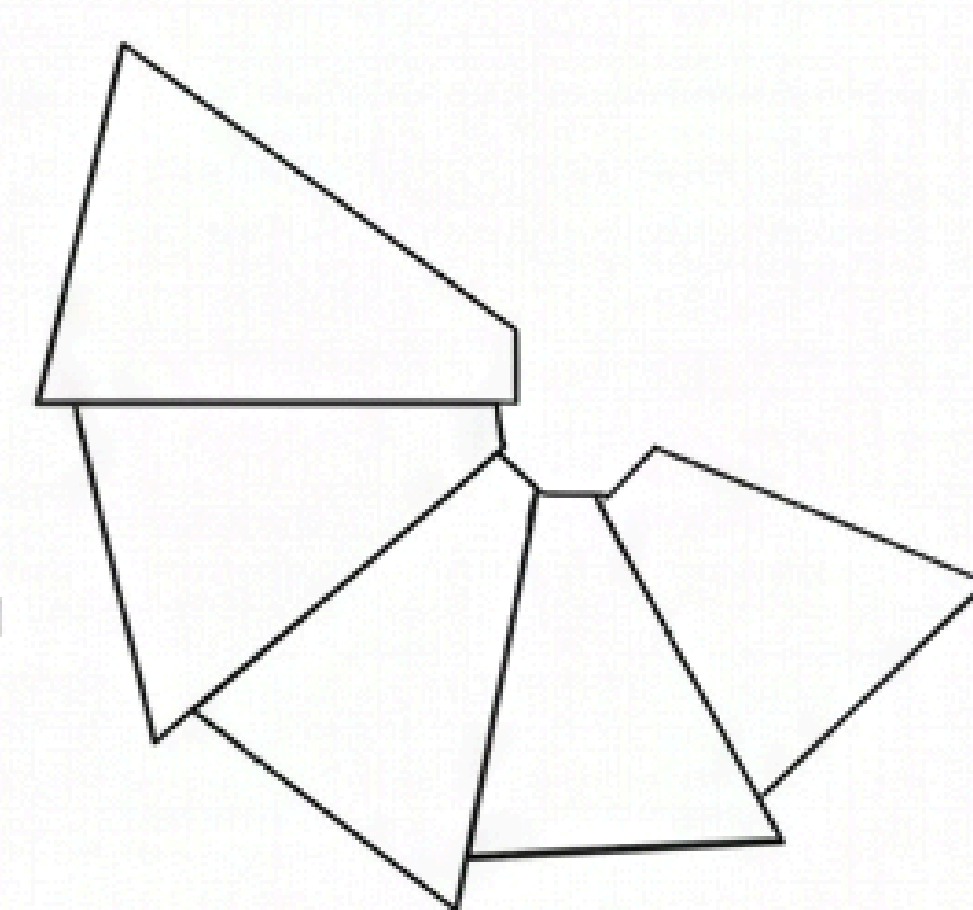
#### 02 | OPENING MECHANISM

The panels rotate around their axes and fold in a controlled manner towards the center.

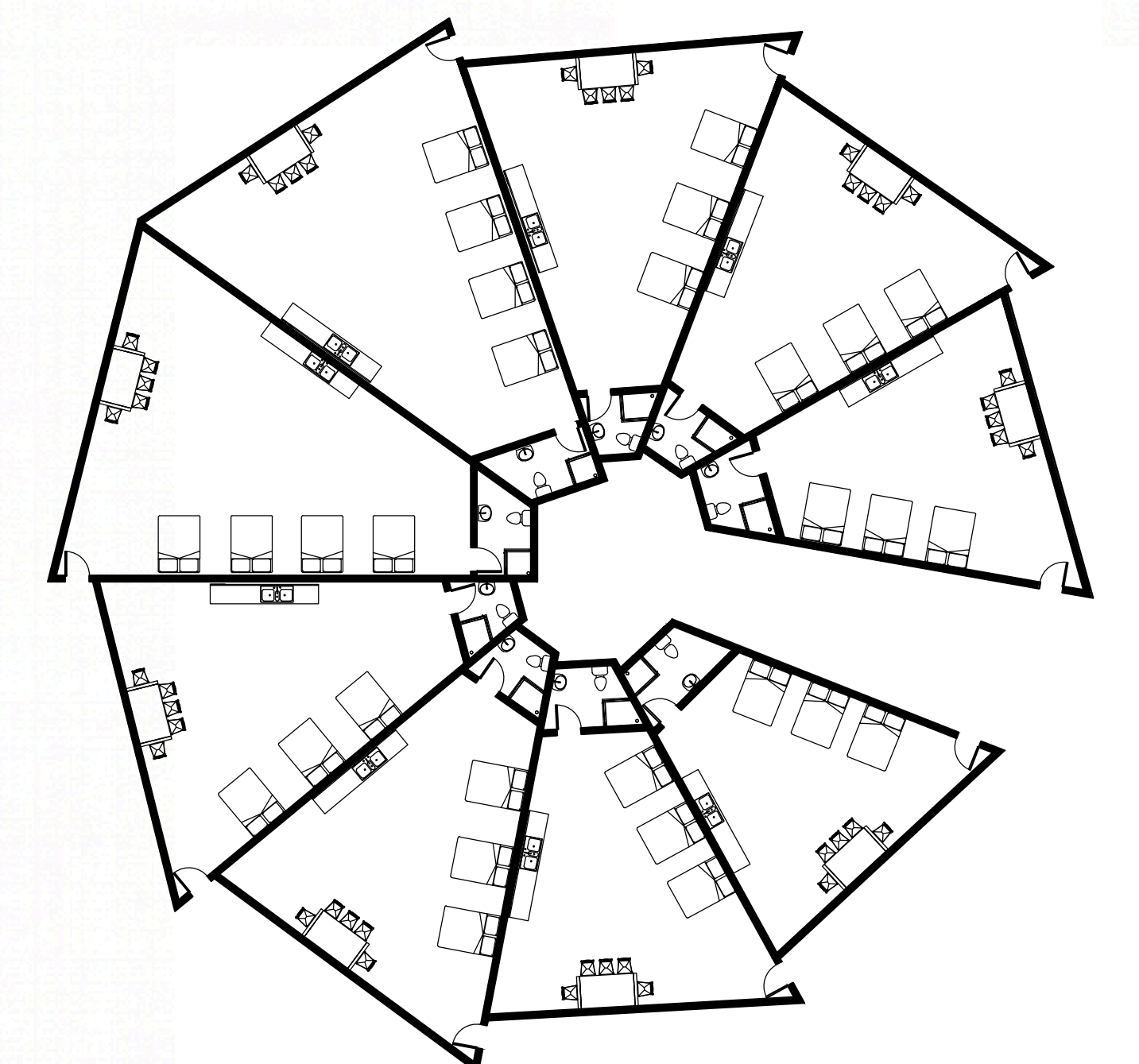


#### 03 | OPEN STATE

The panels are fully retracted, leaving a wide opening and establishing visual and spatial connections.



A radial geometry derived from a central point forms a modular structure that extends out through the angular dot of a circle. This flexible and reconfigurable system provides a dynamic spatial organization that adapts to different usage scenarios.



FLOOR PLAN 1:200