

Connect Wah Fu 連繫華富

Cultural Synthesis

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User Analysis



Target Audience:
Residents of Wah Fu

Age group: 65+

Date: June 24th, 2026

Special Thanks to
Kenny

What do you do here normally?
I do some sports and walk around the estate, but it's pretty boring.

What was your most memorable experience?
It has to be the UFO sightseeing back in the 1970/80s.

Do you chat with your neighbors often?
Not as much as we used to, because trust between neighbors is lower.

What stops you from going out more?
The lack of shade and the AC heating the estate up makes it uncomfortable.

Since Wah Fu is redeveloping, what place or item would you want to preserve?
The twin towers, of course. We had so many fond childhood memories there.



GIS Mapping

- Problem analysis

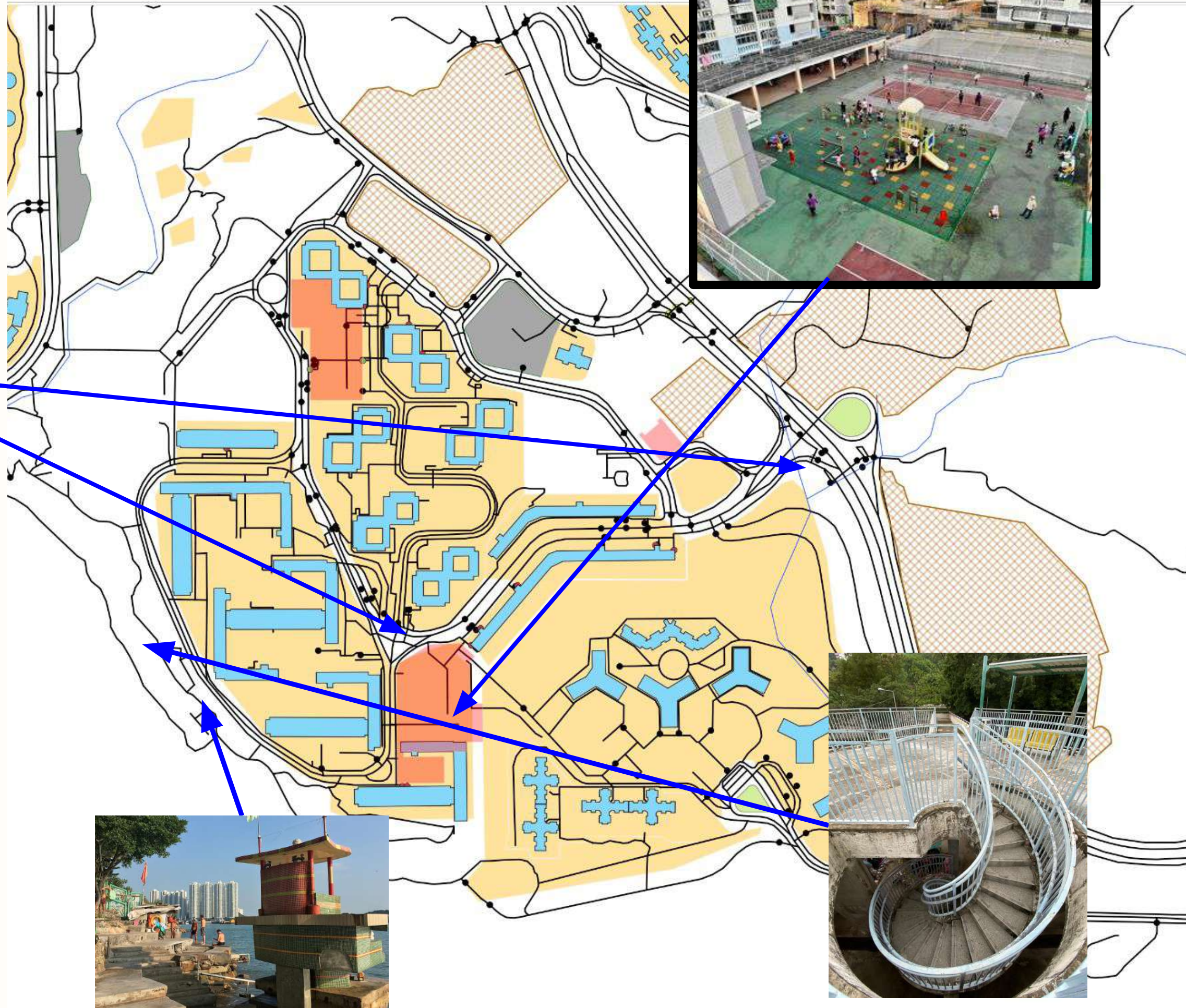


Fortuna Theatre



Various department stores

- Wah Fu was built as a community-focused estate, but changing times have weakened that social fabric.
- The elderly population is rapidly growing.
- Wah Fu lacks the social infrastructure to support this large elderly population.
- While others are busy with work, many elderly residents are left with nothing to do.
- Neighbourly trust is at all time lows



Context Analysis

54% – 68.3%

of adults aged 50+
in Hong Kong experience
moderate to severe loneliness

Source: CUHK research

Existing public spaces



Access & Climate Barriers

Waterfront park and waterfall bay are difficult to access, very hot, or not designed for the elderly majority population.



Site Constraints

Weather exposure, space limitations, and hillside topography create challenges for comfortable public use.

Our Goals

RQ 1

“How can interactive public spaces in Wah Fu re-engage residents through shared social activities and cultural storytelling?”

RQ 2

“How can biometric architecture create an accessible, sustainable and cheap public pavilion for the Wah Fu Waterfront?”

Social & Community

→ Provide a welcoming space for leisure, socializing, and community activities.

→ Ensure the pavilion is accessible and easy to move through.

Climate & Comfort

→ Improve comfort through natural ventilation and shading.

Sustainability

→ Reduce reliance on mechanical cooling and energy use.

01 | Community Bonding

Cultural Heritage Preservation | 02

03 | Environmental Sustainability

Intergenerational Connection | 04

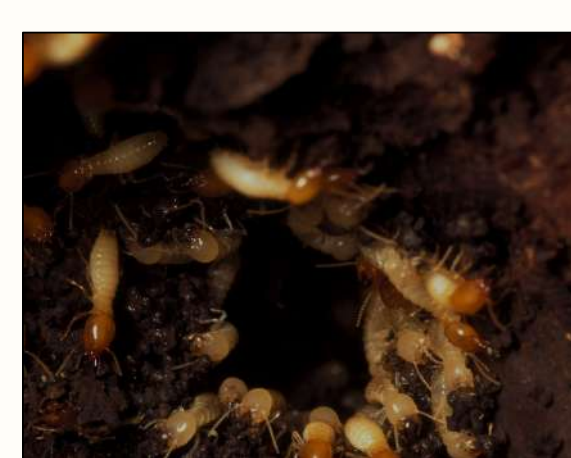
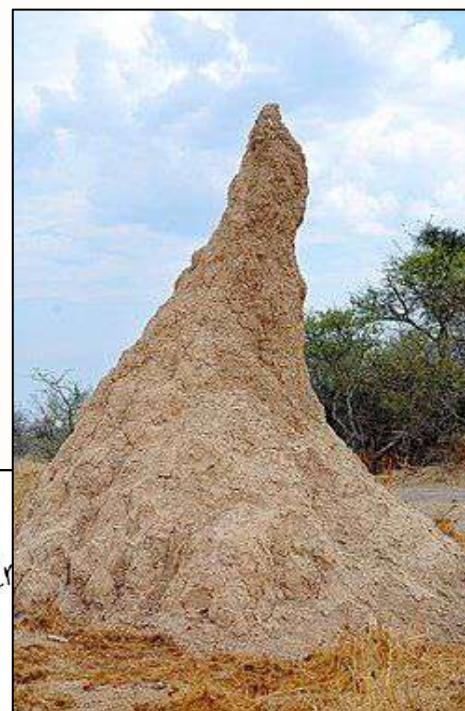
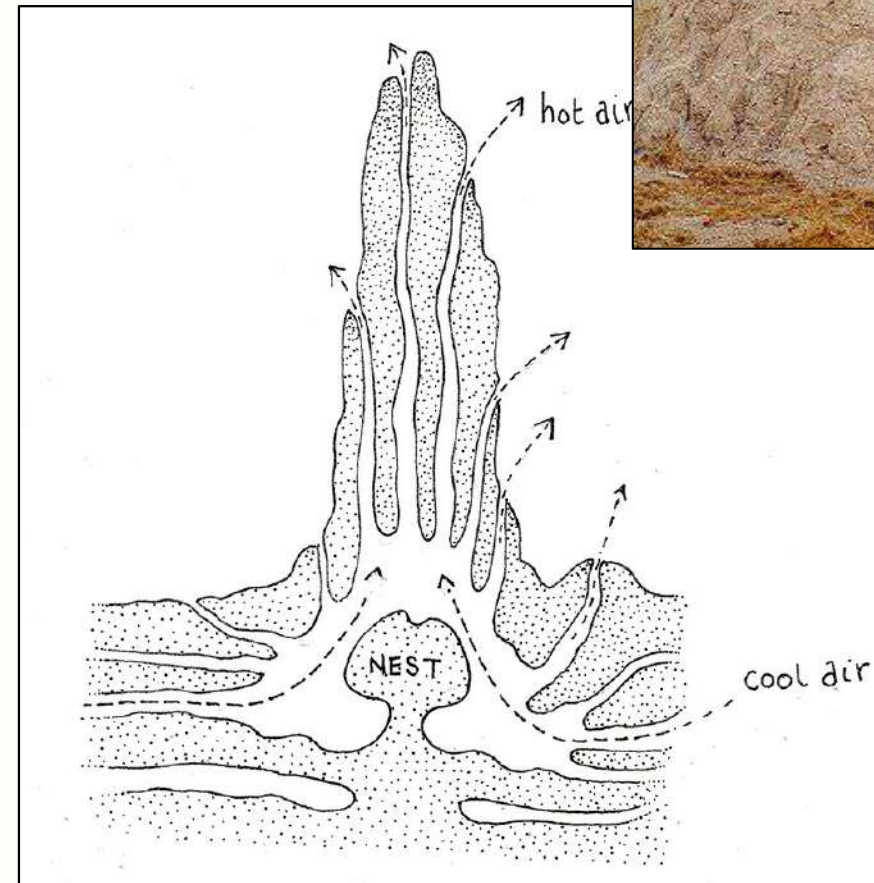
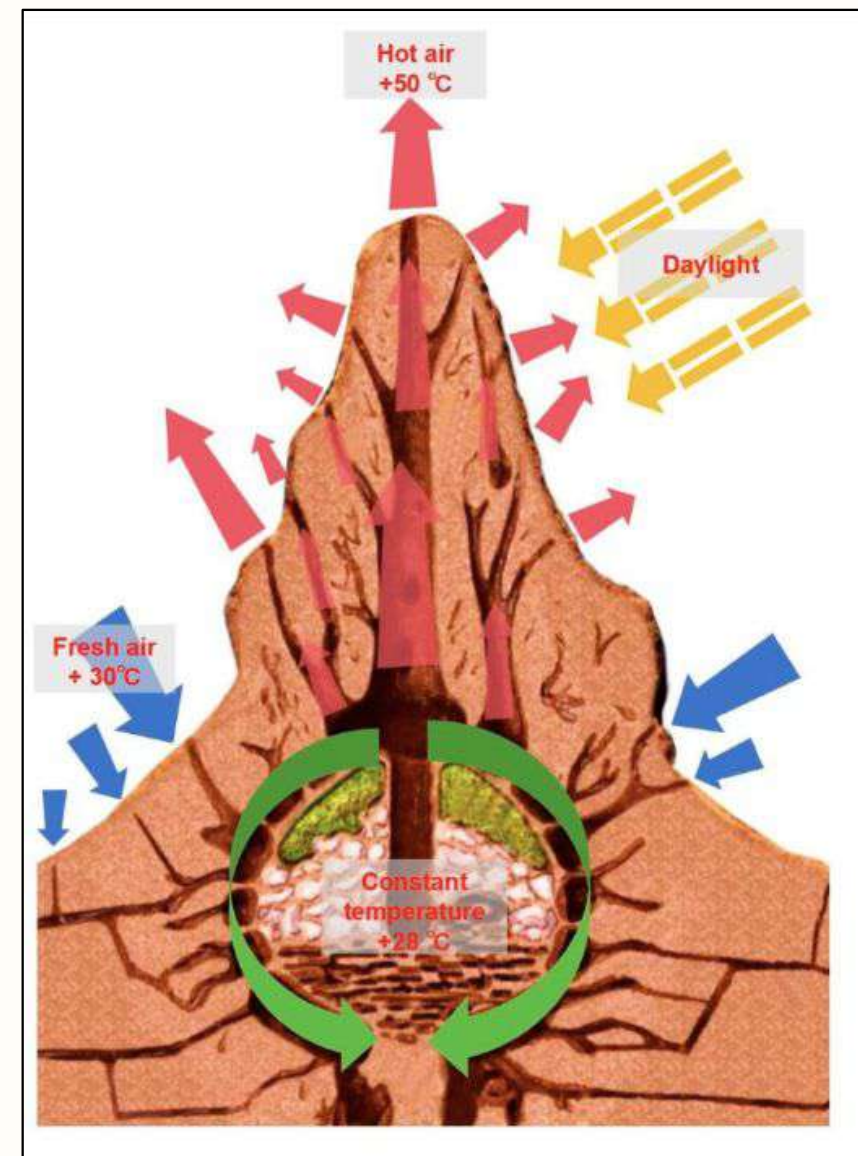
100% Free

100% Entertaining

100% Sustainable

100% Accessible

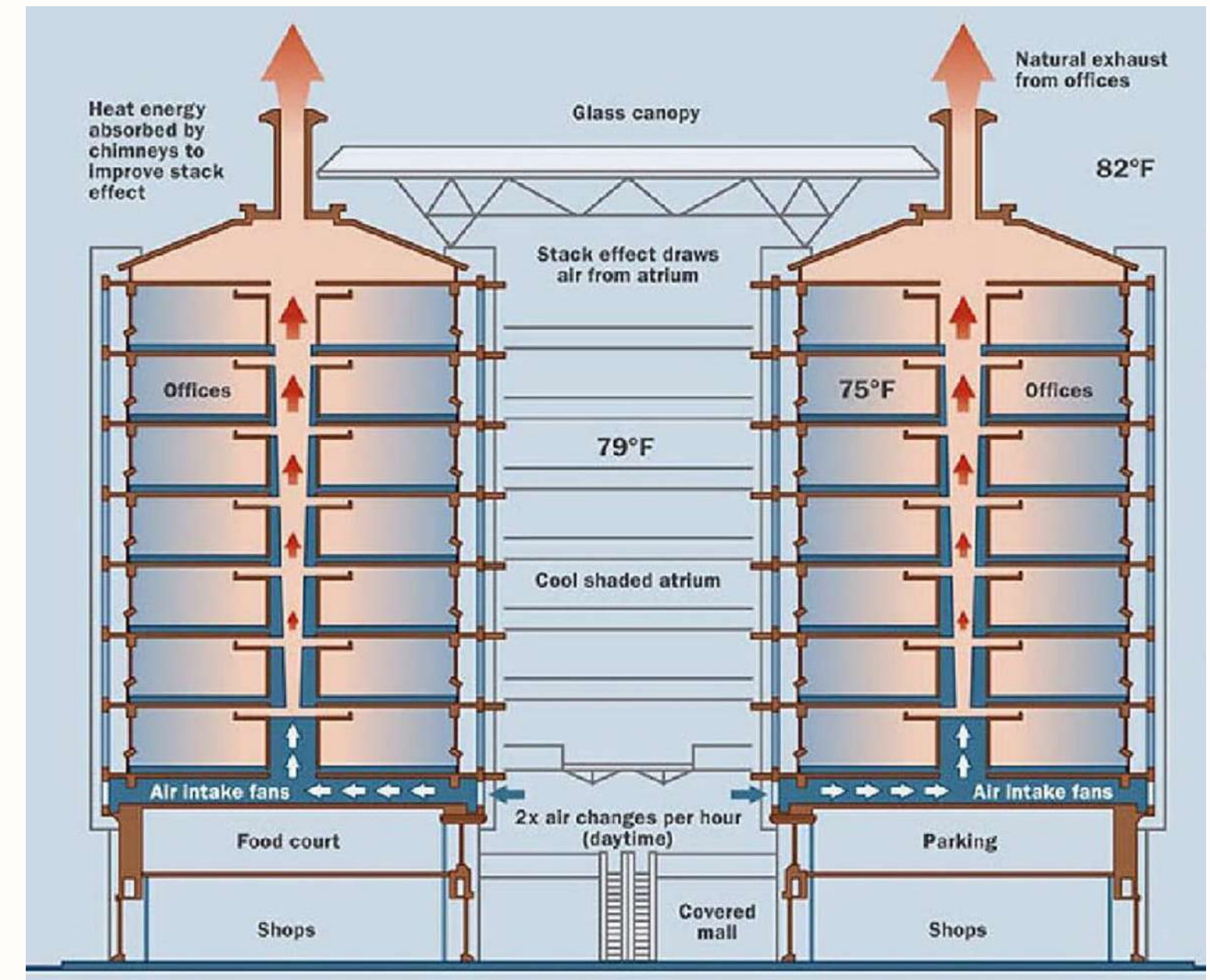
Biomimicry



Termites



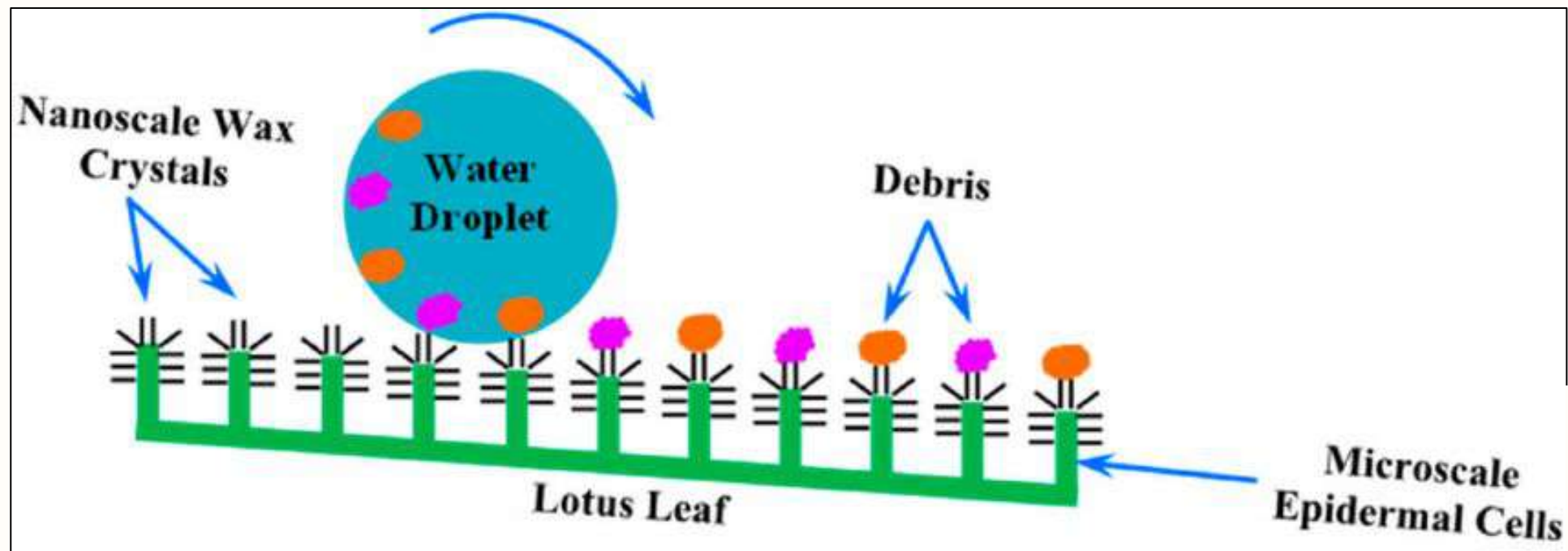
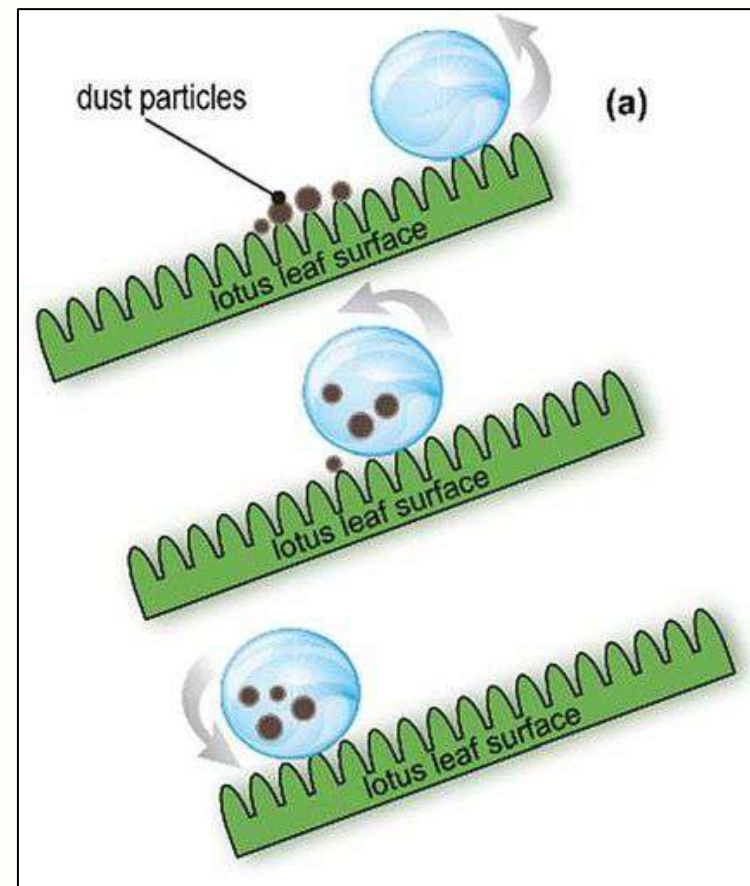
Arch. Precedent #1



Precedent 1

- Eastgate Centre (Harare, Zimbabwe) by Mick Pearce & Arup
- **Mechanism:** Passive **stack effect** (thermal buoyancy). Draws cool air in at the bottom; warm air naturally rises and exits top chimneys.
- **Wah Fu Application:** Uses a tall vertical shape to pull coastal breezes through shaded seating at ground level and dump hot air out the top.

Biomimicry



Lotus Flowers

Arch. Precedent #2



Precedent 2

- ICD/ITKE Biomimetic Pavilions (Univ. of Stuttgart) / Hydrophobic Surface Architecture
- **Mechanism: Micro-textured surface** causes rainwater to form spherical beads that roll off, carrying dirt and salt particles away.
- **Wah Fu Application:** Keeps the pavilion's exterior clean using monsoon rain, preventing salt-mist build-up and lowering maintenance costs.

Our Targeted Site

Why?

- Beautiful sea views 🌊
- Currently under-utilized 🚧
- Enhance accessibility to the waterfront for wheelchair users ♿
- Revitalize the waterfront area 📌



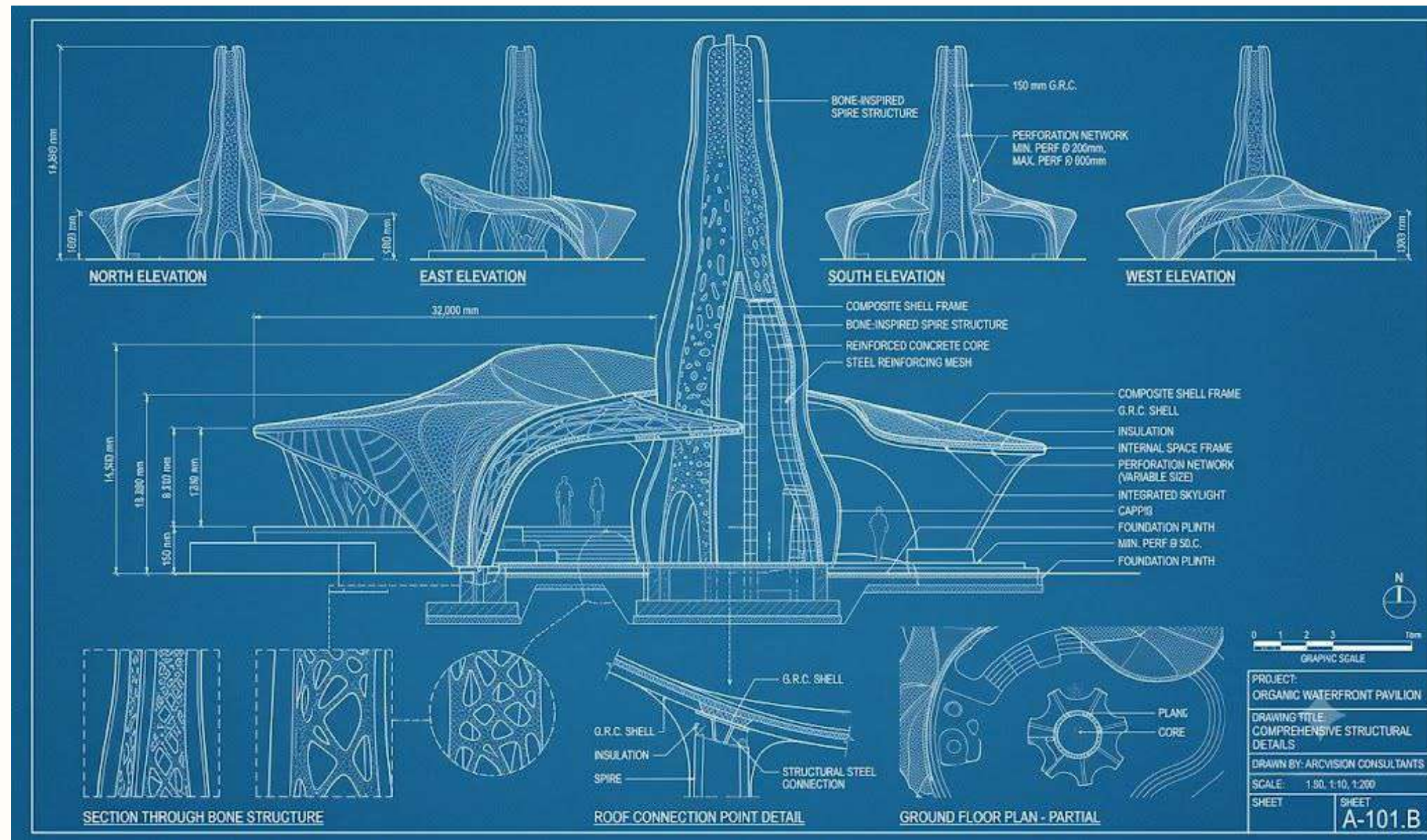
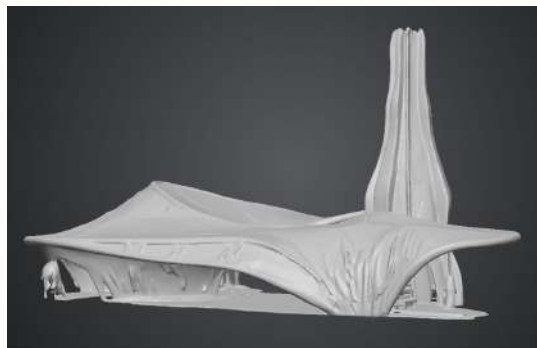
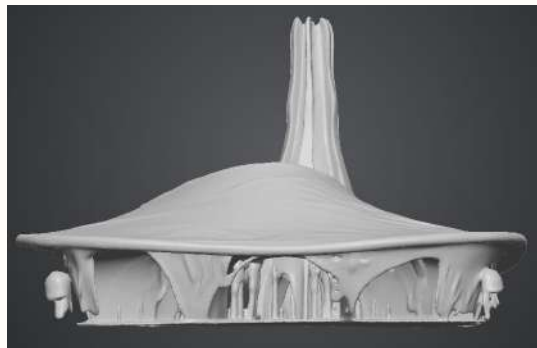
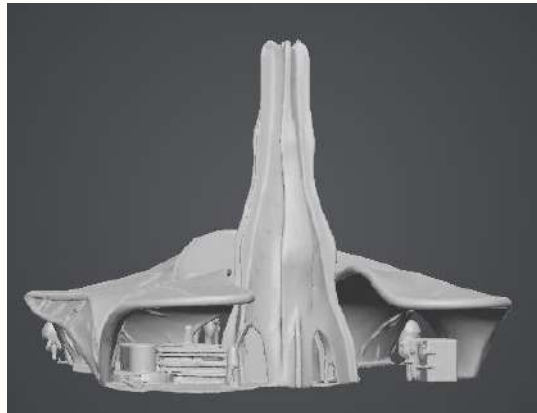
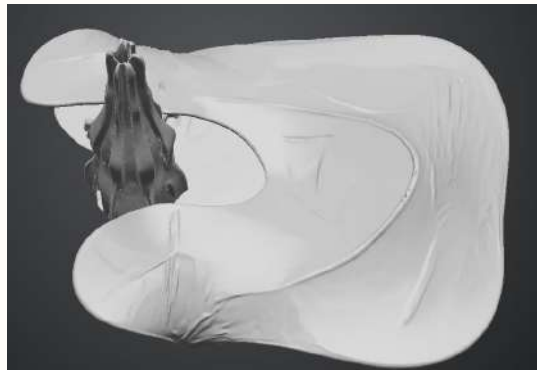
Target Users

- Elderly Residents
 - ◆ Finds a safe, shady, and accessible seaside space to escape isolation and play classic games. 🧓 🧓 🧓 🪄 🦽 🦼 🕶️ 🍵 🧶 📦 🌿
- Local Youth & Students
 - ◆ Learns about Wah Fu's unique history through interactive pavilions. 🧑 🧑 🎓 🎒 📝 📚 📖 🏃 🛹 🎨 🎮
- Community Volunteers
 - ◆ Uses the app to organize events and help look after neighbors. 🤝 🏠 🧑 🧑 🍲 🧹 🌱 📋 📢 ❤️



Idea 1

We will make a physical model of a public pavilion designed for Wah Fu using biomimicry derived from termite mounds and lotus leaves. The model showcases a vertical chimney structure inspired by termite mounds to demonstrate passive stack cooling, paired with a micro-textured exterior skin based on the lotus effect to demonstrate self-cleaning and rainwater runoff in a coastal environment.



Cheap and compact ✓
Clear and welcoming ✓
Can build multiple ✓

Lower capacity ✗
Difficulty implementing to hillside ✗
Visually unappealing (currently) ✗

Idea 2



Well-liked among residents ✓
Clear and recognizable ✓
Can fit many activities ✓
Integrates terrain structure ✓

Not practical to build ✗
High-cost and maintenance ✗
Accessibility concerns ✗
Confusing navigation ✗

Idea 3

Instead of building a completely new structure, we will simply add cost and space efficient tables, chairs, and benches where people of all ages can connect, relax, and play. Because there are a lot of trees everywhere, we do not require much additional shading structures.



These chairs are inspired by lotus and lily flowers to be able to be folded into neat, light, and compact structures which can be easily unfolded when needed.

Simple and easy to build ✓
Cost efficient ✓
Does not require heavy alteration of the landscape and terrain ✓

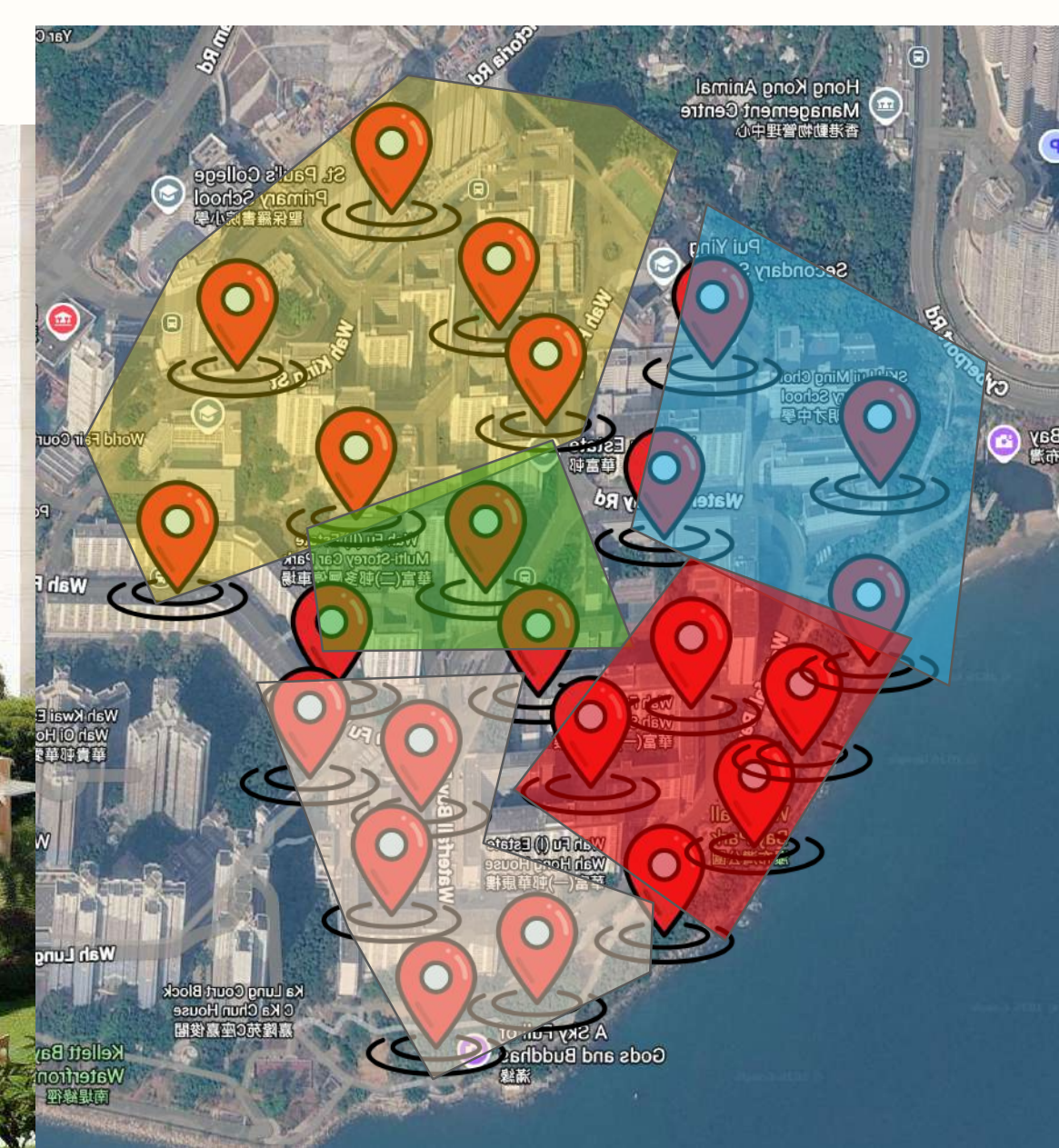
Heavily affected by weather ✗
Not innovative ✗
Accessibility concerns ✗

Idea 4

We will place many large scale pavilions across Wah Fu Estate for different areas

Many different activities ✓
Accessible to whole estate ✓
Many different spaces for residents to choose from ✓
Many designs for different areas ✓

Target area/site is too big ✗
Too big of a scale/too much ✗
Hard to manage all ✗
Not focused/specific ✗
Affecting other residents that isn't using the space/too loud ✗



Concept: Combining ideas into a comprehensive design



We will design 3 types of pavilions:

Showcase Pavilion



Size: Large

Amount: 2

Purpose: Provide information, showcase exhibits

Flexible/Activity Pavilion



Size: Medium

Amount: Several

Purpose: Multi-use (Chill, exercise, events)

Connector Pavilion



Size: Small

Amount: Some

Purpose: Shading, accessibility

Pavilion A: Showcase Pavilion

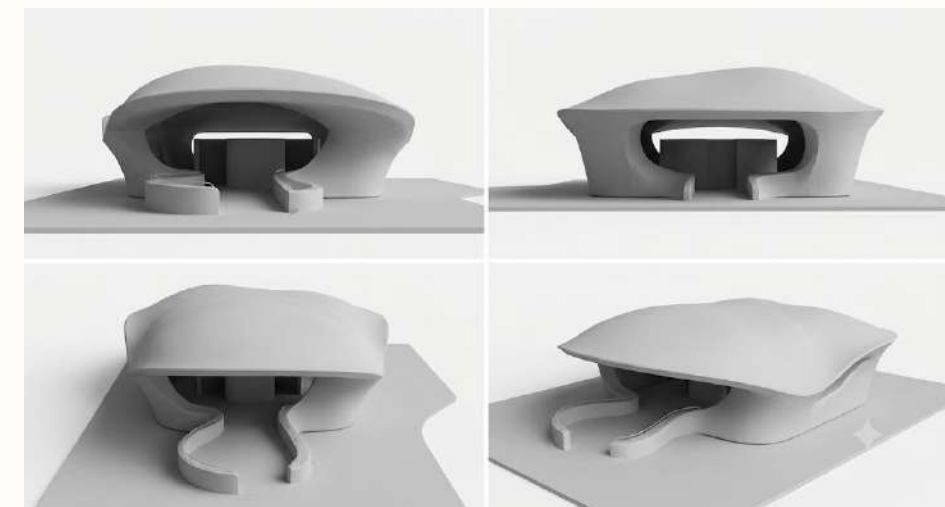


Elevated

Enclosed

One main entrance

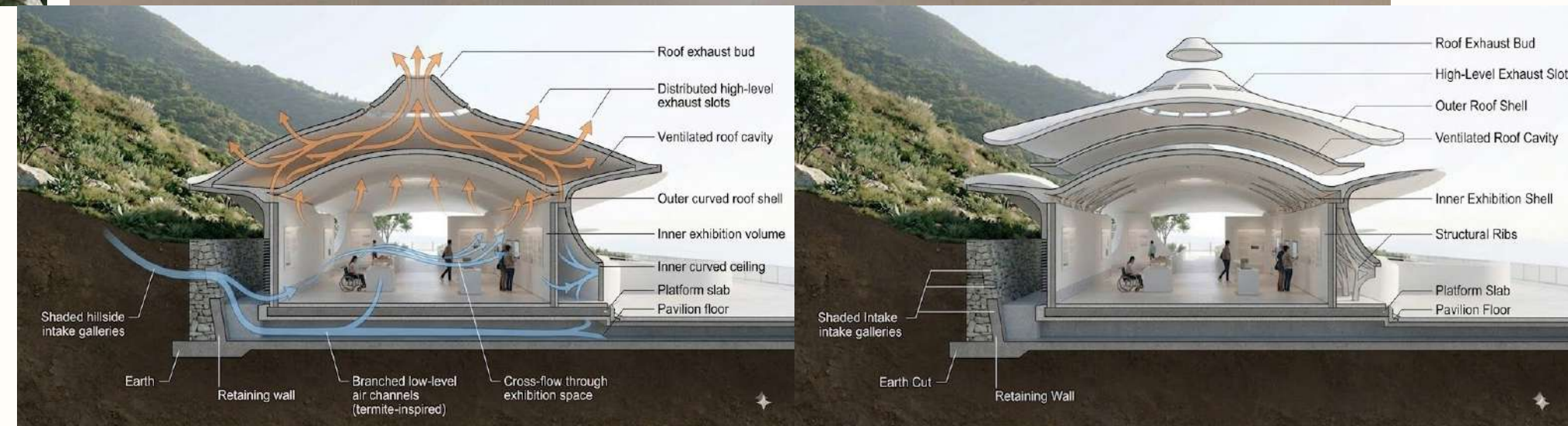
Windows



Ventilation for Pavilion A



Stack Ventilation
Air intake louvre
Cool air passes through interior
Network of tunnels/pipes



Pavilion B: Flexible Pavilion



Thin, unobstructive
pillars

Curved roof for
shading

Customisable, multi-use

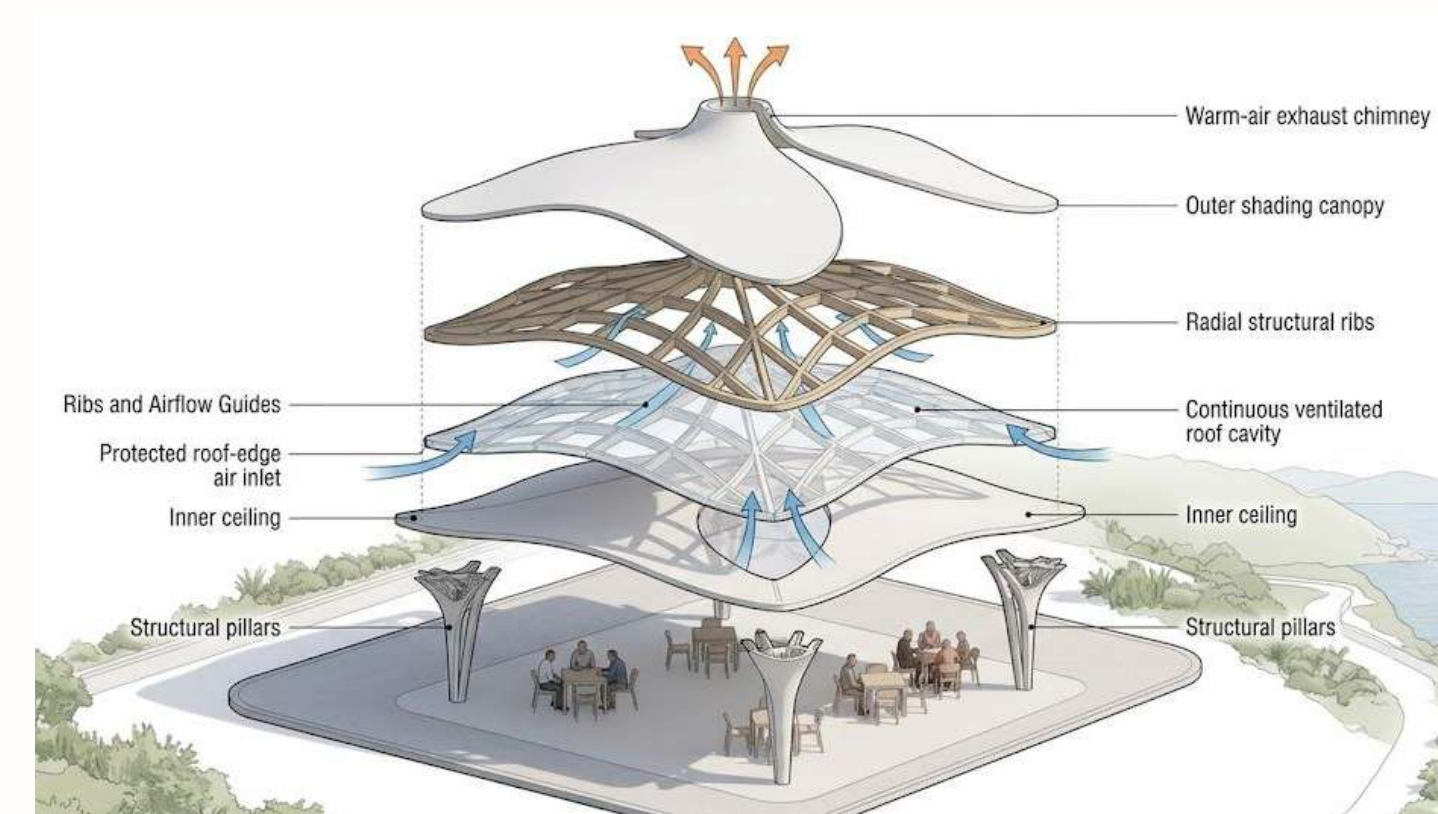
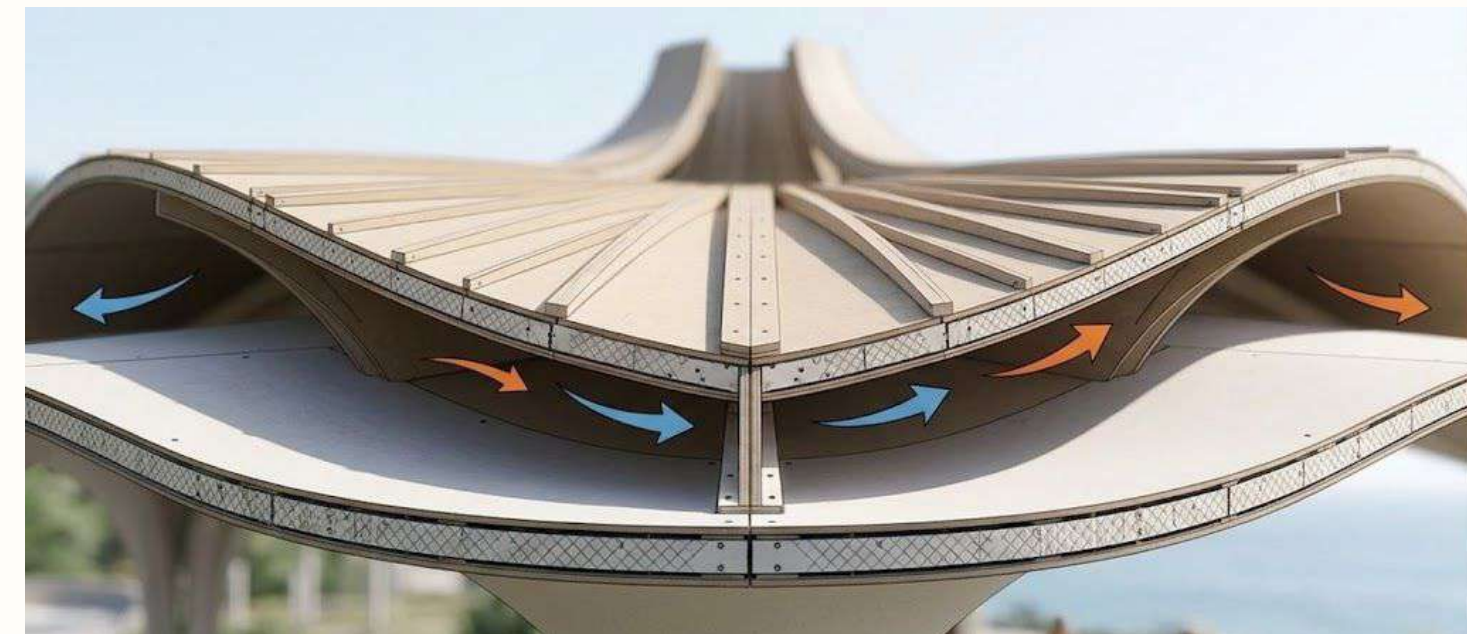


Ventilation for Pavilion B



Cross Ventilation
Open structure
Sea breeze, wind

Stack Ventilation
Double-roof system
Warm air rises



Pavilion C: Connector Pavilion



Wayfinding Design

Colored path indicators
Clear signs

Accessibility

Added wheelchair ramps
Safe guardrails



Community Furniture Design



Lightweight foldable chairs and tables.

Xiangqi/Go chess boards

Chess pieces placed inside the table

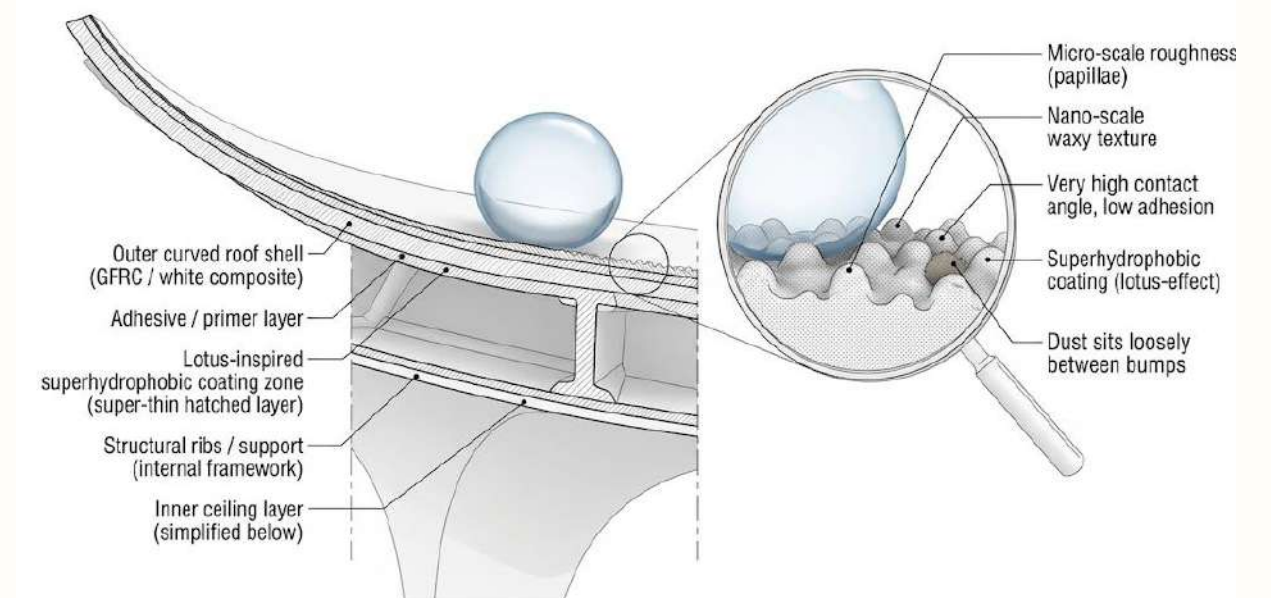
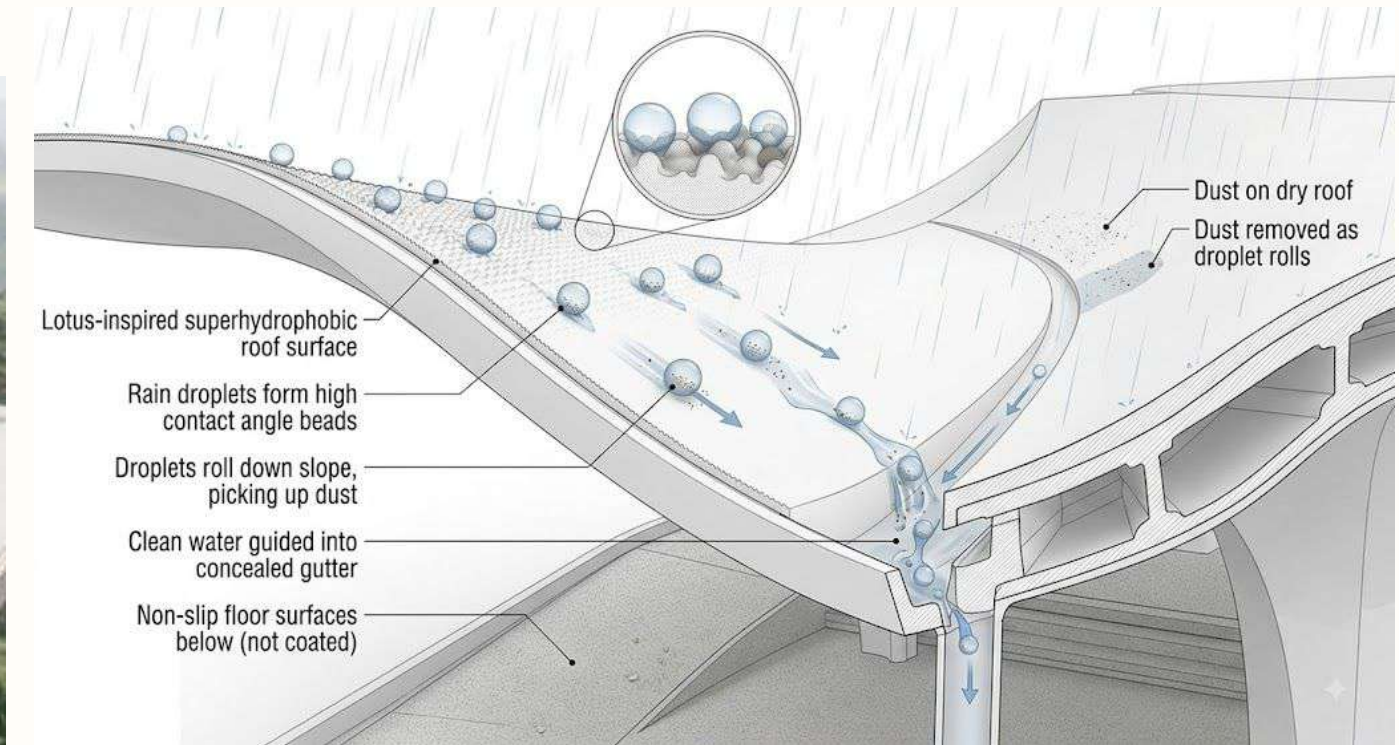
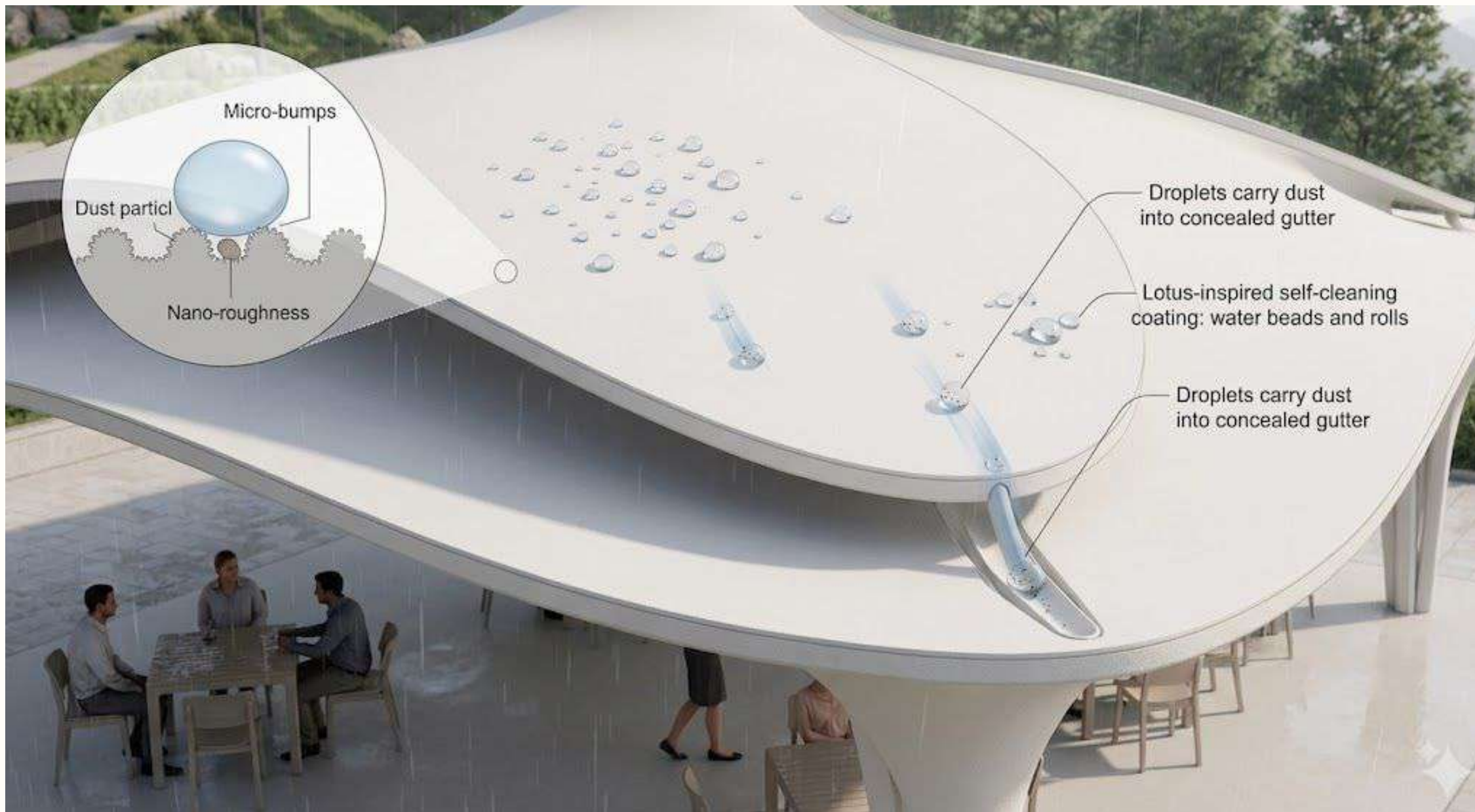


Chairs and tables can be easily folded to the side for other activities inside the pavilion.



(The exterior parts in these visualisations are inaccurate. Please only focus on the interior)

Self-cleaning Roof



Elderly Dislikes White



So boring
and bland



Citizen's Canvas

Empty walls for citizens to draw and paint murals on them for decoration. In the showcase building, there will also be space to showcase art projects done by the community and other art pieces.







M1: Project Introduction



M2: Rewarding System

To guide visitors through our project mission, rewards program, seasonal events, and culinary marketplace.



M3: Limited Time Event

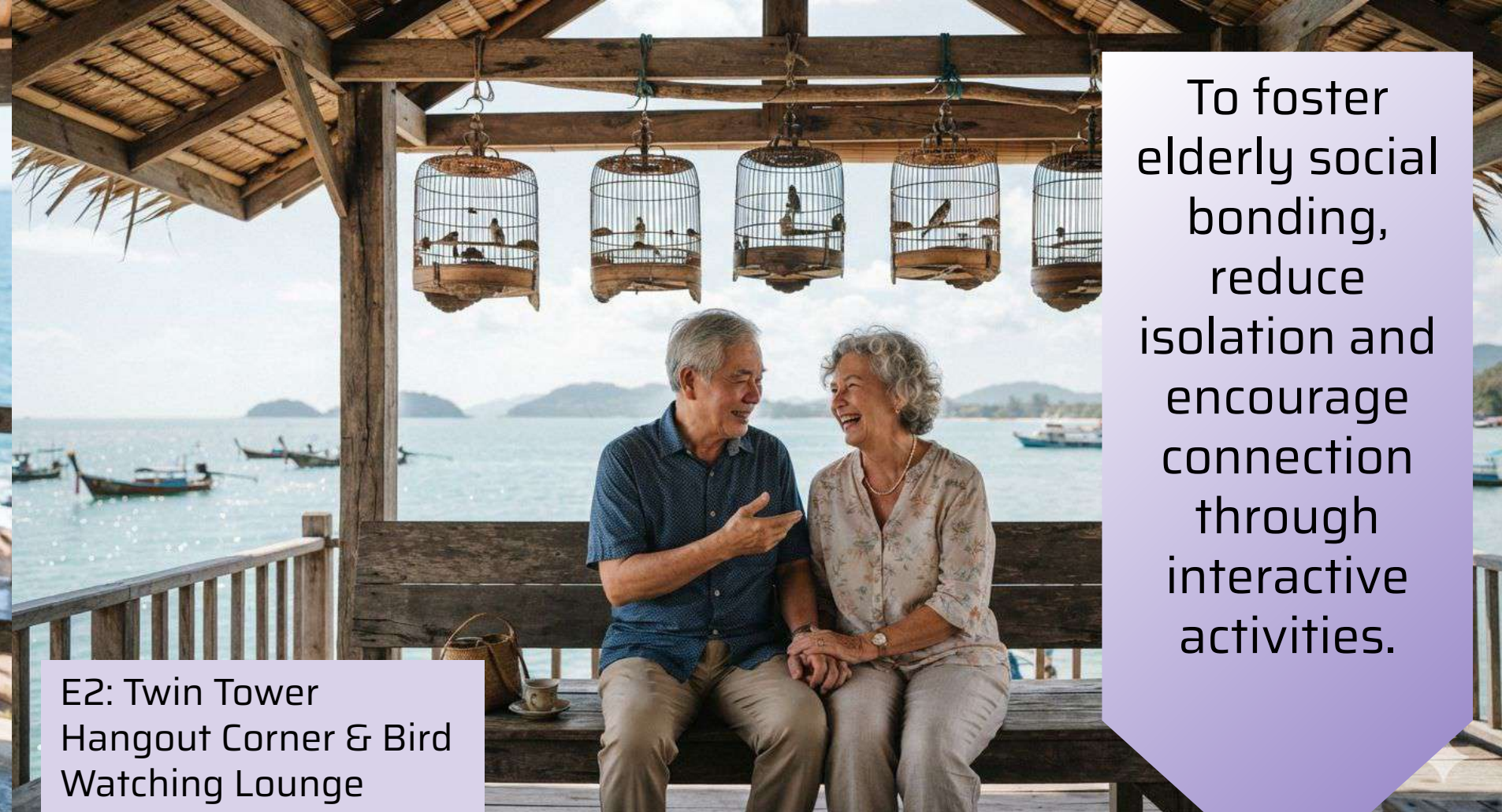


M4: Food Market

Elderly Pavilions



E1: Classic Chinese Board & Card Games



E2: Twin Tower Hangout Corner & Bird Watching Lounge

To foster elderly social bonding, reduce isolation and encourage connection through interactive activities.



E3: Wah Fu Archives

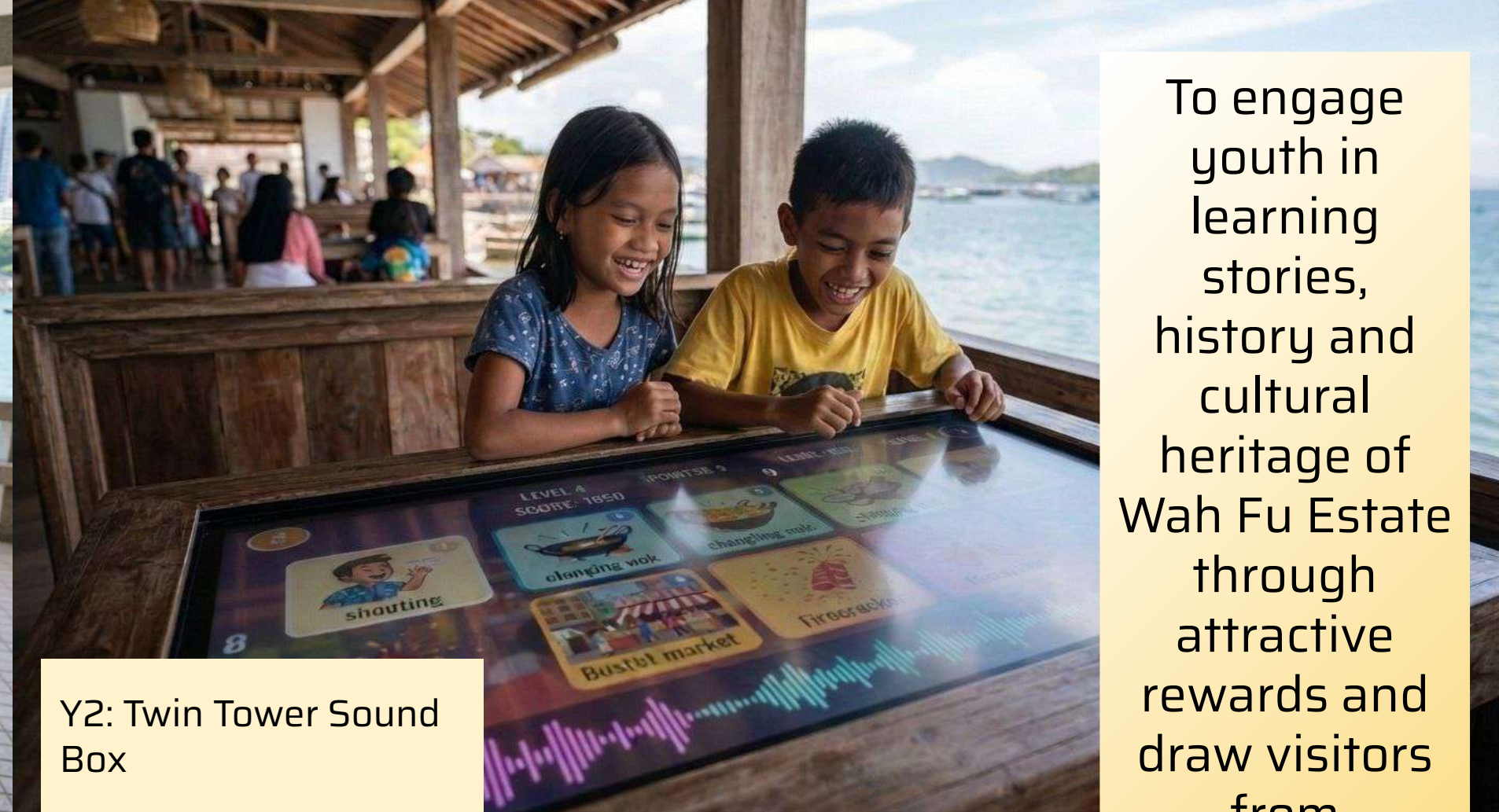


E4: Vitality Hub

Youth Pavilions



Y1: Interactive Wah Fu Time Machine



Y2: Twin Tower Sound Box



Y3: 天光墟 (Dawn Market) Balance Beam Challenge



Y4: Corridor Games

To engage youth in learning stories, history and cultural heritage of Wah Fu Estate through attractive rewards and draw visitors from HK/around the world to explore and discover Wah Fu.

Community Activities

- M1: Project Introduction
- M3: Limited Time Event
- E1: Classic Chinese Board & Card Games
- E2: Twin Tower Hangout Corner & Bird Watching Lounge
- E3: Wah Fu Archives
- E4: Vitality Hub



- M2: Rewarding System
- M4: Food Market
- Y1: Interactive Wah Fu Time Machine
- Y2: Twin Tower Sound Box
- Y3: 天光墟 (Dawn Market) Balance Beam Challenge
- Y4: Corridor Games

Community APP Integration

Vibe-coded with Vercel. Link: <https://connectwahfu.vercel.app/>



Interact with community

Share stories

Discuss hobbies

Ask about Wah Fu

Updates & events

Chat with neighbors

Sign up

WHAT'S ON

Events

Aug 23 – 29

S

M

T

W

T

F

S

23

24

25

26

27

28

29

Month

Week

05 SEP

Social

Neighbourhood Go tournament

🕒 2:00 PM – 5:00 PM

📍 Community Hall, Block 2

👤 22 going

Signed up ✓

NEIGHBOURS

Chat

Block 3 Residents

Auntie Chan: Don't forget bin collection moved to Thursday

2m

3

Wah Fu Lantern Walk

You: Count me in, bringing extra lanterns!

18m

Tai Chi Morning Group

Coach Fong: See everyone at the podium garden tomorrow

1h

1

←

Lost & Found — Wah Fu

210 members

Ah Ming

Found a set of keys near Block 7 lobby, left them with the security guard.

AM

11:10 AM

Security – Mr. Ho

They're at the Block 7 counter, come by anytime with ID to collect.

SM

11:22 AM

I like pretzels :)

now

Posts

Questions, stories and h from your neighbours.

+ Add post

Y

You

Question

Hi all, looking for someone to play chess with! Meet me at the flexible pavilion!

Reply to post

now

ML

Mrs. Leung, Block 6

Question

Does anyone know a good spot near the estate to buy fresh vegetables in the morning? Just moved in last week!

Hide 2 comments

UW

Uncle Wong

The market by the bus terminus opens at 6am, best produce goes fast!

18m

Y

You

Don't buy vegetables, buy pretzels

now

Write a reply...

Design goals analysis

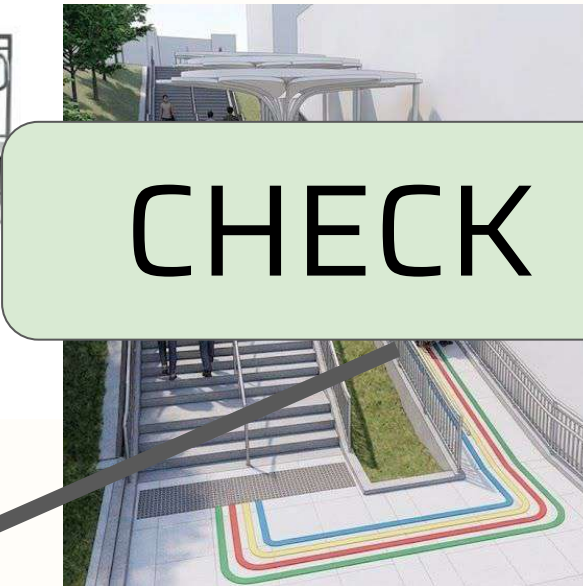
Social & Community

- Provide a welcoming space for leisure, socializing, and community activities.



Daily, leisure, fun, and health activities (chess, Tai Chi, etc).

- Ensure the pavilion is accessible and easy to move through.



Dedicated sloped walkways for wheelchairs or those who struggle with walking stairs.



Bilingual signs for wayfinding.

Climate and comfort

→ Improve comfort through natural ventilation and shading.



Passive ventilation designed from biomimicry.

Sustainability

→ Reduce reliance on mechanical cooling and energy use.



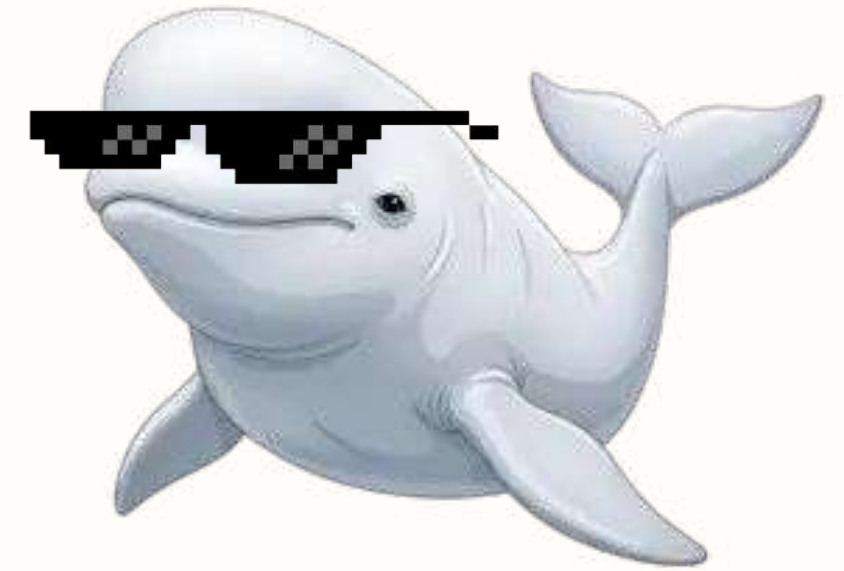
CHECK

Community Mascot



Ursula the UFO

- Why an UFO?
 - ◆ During the 1970s-1980s, Wah Fu residents reported seeing an UFO , so it's part of Wah Fu's history!
- Friendly Wayfinding
 - ◆ "Ursula" appears on floor paths and signs to guide residents.
- Digital Companion
 - ◆ AI chatbot inside our app.



Donny the Dolphin

- Why Dolphin?
 - ◆ Chinese white dolphins have historically been sighted in the coastal waters and bays near Wah Fu Estate!



第三屆 青年建築師計劃



Design Scientist 2026 Incubation Program
The 3rd Annual Program of The Citizen Architect Initiative



AI-For-Good 仿生設計夏令營

Artificial Intelligence & Biomimicry Design Workshop | Summer Cohort