

***Make stone great again***

Make stone common again

2023 Summer

*Yuqiu. Yao*

# A critique on the labor force consuming of stone construction



**Formwork**

Issue 1:  
Stones are too heavy to be transported by a little labor force



**Transportation**

# MASS STONE CONSTRUCTION

Issue 2:  
To build a freeform stone building, you have to build a freeform formwork first.



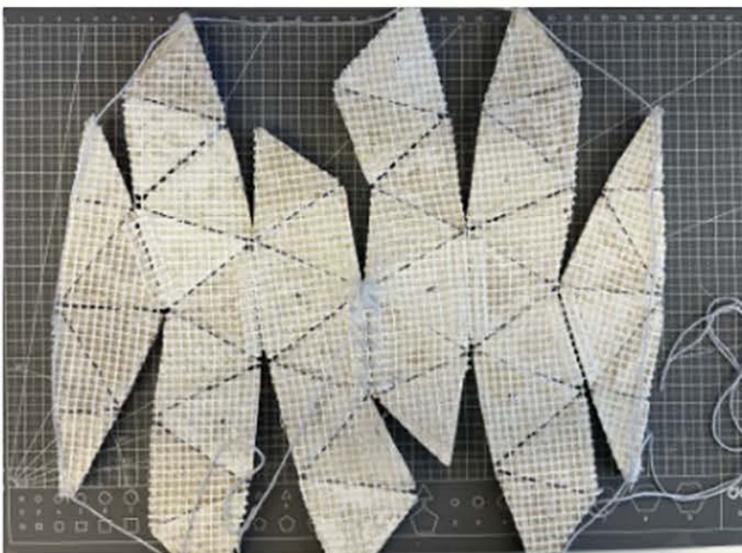
**Reshaping**

Issue 3:  
It will take a long time to reshape stones on site.



**Filling**

## General Solution II: Stone quick-built system



## Tradition

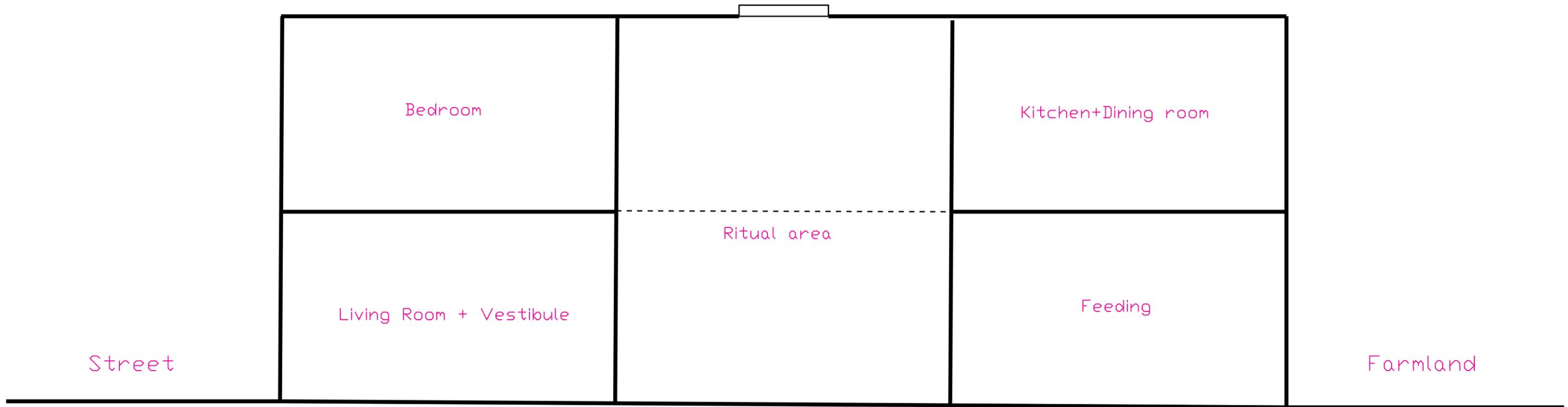
Whole family will do a favor during the construction



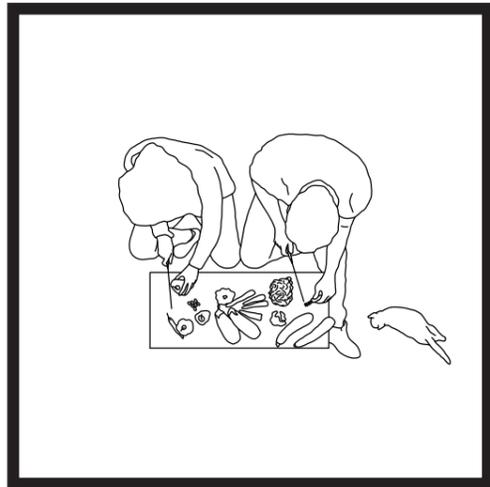
Why?

Fundamental principle: cheaper is better

# Civilization in local Residence



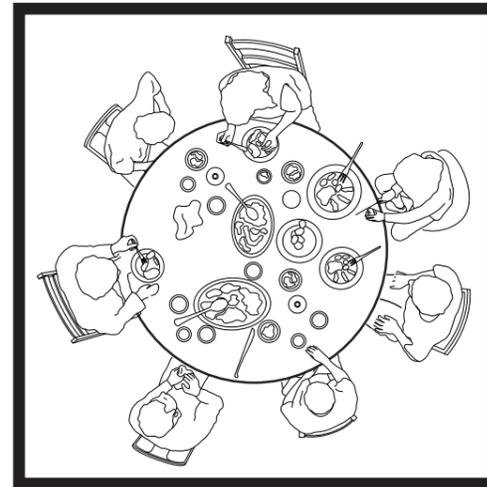
Bedroom



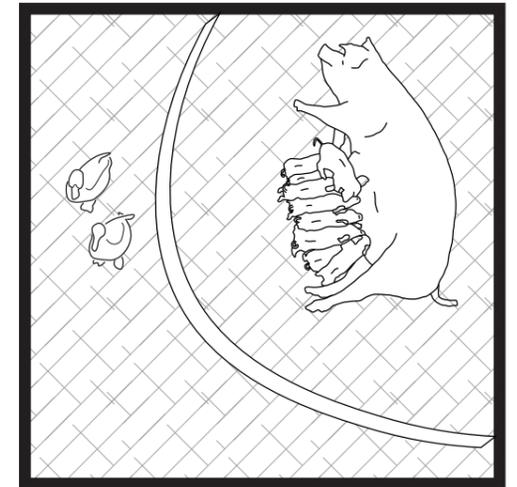
Living Room + Vestibule



Ritual area



Kitchen+Dining room

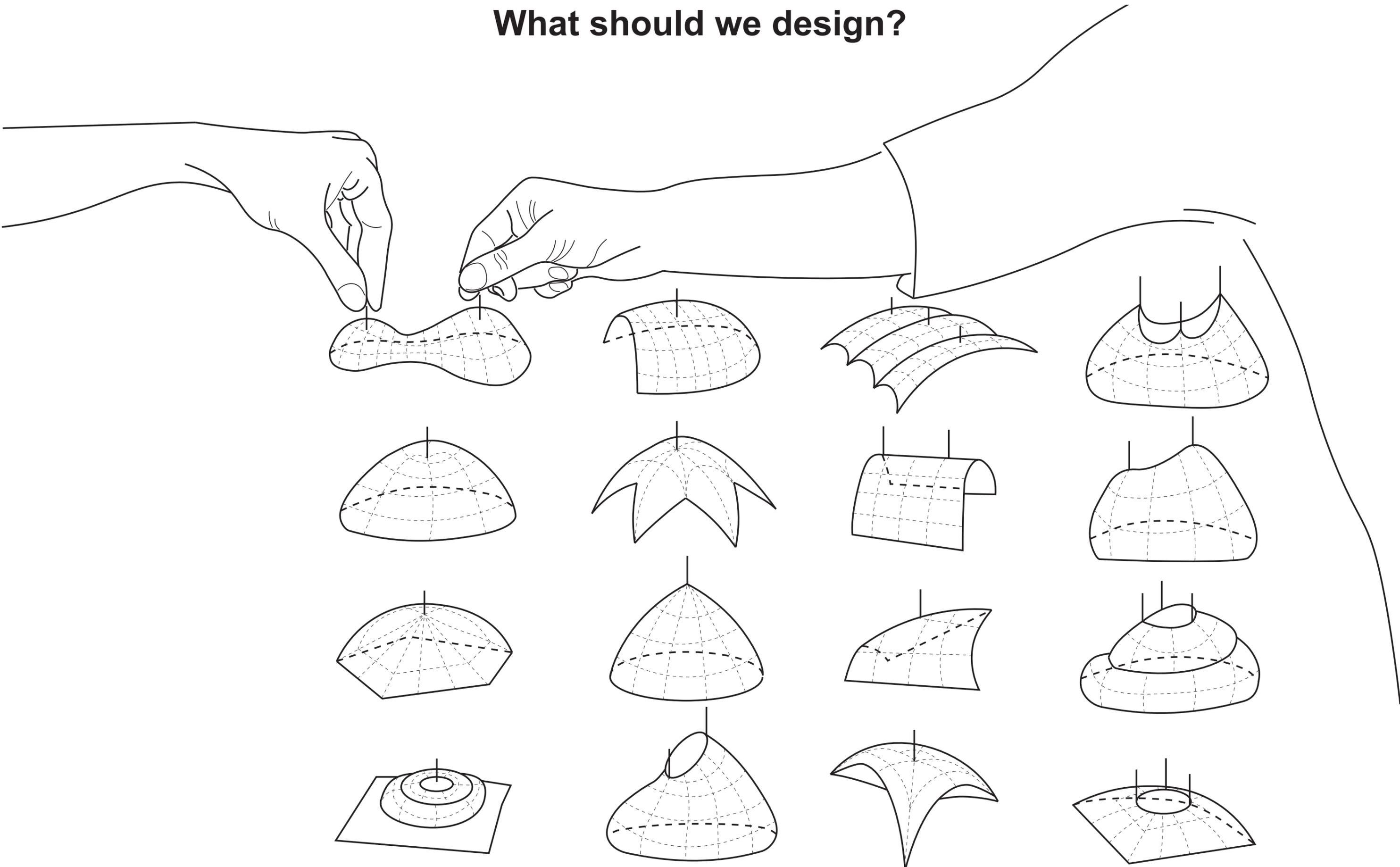


Feeding

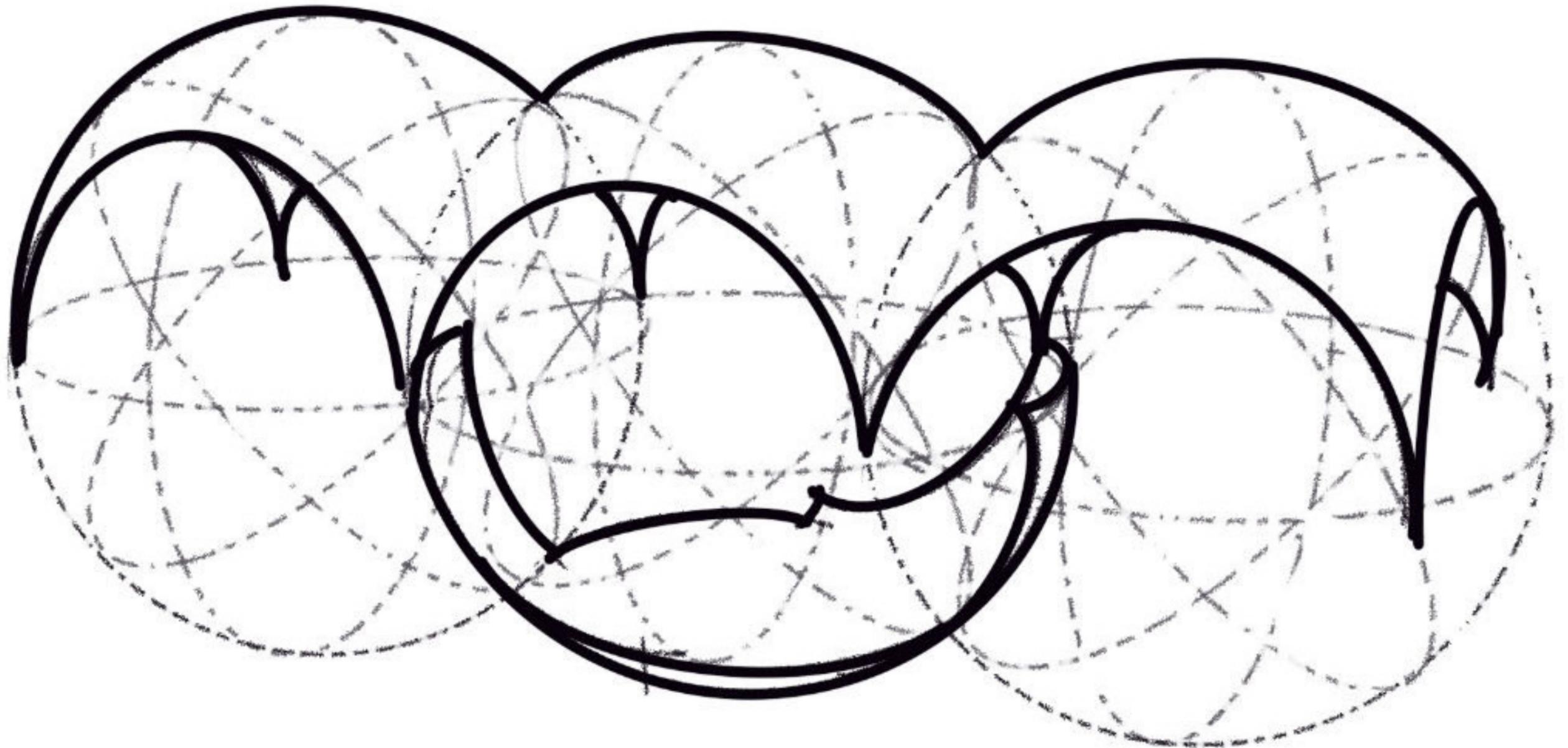
## Common issues:

1. poor air circulation
2. poor natural daylight
3. poor division with animals

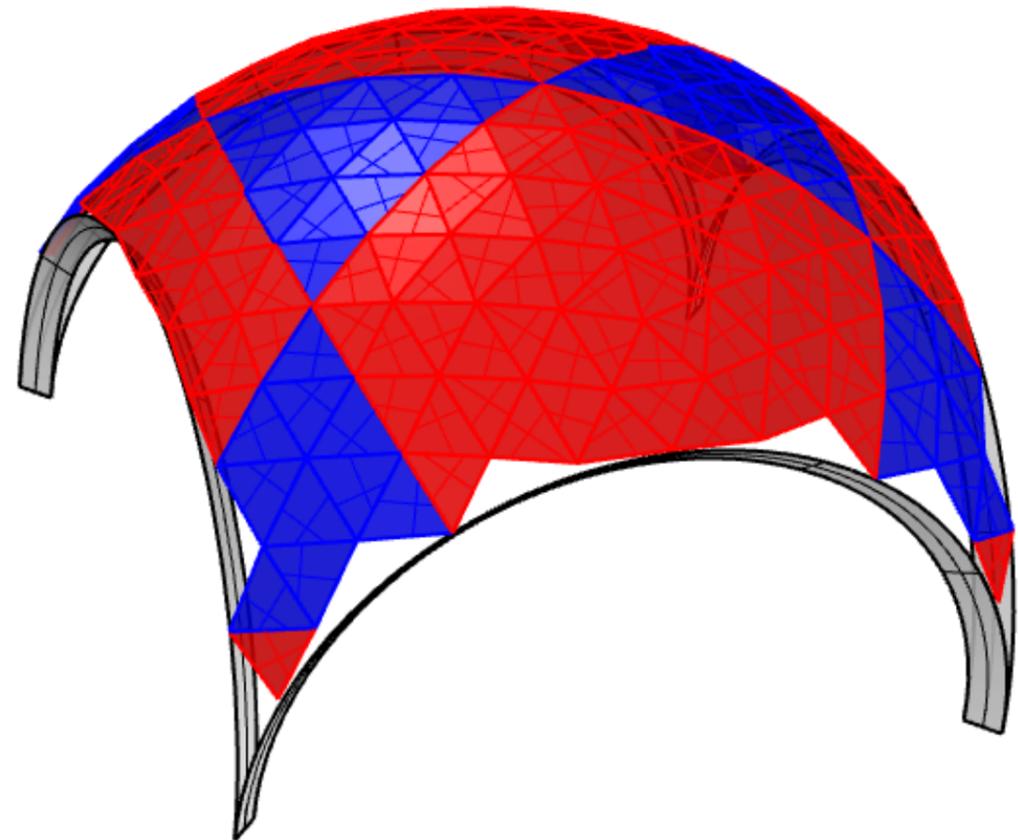
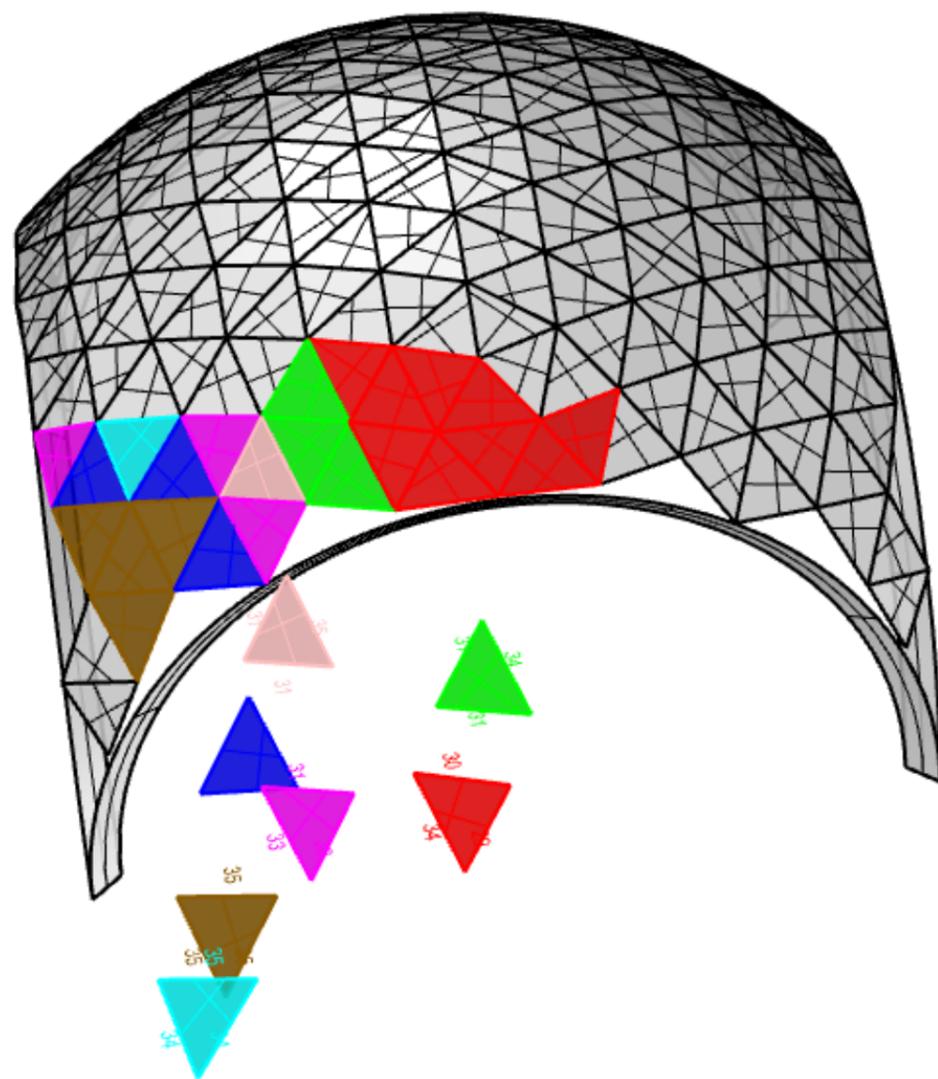
# What should we design?



**Cheaper is better.**

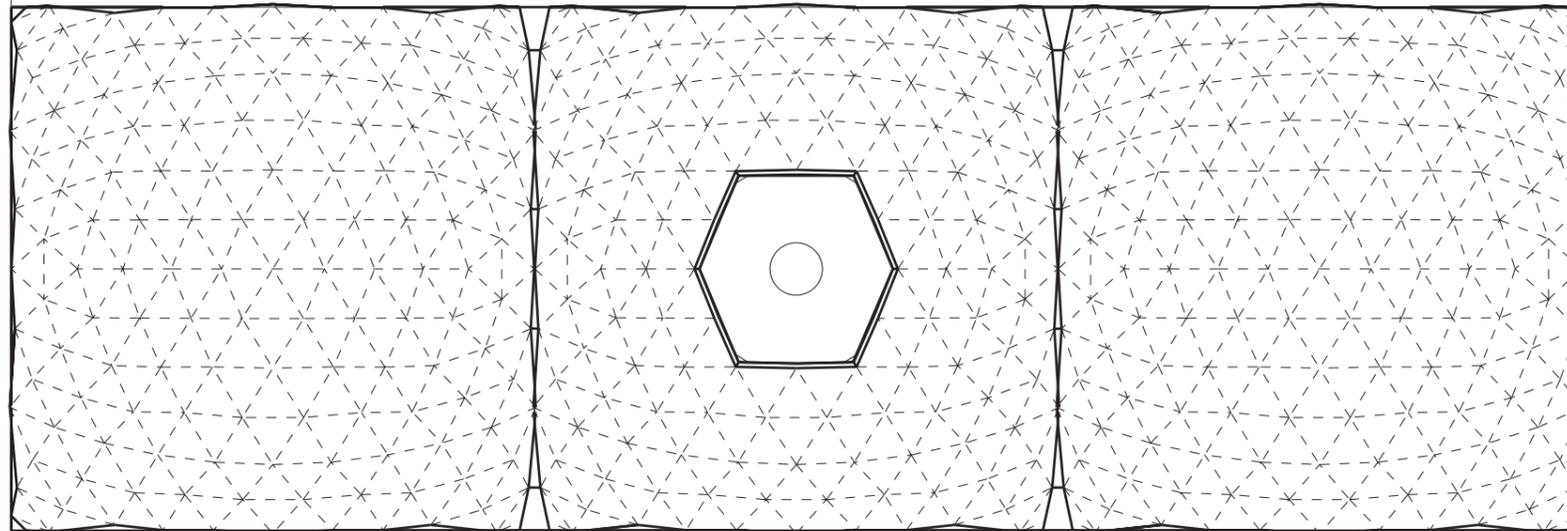


Surfaces belong to the same sphere, provides with easier construction, cheaper cost.

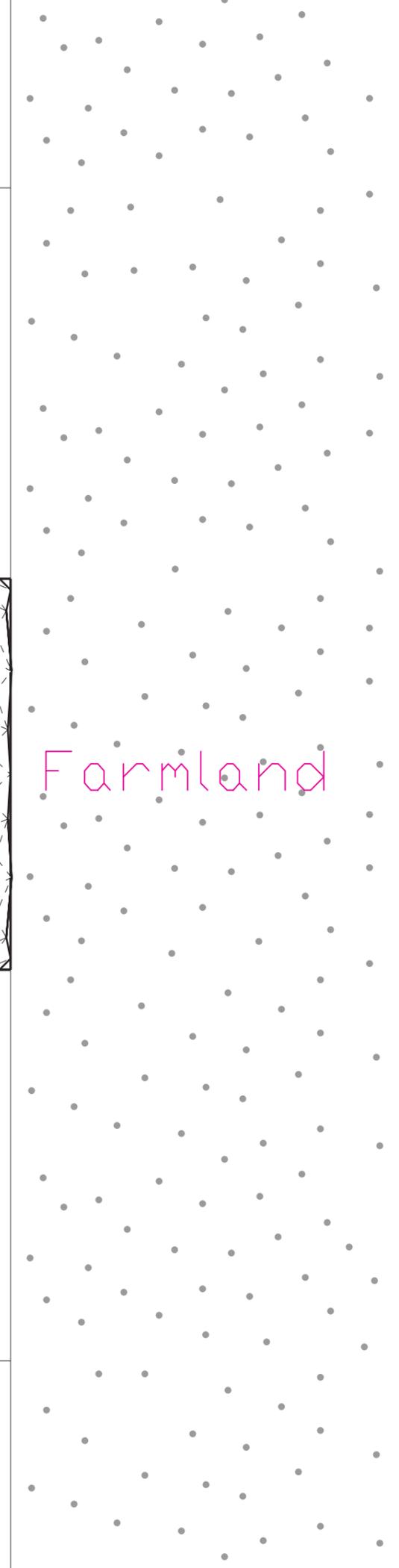


Machine calculation to architectural solution

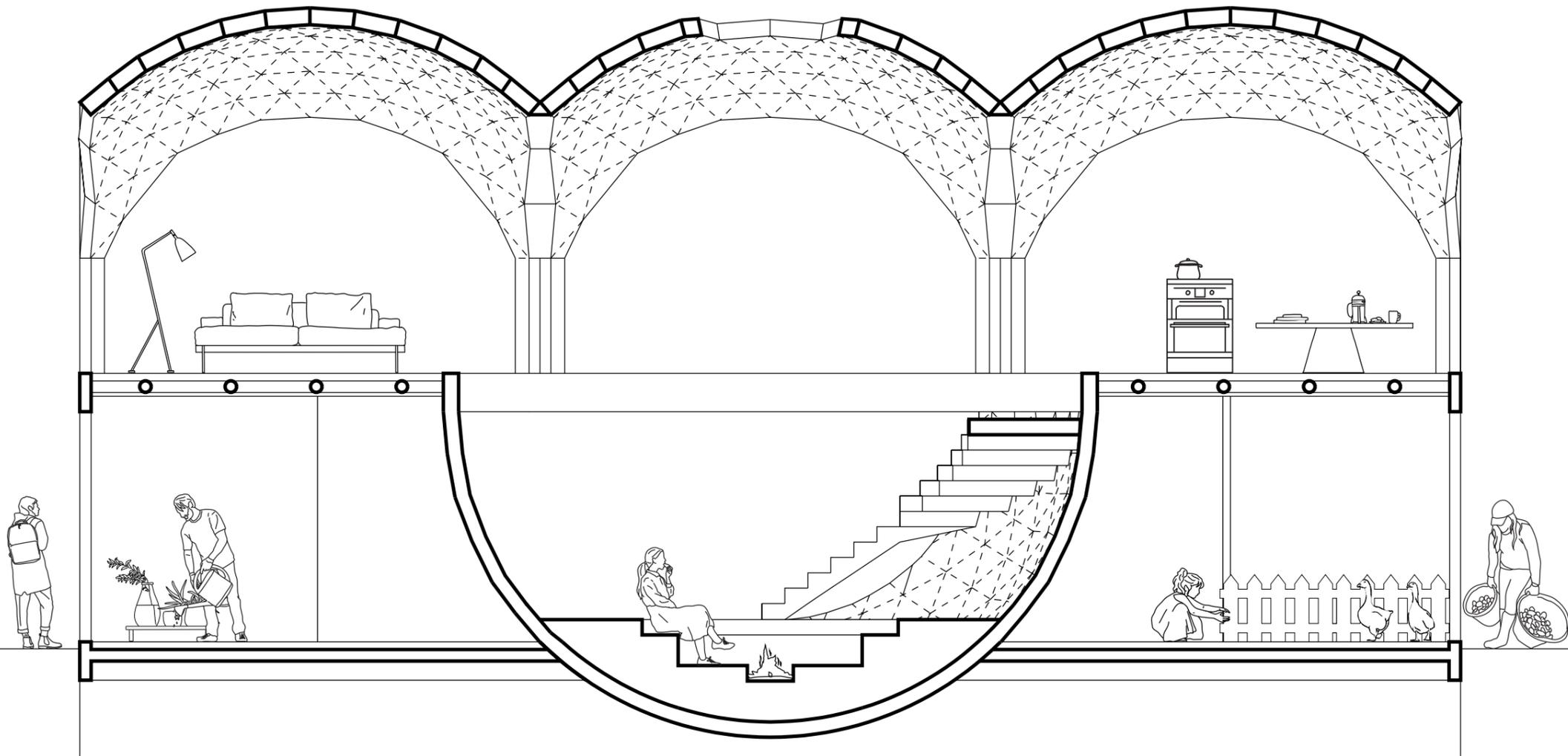
Street



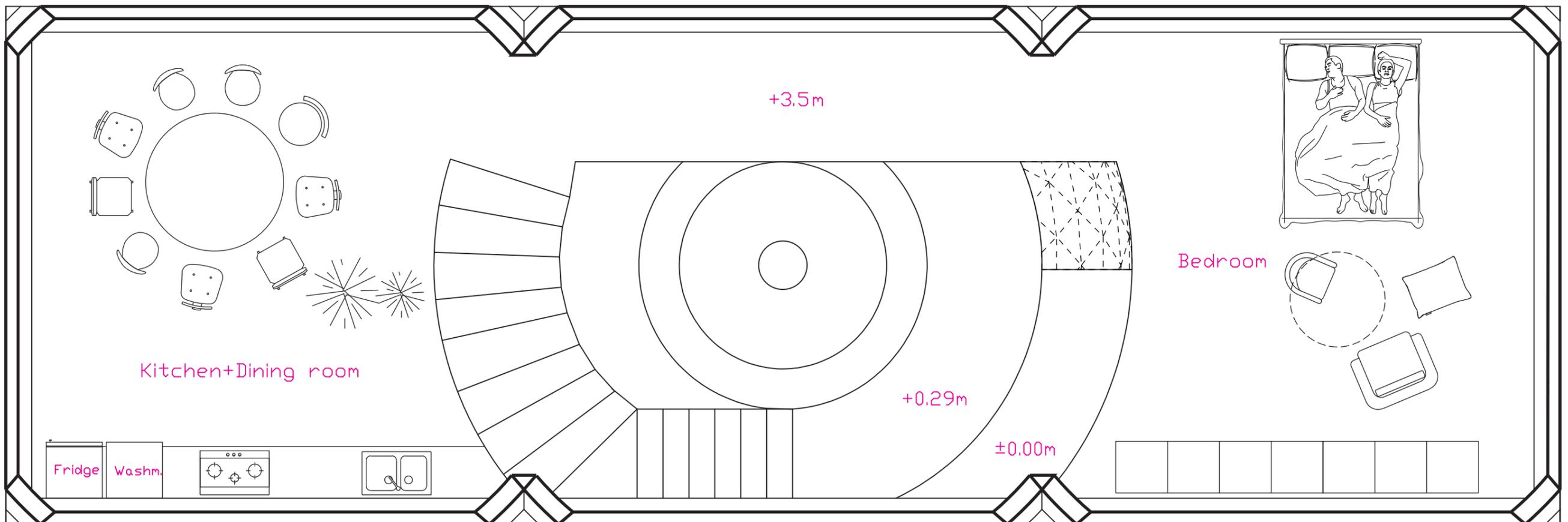
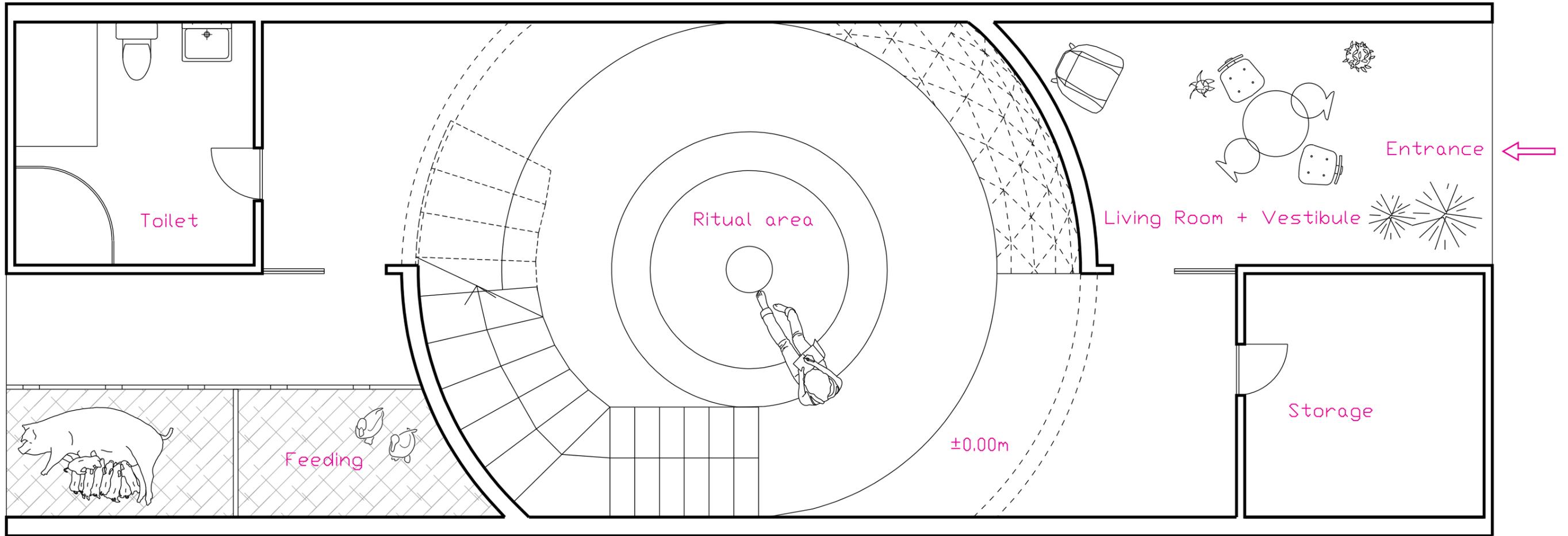
Farmland

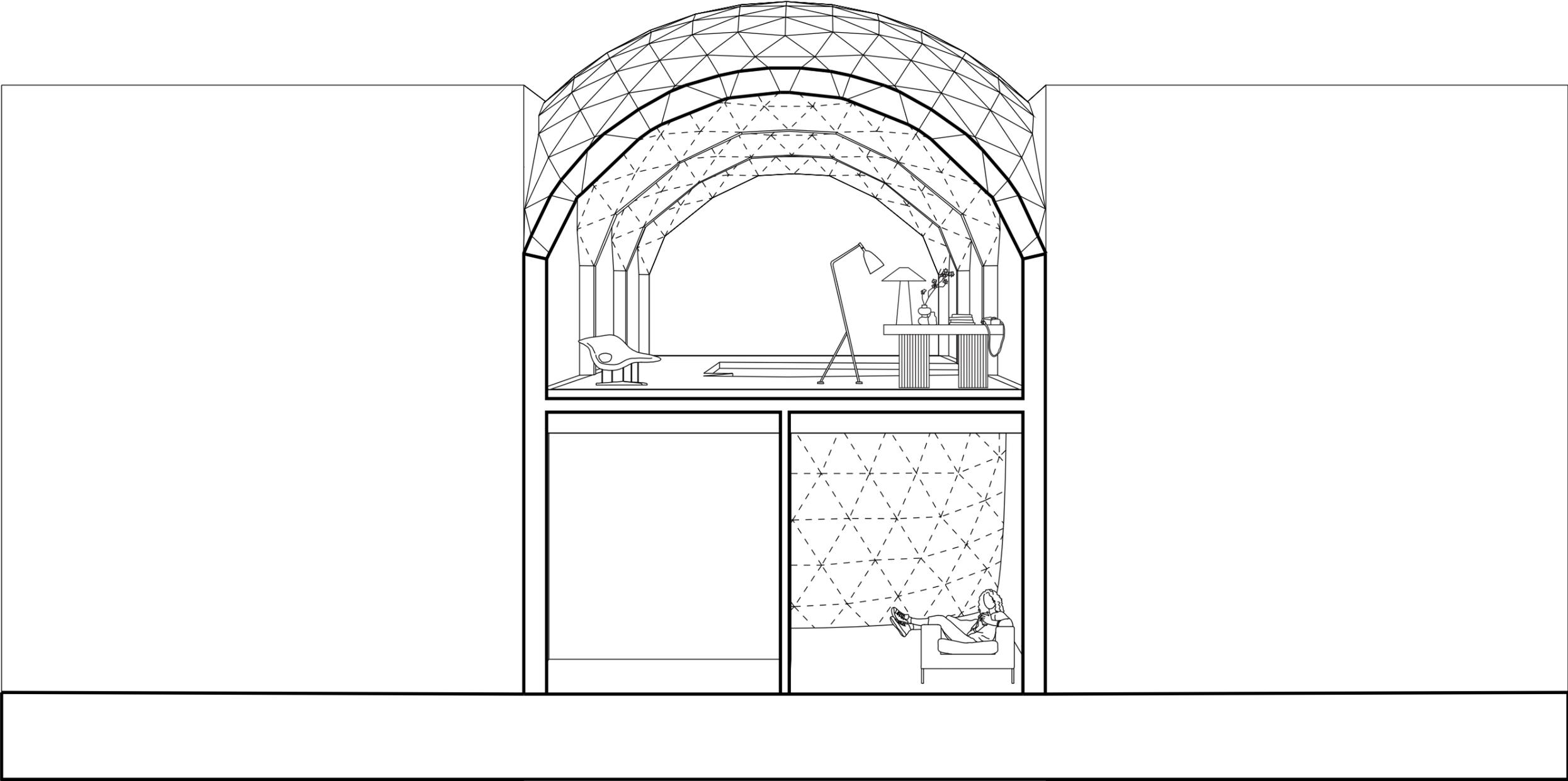


Street



Farmland





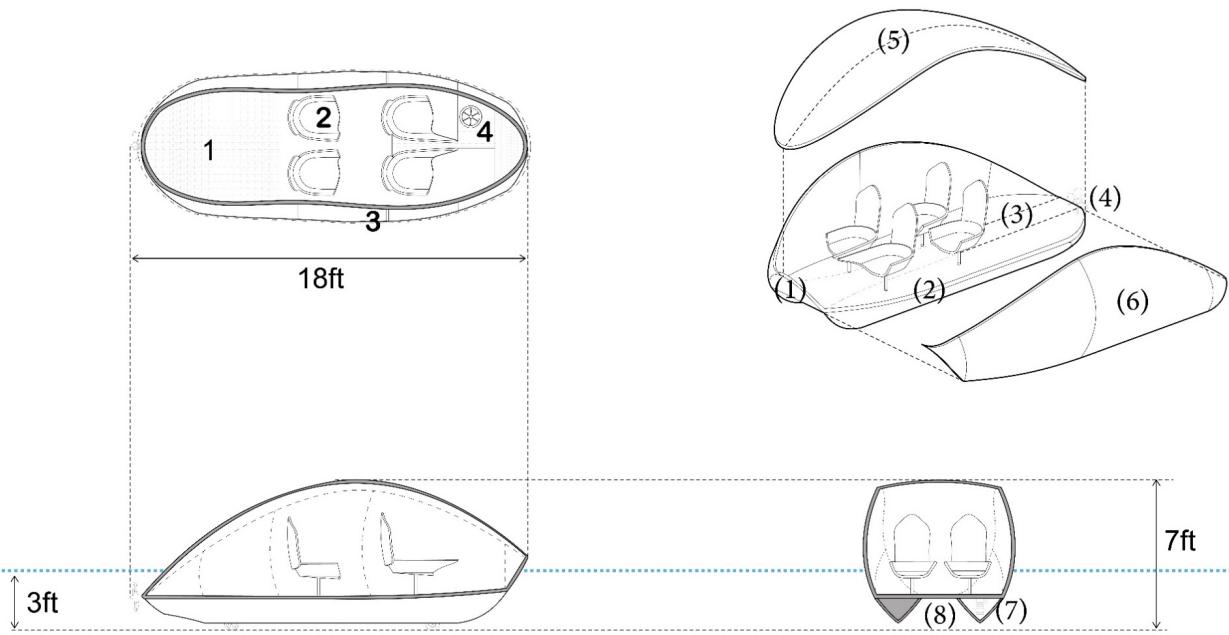
***Flooding theatre & Amphibious boat***

Amina Blacksher  
2023 Fall

*Yuqiu Yao*

# Amphibious boat

Capacity: 4 people max  
 Speed(on water): 60km/h  
 Speed(on land): 90km/h  
 Energy type: Electric boat  
 Max journey once charge: 300km

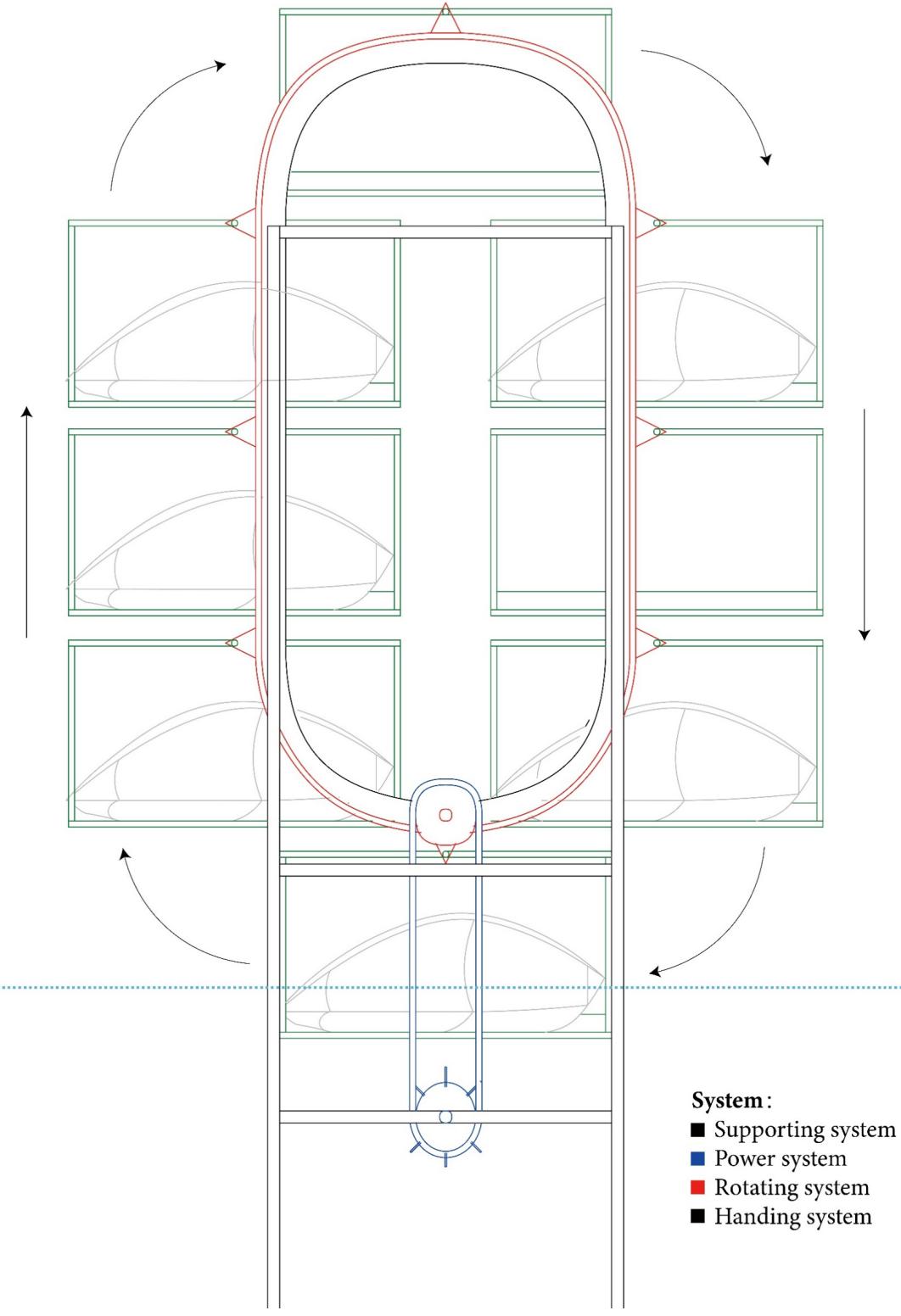


**Division :**

- 1. Storage
- 2. Passenger seat
- 3. Sliding door
- 4. Operation

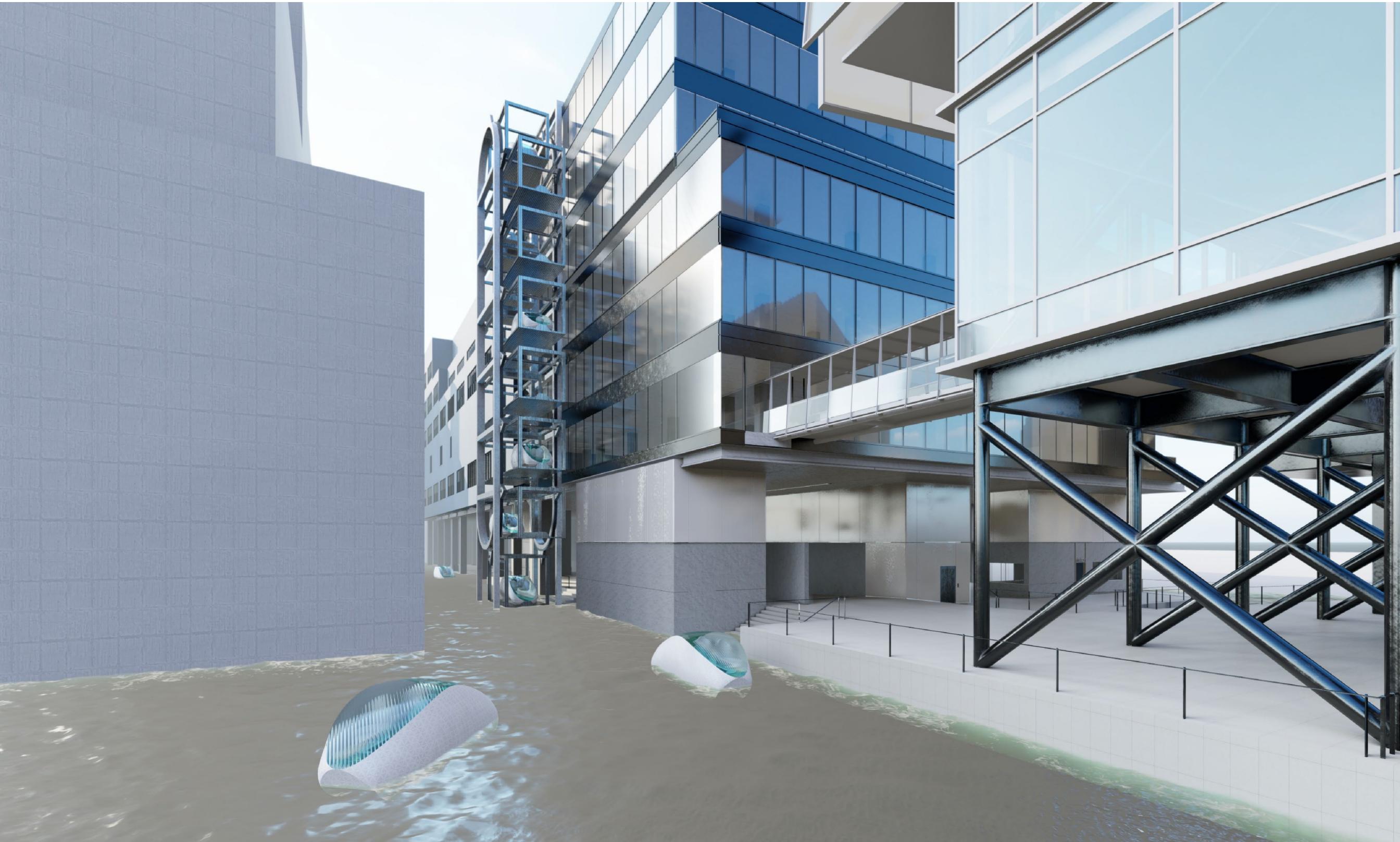
**Component :**

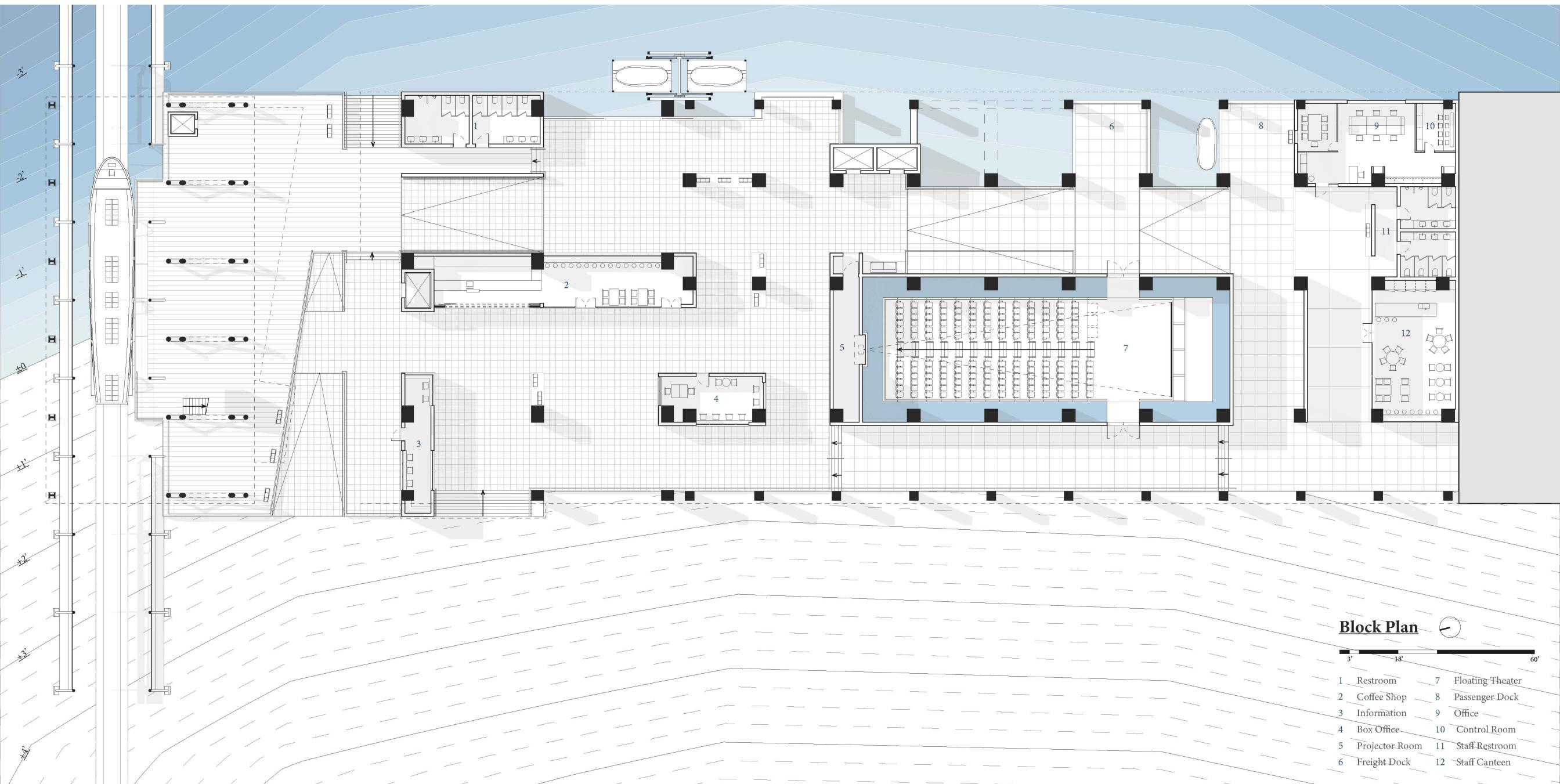
- (1) Anti-collision foam
- (2) Fiberglass body
- (3) Wood board
- (4) Electric engine
- (5) Color changing glass
- (6) Sliding door
- (7) Floating wheel
- (8) Doble hull



**System :**

- Supporting system
- Power system
- Rotating system
- Handling system

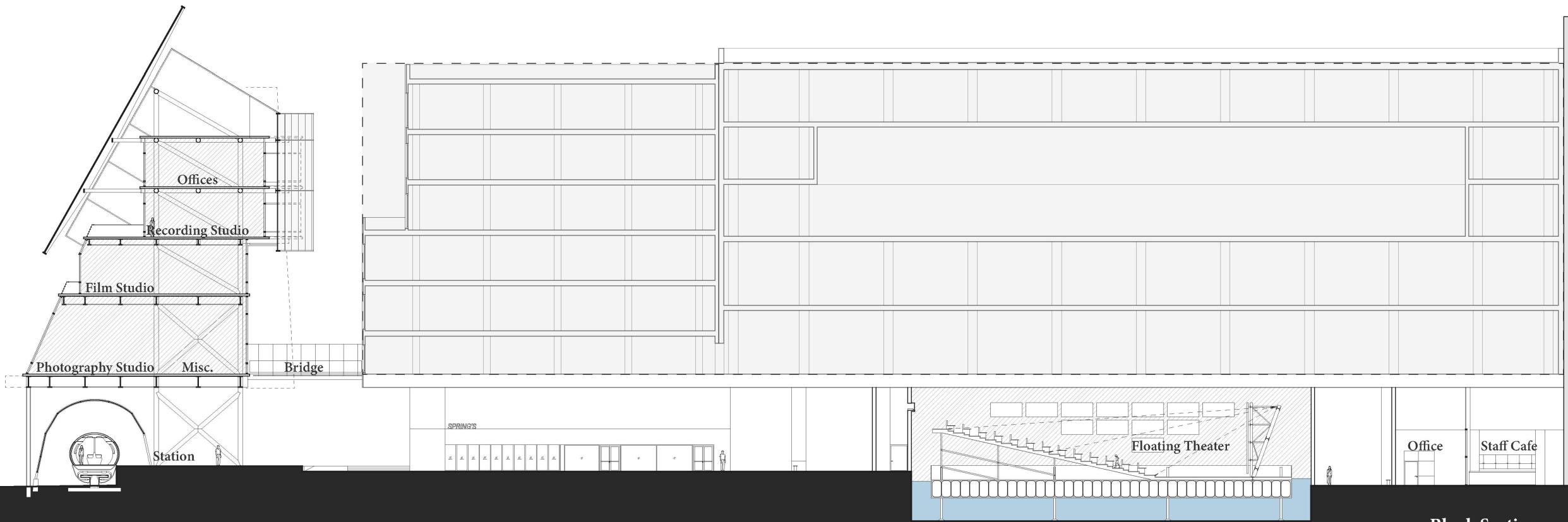




**Block Plan**



- |                  |                    |
|------------------|--------------------|
| 1 Restroom       | 7 Floating Theater |
| 2 Coffee Shop    | 8 Passenger-Dock   |
| 3 Information    | 9 Office           |
| 4 Box Office     | 10 Control Room    |
| 5 Projector Room | 11 Staff Restroom  |
| 6 Freight-Dock   | 12 Staff Canteen   |



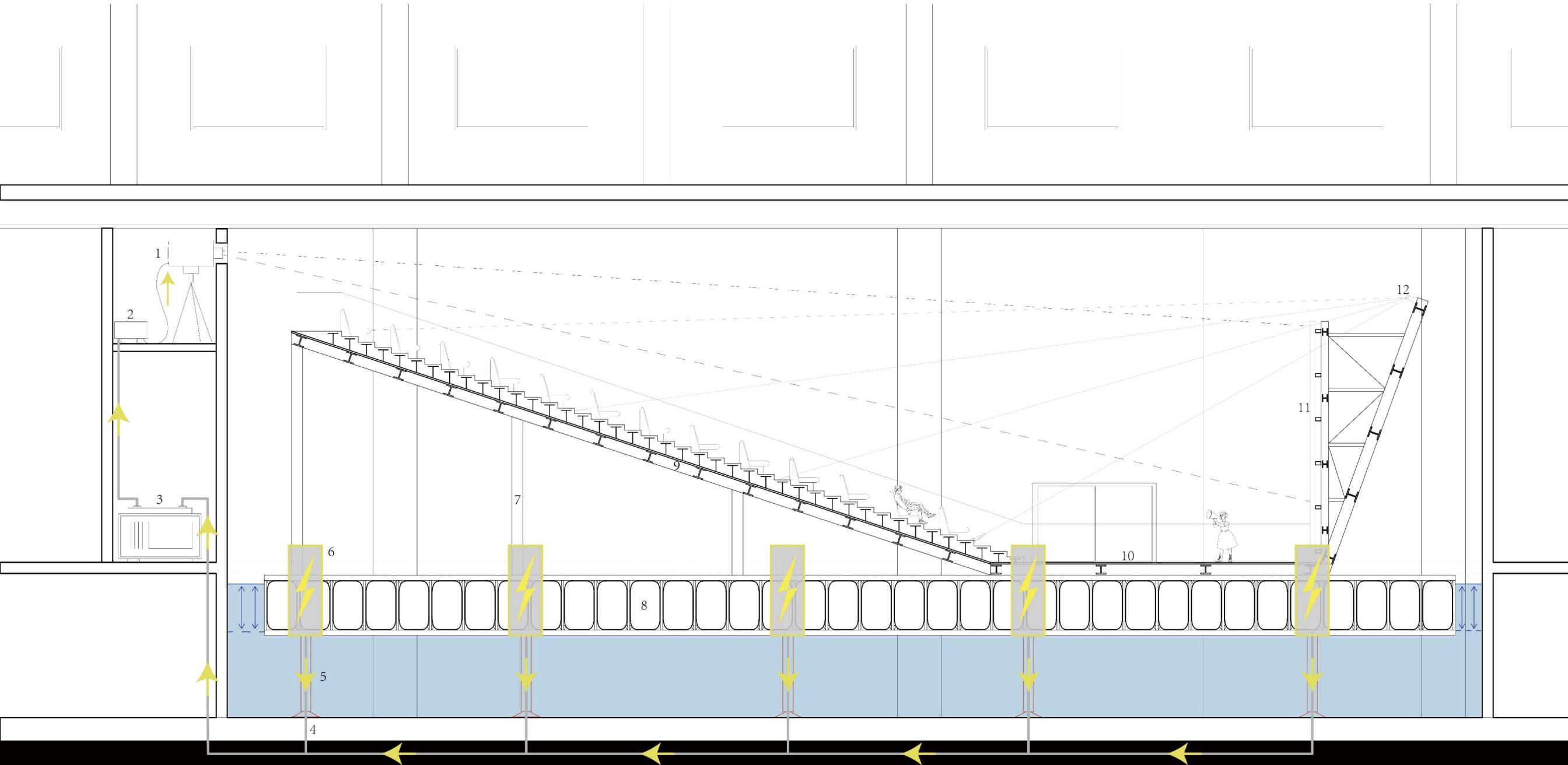
**Block Section**



3' 18' 60'



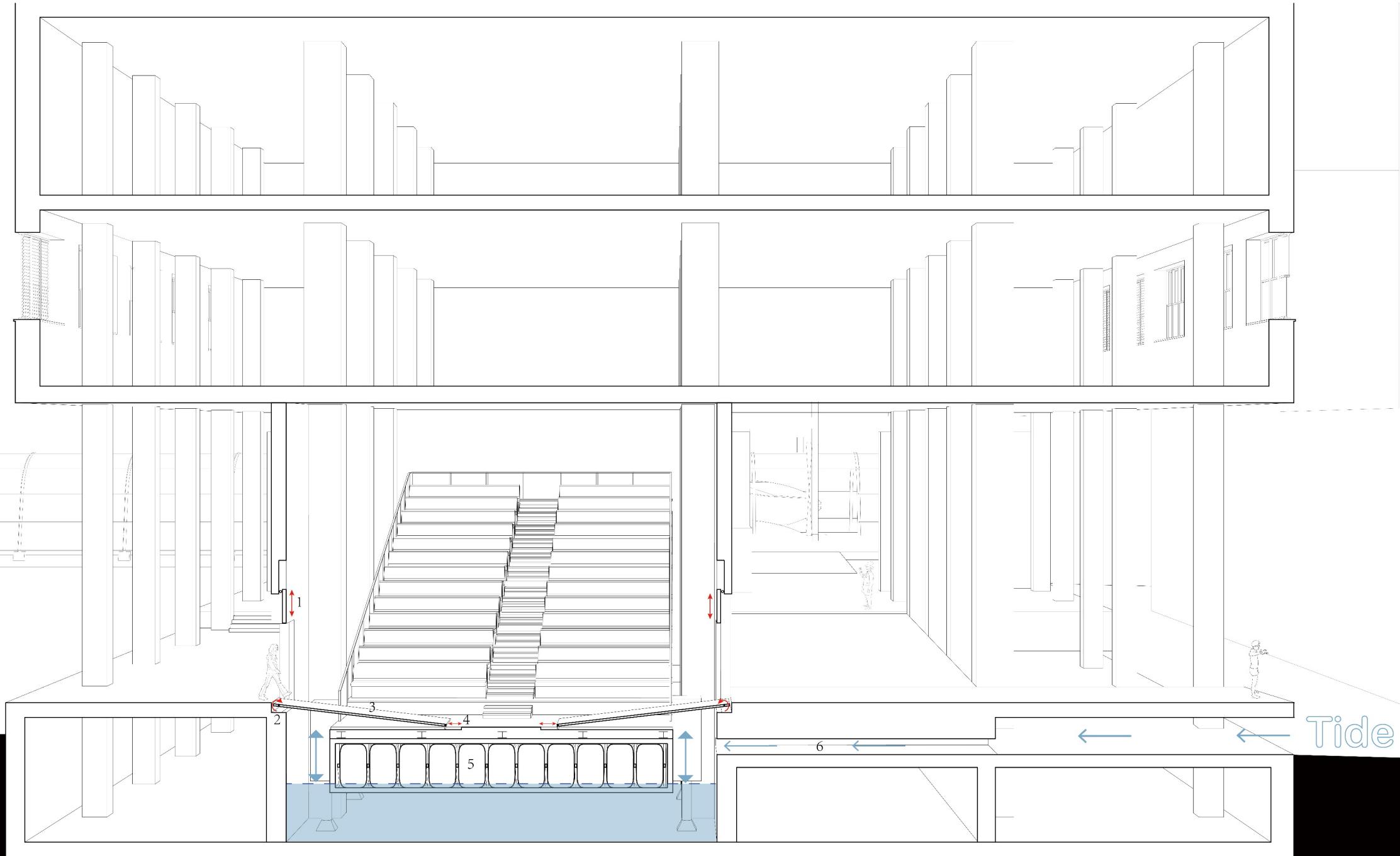
Floating Theater



- |                |                      |                 |                 |
|----------------|----------------------|-----------------|-----------------|
| 1. Projector   | 4. Cable             | 7. Steel column | 10. Wood board  |
| 2. Transformer | 5. Connecting Column | 8. pontoon      | 11. Screen      |
| 3. Battery     | 6. Generator         | 9. Steel Frame  | 12. Steel cable |

Hydraulic System





- 1. Expandable door
- 2. Shaft
- 3. Connecting bridge
- 4. Slide rail
- 5. Ponton
- 6. Pipeline

**Flex Connection**



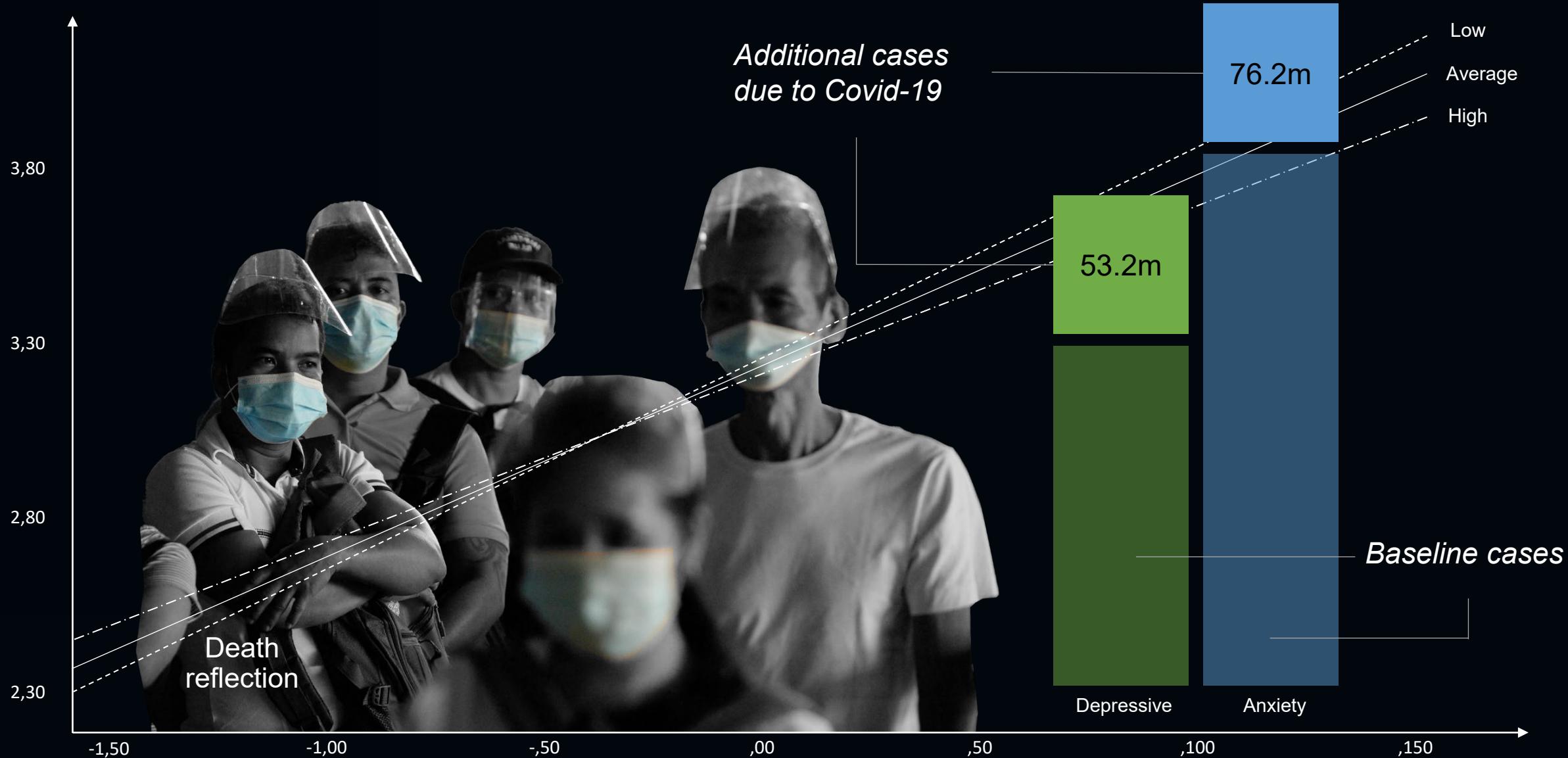
***The line, the life***

Harmony of Remembrance

2024 Spring  
Karla M. Rothstein

*Yuqiu. Yao*

# Covid-19 Anxiety



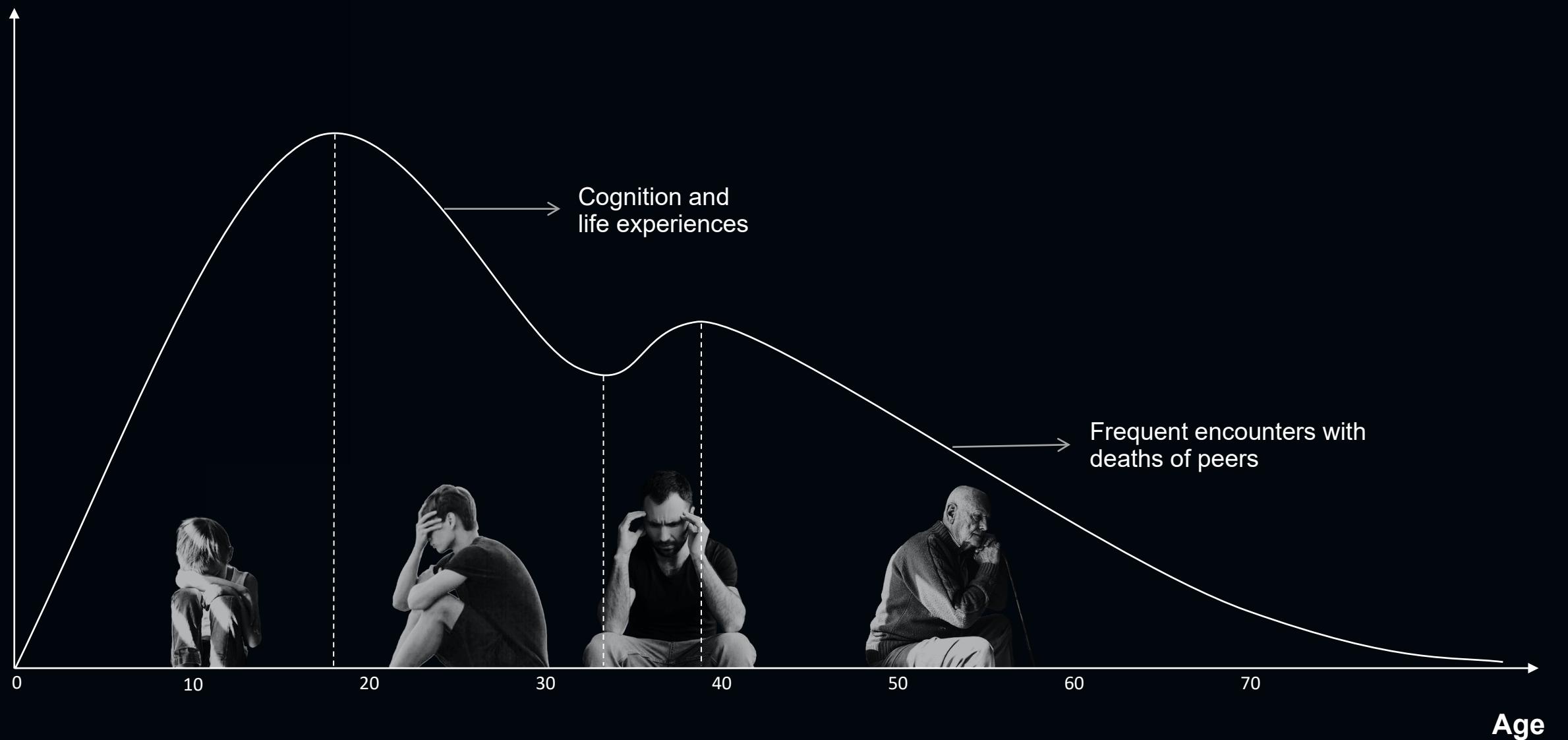
Death reflection

Additional cases due to Covid-19

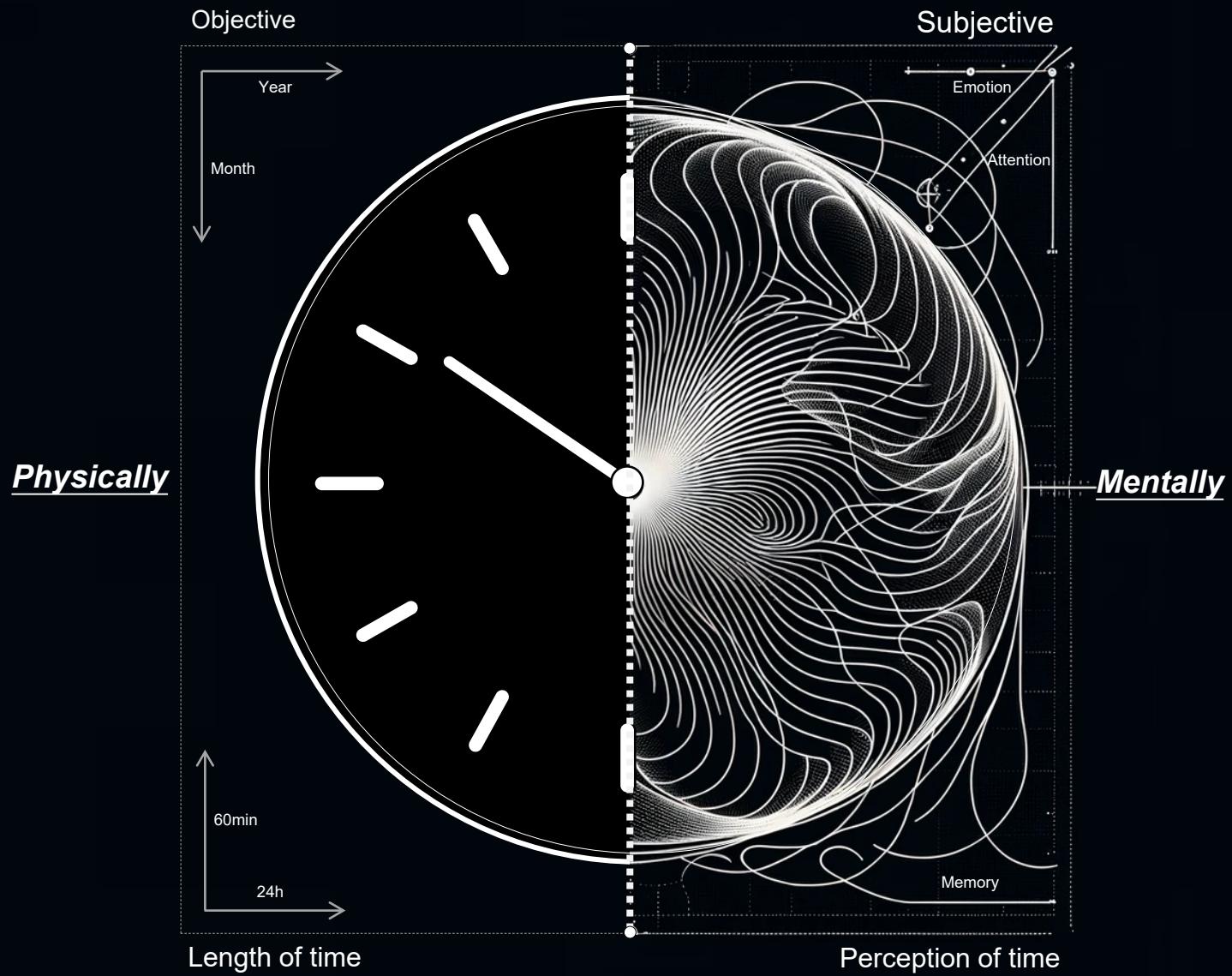
Baseline cases

Death Anxiety

## Death Anxiety



Cognition and exposure are the main influences on death anxiety.

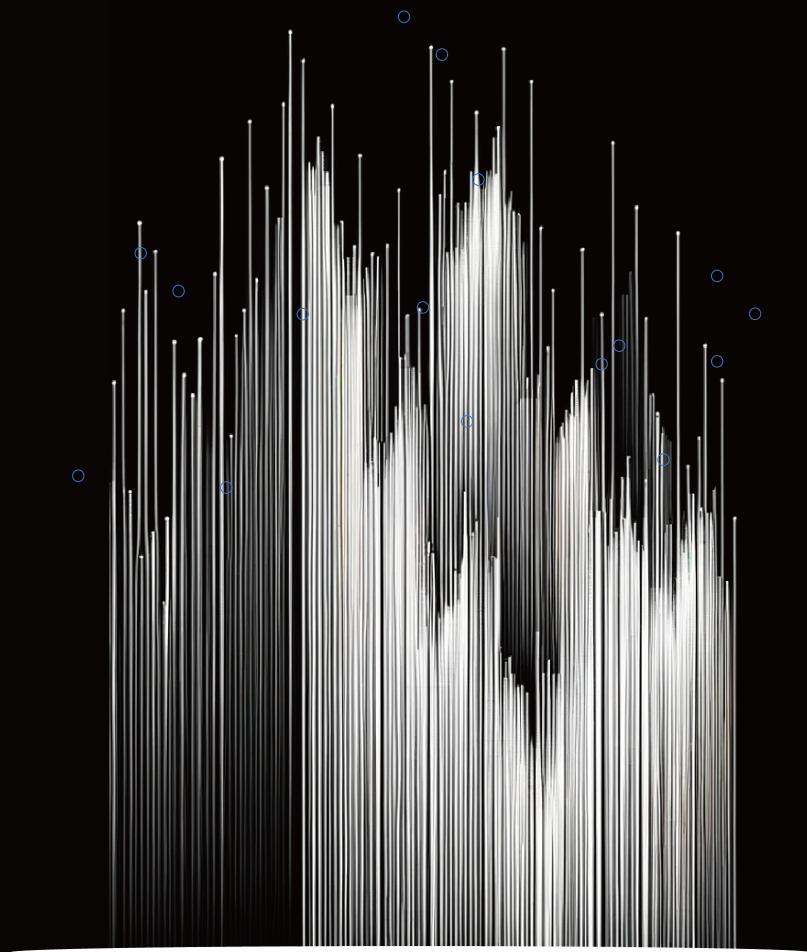


**The physical duration of time**

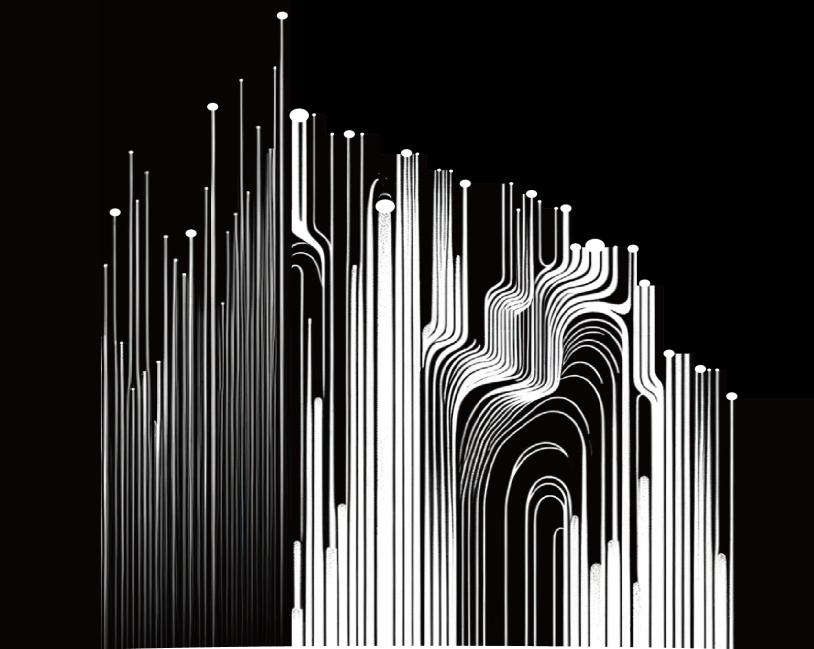


**Psychological perception of time**





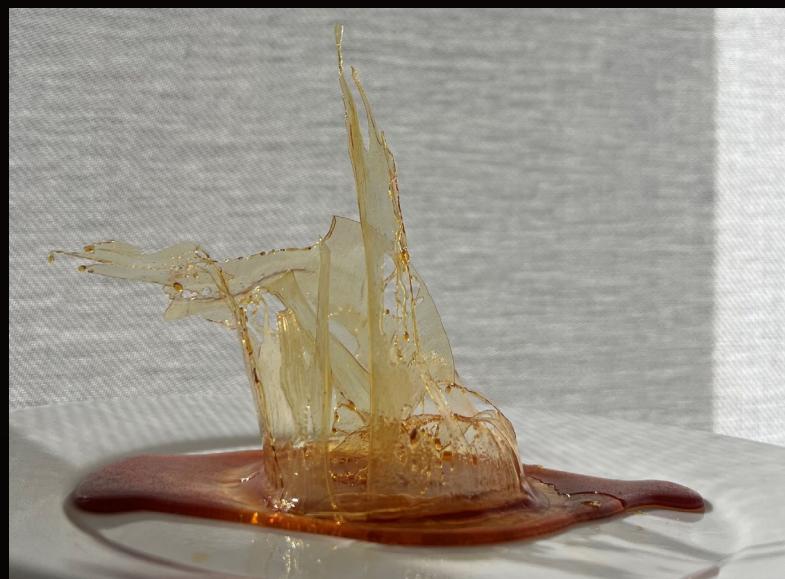
1h



12h

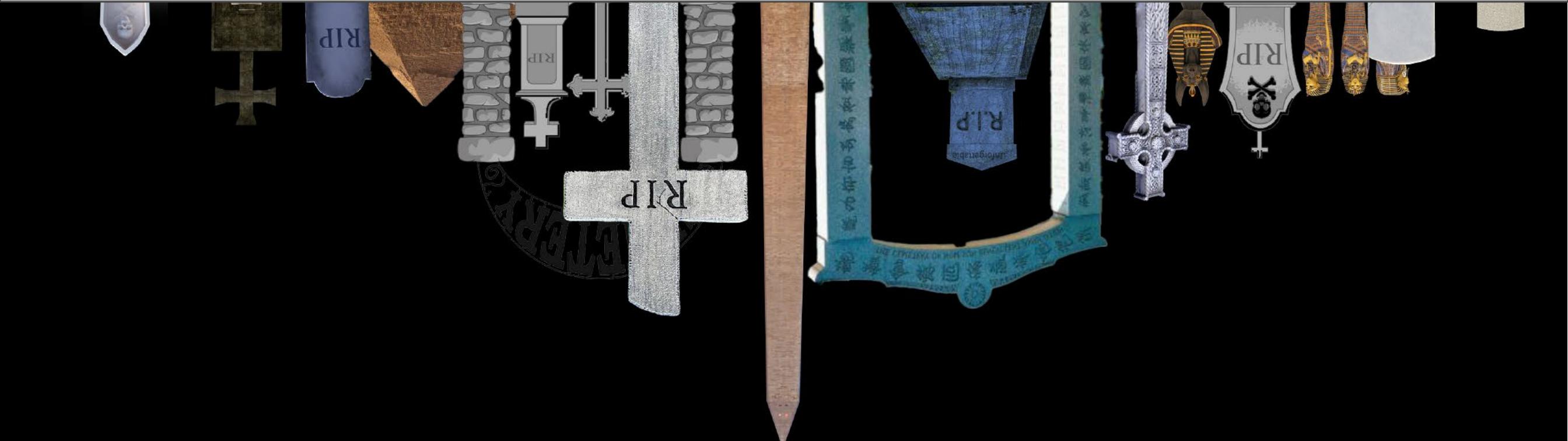
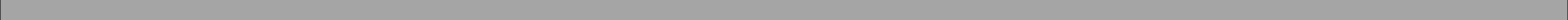
Linear stretching

24h



# Rotational stretching





Death



Transportation



Embalming



Restorative Art



Casket and Urn Sales



Funeral



Burial or Cremation





**Now**

It was decommissioned from 1993, role as a landscape reservoir with 1 billion gallons of stagnant.

North gatehouse

Causeway

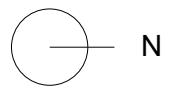
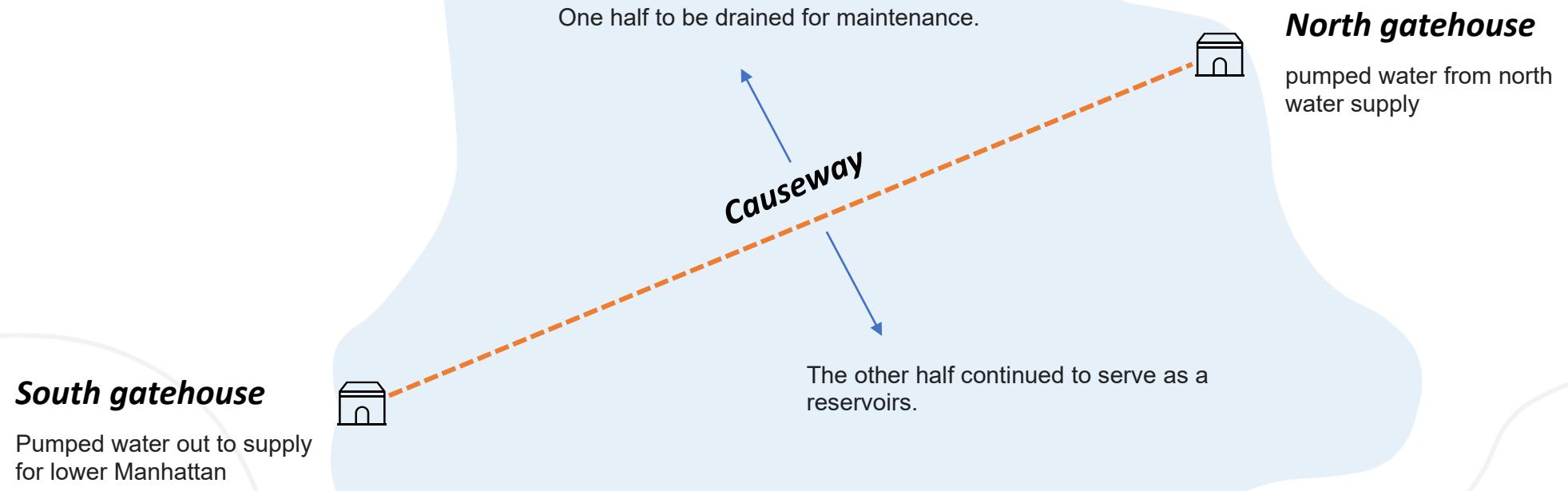
South gatehouse

1862

To supplement the distribution system for lower Manhattan, this second reservoir was **built**.

VENUE

**How did it used to work?**



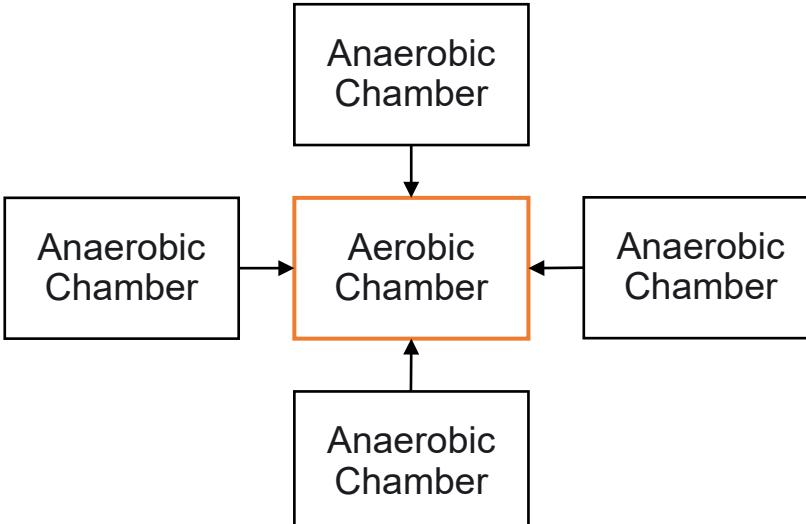
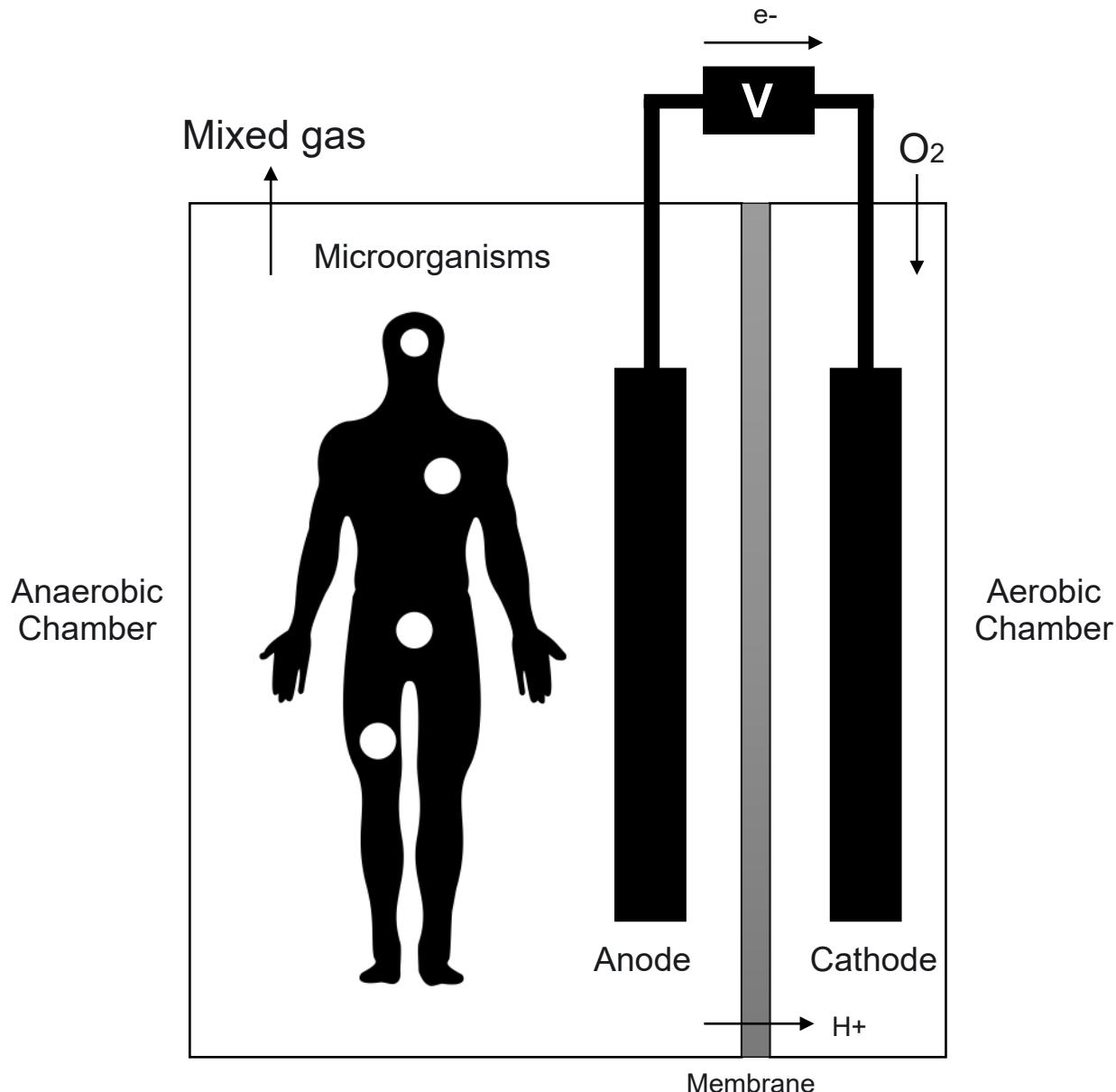
Reflection of central  
reservoir





*In which way should we accept the death of a loved one?*

# Microbial fuel cell (MFC)



Human biomass energy density:  $\approx 20\text{-}30 \text{ kJ/g}$   
 Efficiency of microbial batteries:  $\approx 10\%$   
 The energy one can generate:  $12\text{-}20 \text{ MJ}$   
 Conversion to electricity:  $10\text{-}16 \text{ kWh}$   
 (A 5-watt LED light can stay on for anywhere from 20 to 30 months.)

**Organic substrate + Microorganisms + Oxygen**

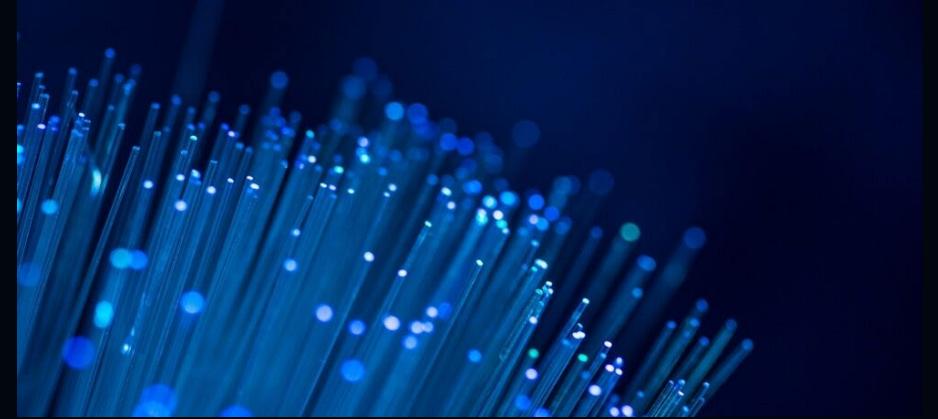
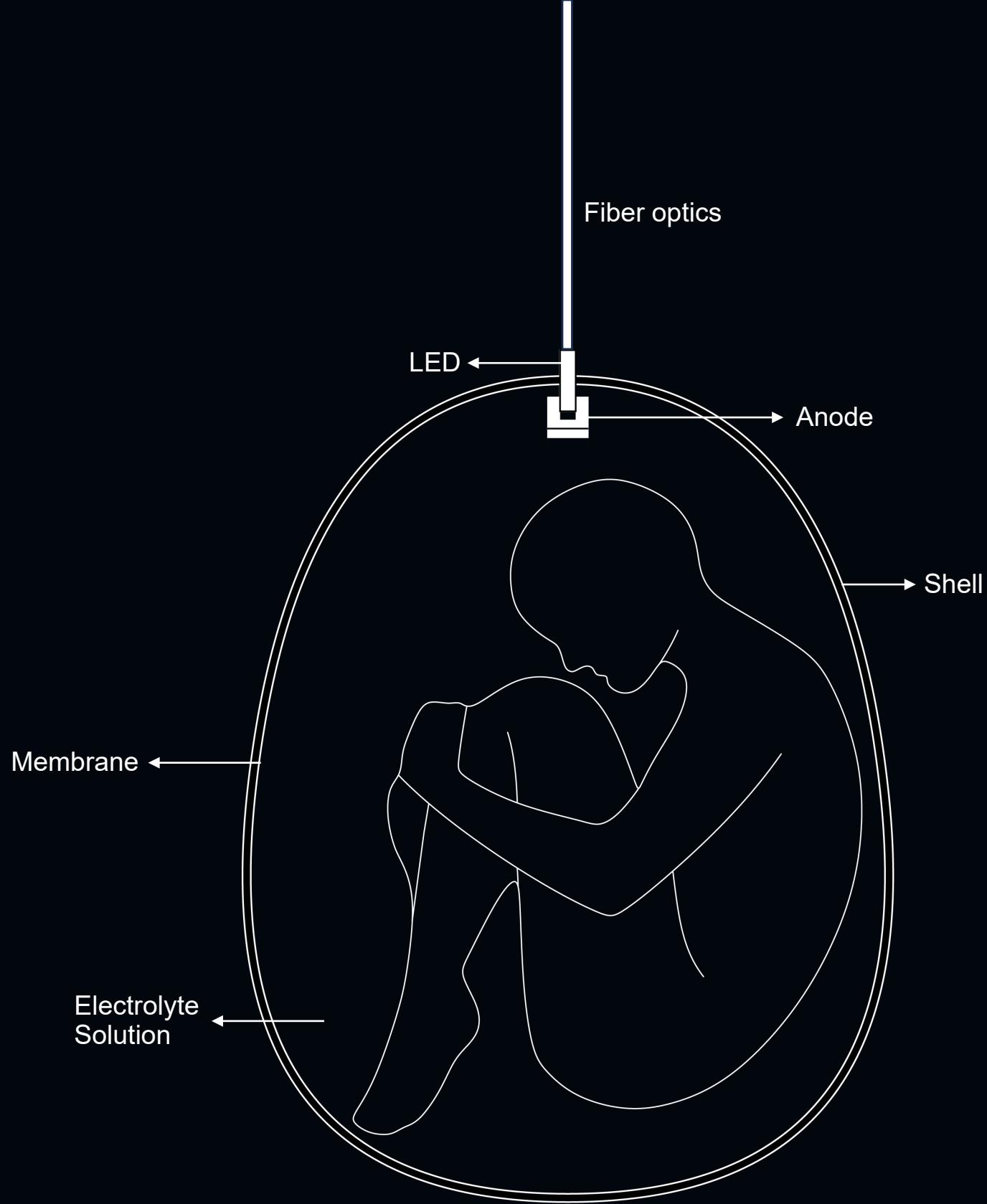


**Electricity + Water + Carbon dioxide + Other**

# Container



*As one comes, so one goes.*



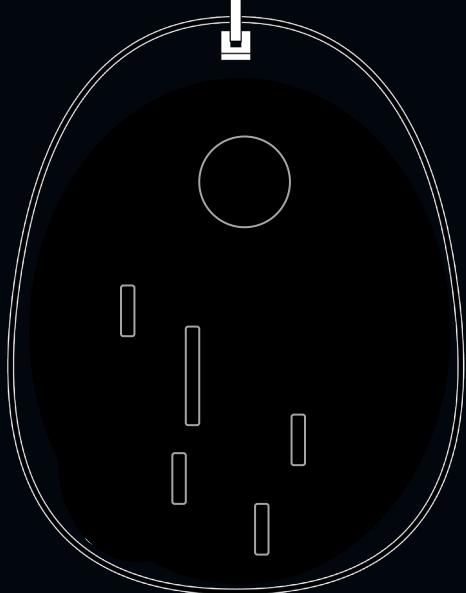
Energy {  
Lighting (30%)  
Water cleaning (70%)



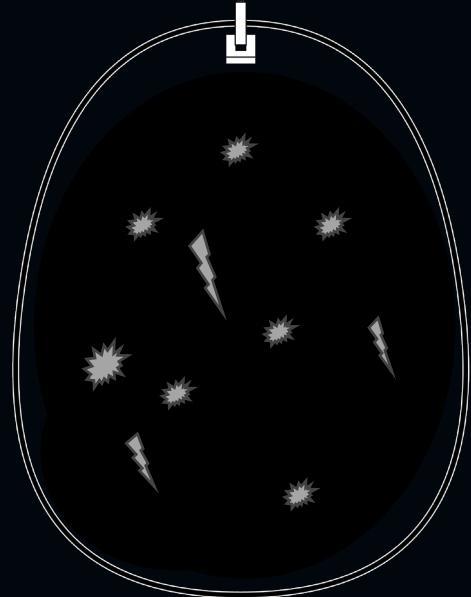
1. Introduction of corpse



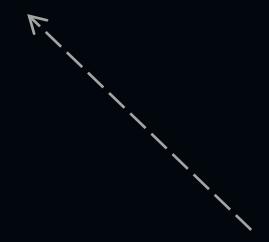
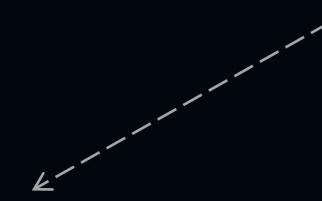
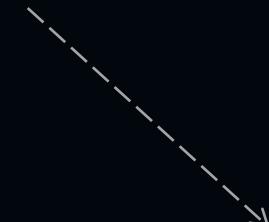
2. Biochemical process

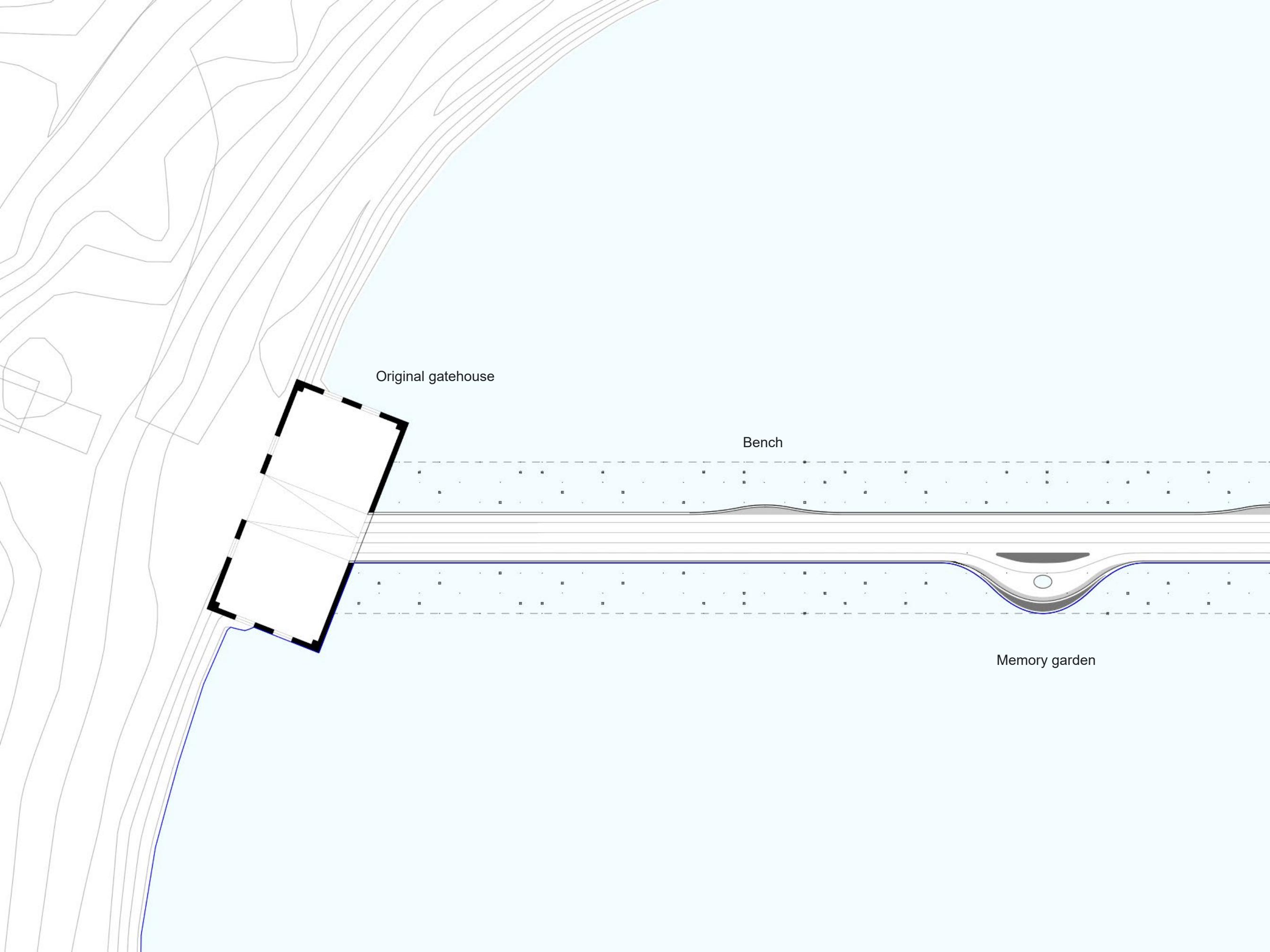


3. Retrieval of remains



4. Recultivation of microorganisms



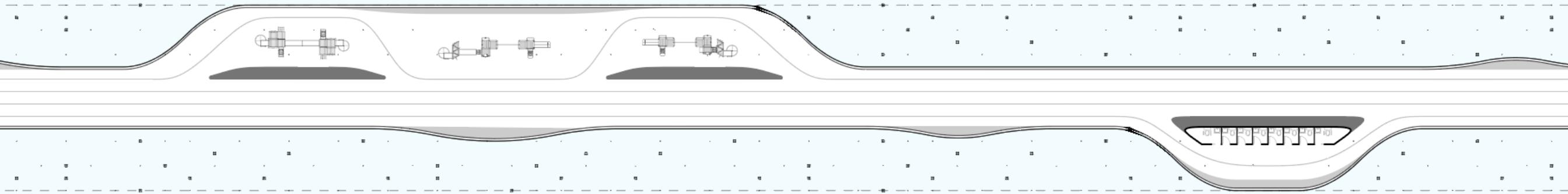


Original gatehouse

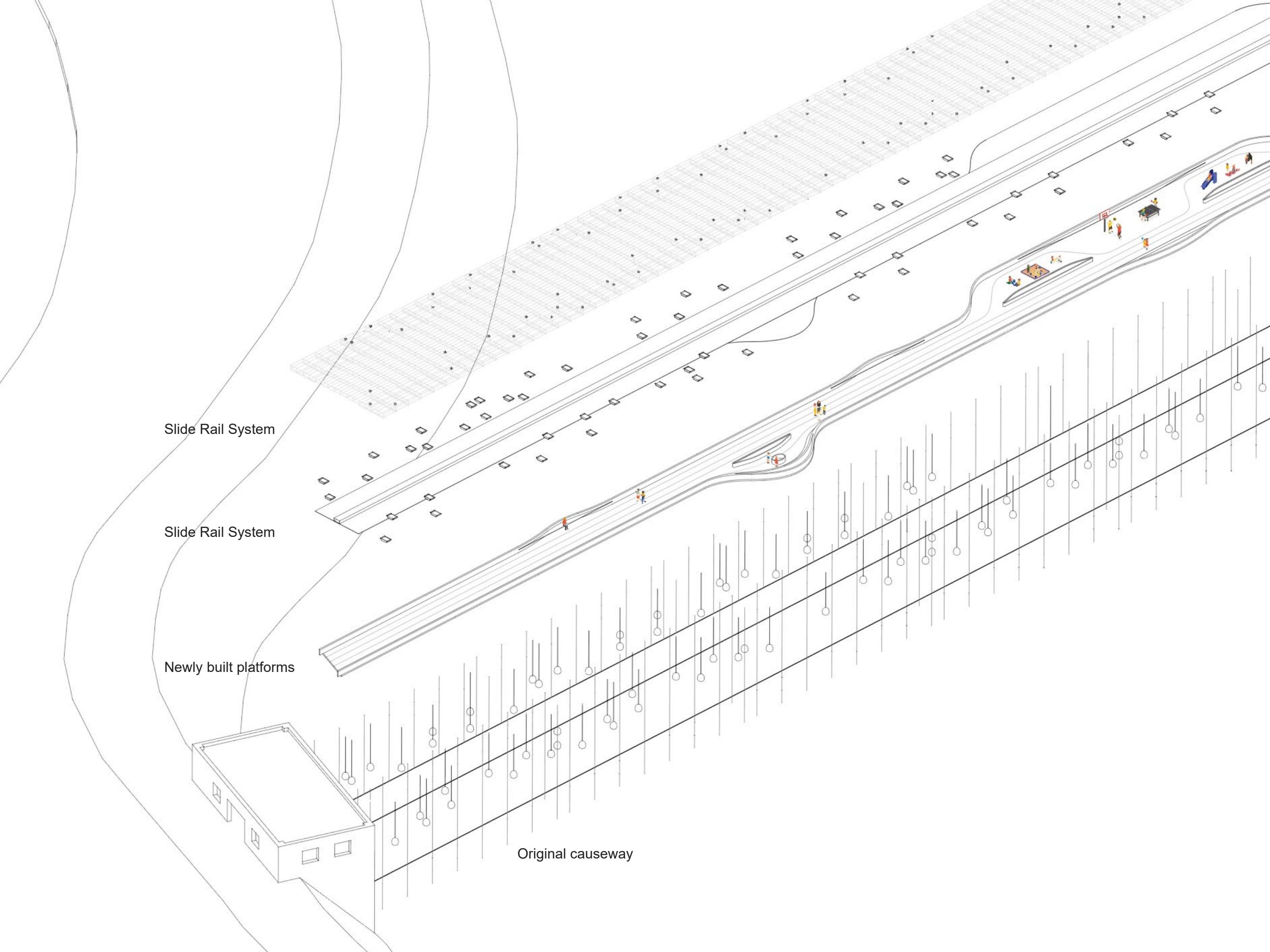
Bench

Memory garden

Family park



Restroom



Slide Rail System

Slide Rail System

Newly built platforms

Original causeway







