

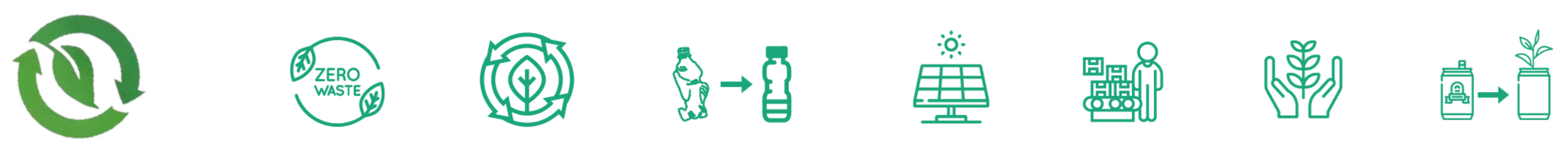


FACADE (DAY VIEW)

BA (HONS) INTERIOR ARCHITECTURE 2025-2026_HKU SPACE LECTURER : MR. ARTHUR LO LAI MAN WONG_MAN STUDENT NUMBER: M01037545

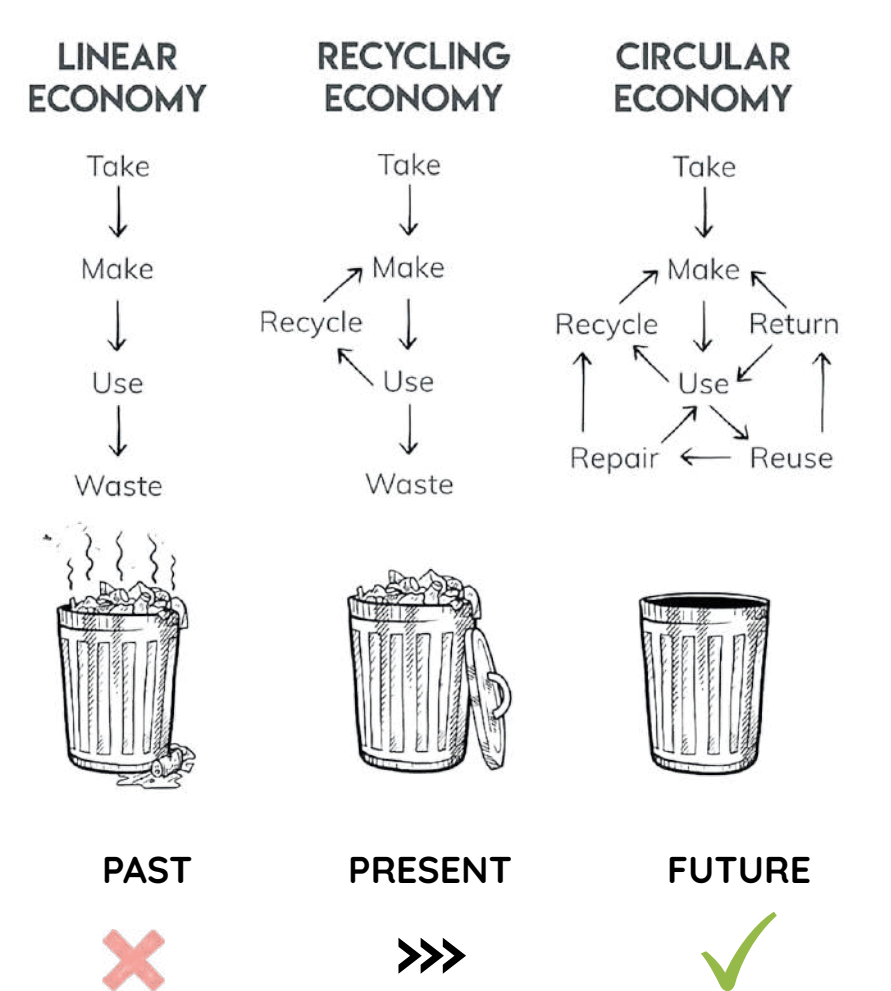
UPCYCLING ACADEMY LAB

WASTE AGE



01. PROJECT NARRATION

We once built a prosperous urban landscape through speed, consumption, and construction, but at the same time, we created a massive amount of waste and spiritual "pollution". In the fast-paced development of modern cities, "waste" has become an unavoidable consequence. Hong Kong, as a high-density, consumption-driven metropolis, produces over 10,000 tonnes of solid waste daily. Much of it is used once and discarded, exposing the limitations of the "linear economy" — "take → make → use → discard". This project focuses on "Circular Economy" and "Zero Waste" as its core themes, exploring how architecture and interior design can transform waste into a reusable resource system. The design acts not only as a physical structure, but as an educational platform that visualizes the process of regeneration — allowing people to experience and understand the continuous flow of materials and energy. This experience lab is not just about space design, but also an educational concept that promotes "mind filtering", allowing people to re-understand the meaning of "waste" and put the urban vision of "waste regeneration" into practice.



Rethink / Redesign
Reduce
Reuse
Recycle / Compost
Material Recovery
Residuals Management
Unacceptable

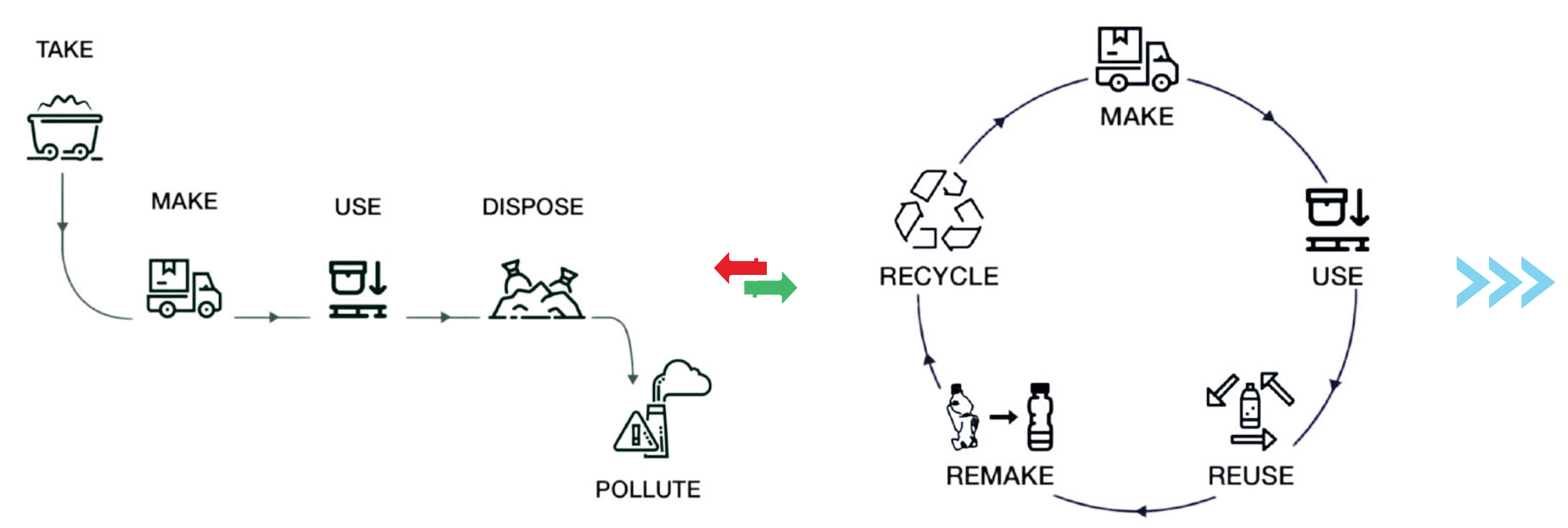


WEST VIEW

02. PROJECT VISION

CIRCULAR ECONOMY × ZERO WASTE

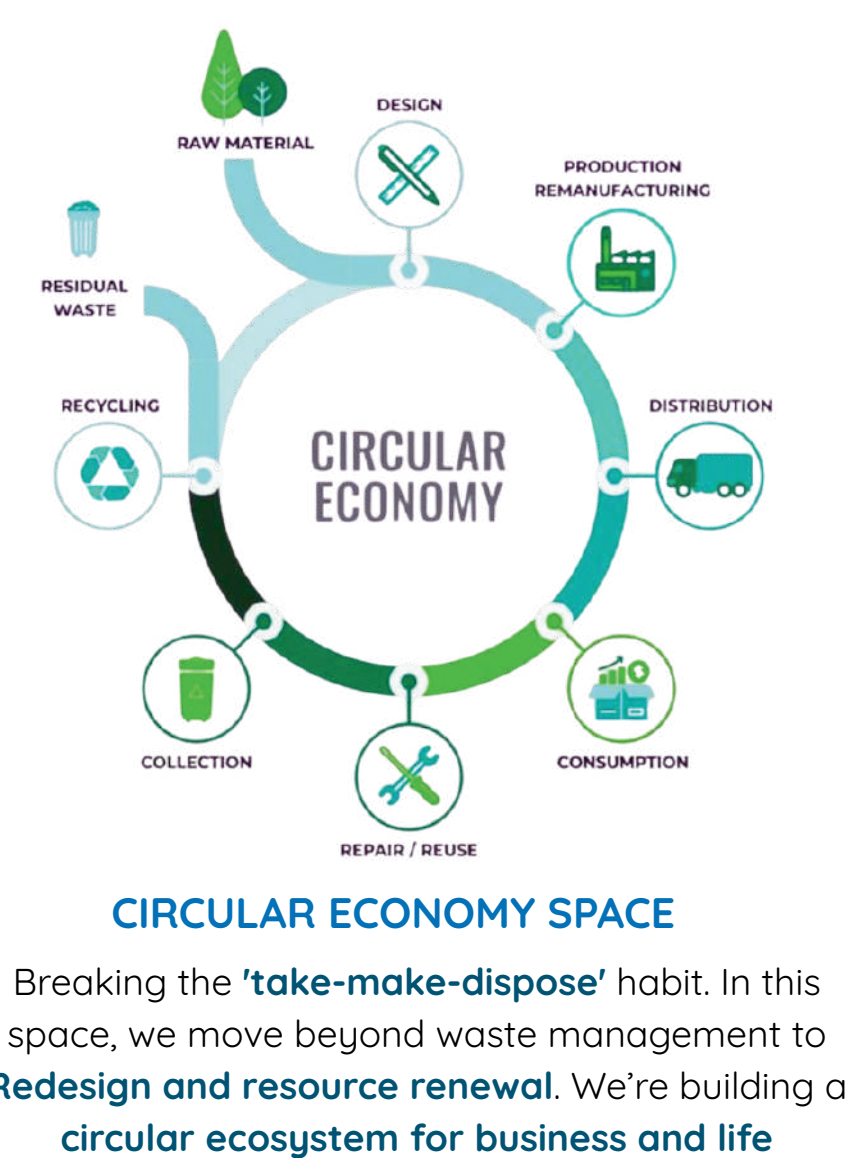
AIM :
To create an "experiential architectural journey" that transforms people's awareness and behavior — guiding them "from wastefulness to regeneration", through learning, interaction, and sustainable living experiences.



OBJECTIVE:
An architectural journey that transforms waste into wisdom, and space into regeneration

LINEAR ECONOMY
The traditional production model of "Take → Make → Use → Discard". A linear process, once resources are used up, they become waste

CIRCULAR ECONOMY
A closed-loop system of "Design → Use → Recycling → Regeneration → Reuse." Mimicking the natural cycle, resources are continuously circulated and reused, reducing waste.



CIRCULAR ECONOMY SPACE
Breaking the "take-make-dispose" habit. In this space, we move beyond waste management to Redesign and resource renewal. We're building a circular ecosystem for business and life

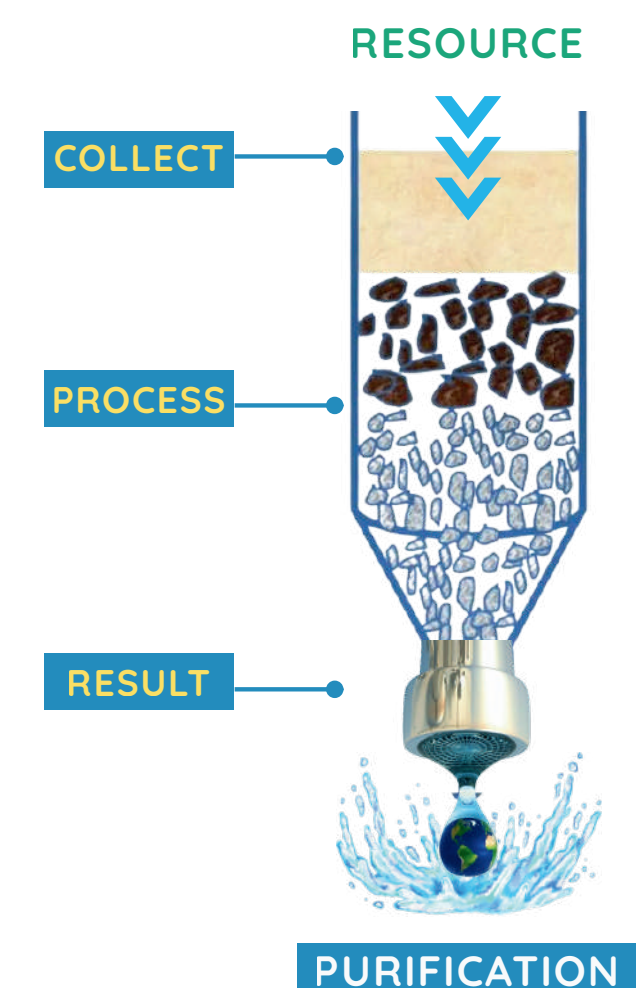
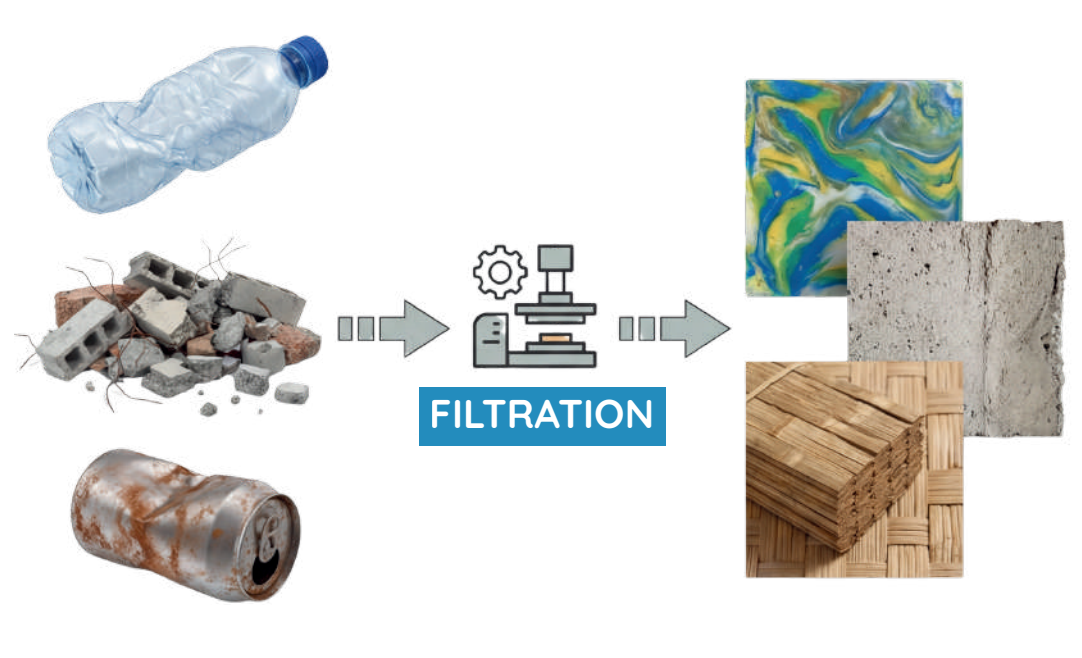
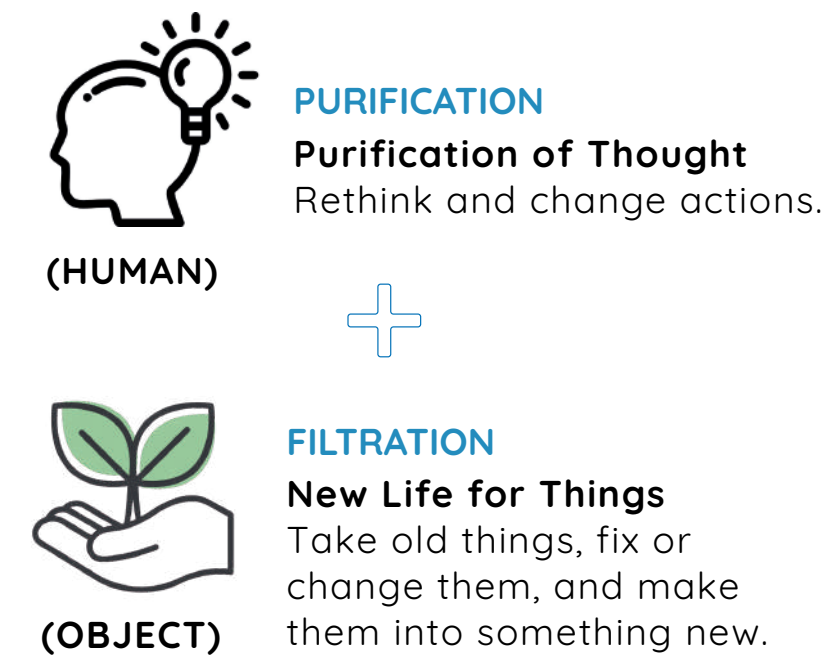


REAR VIEW

03. DESIGN IDEAS

FILTRATION + PURIFICATION

Serves as both a physical and metaphorical system — transforming waste into awareness, pollution into reflection, and decay into renewal. The architecture itself becomes a "living filter", integrating rainwater harvesting, recycled materials, energy loops, and educational installations to make the invisible process of sustainability visible.



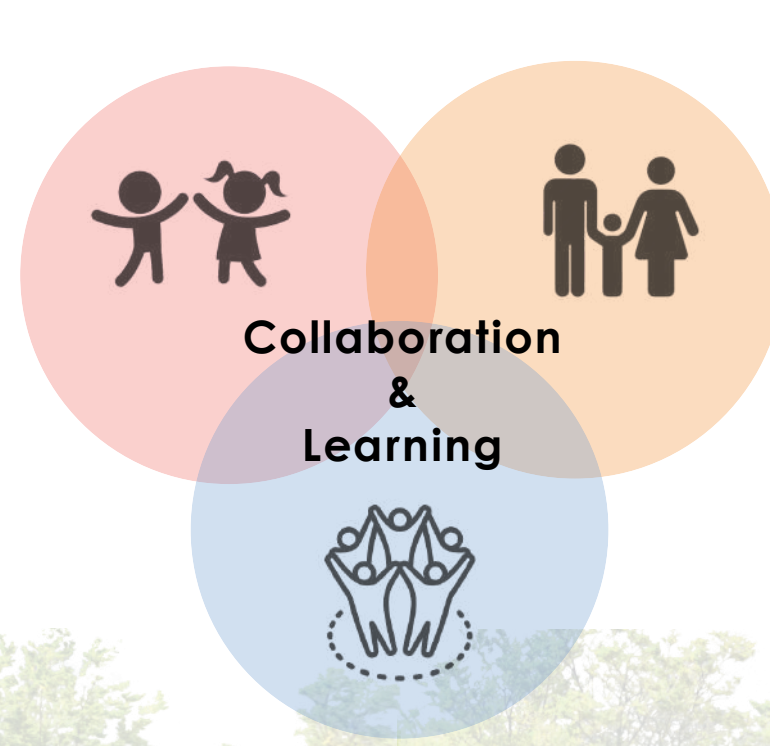
04. TARGET AUDIENCE

RESPONSIBLE FOR THE NEXT GENERATION

Our Next Generation:
Hope and Challenges for the Future

Combining the theme of "zero waste" with "educational spaces" and targeting the "children and parents" group.

It is an educational and entertaining parent-child space.



- Children (3-12)**
Early Awareness Responsibility & Achievement
- Parents**
Role Modeling & Leading by Example
- Local Community**
Transformative educational platform



EAST VIEW



FACADE (NIGHT VIEW)

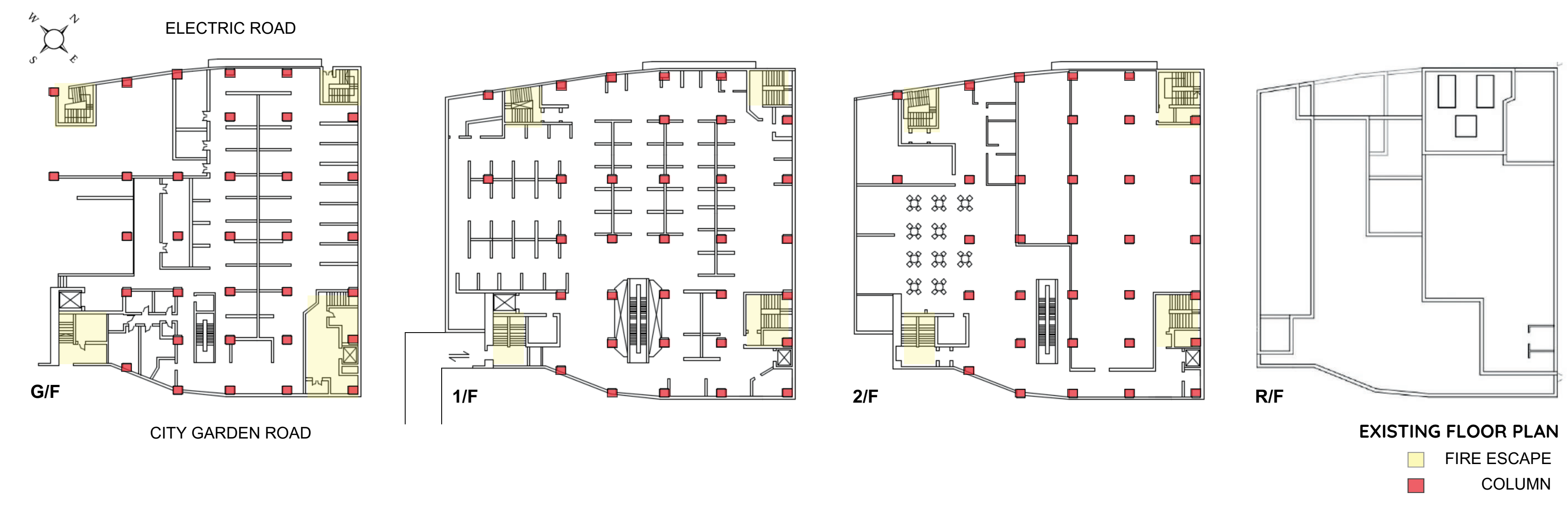
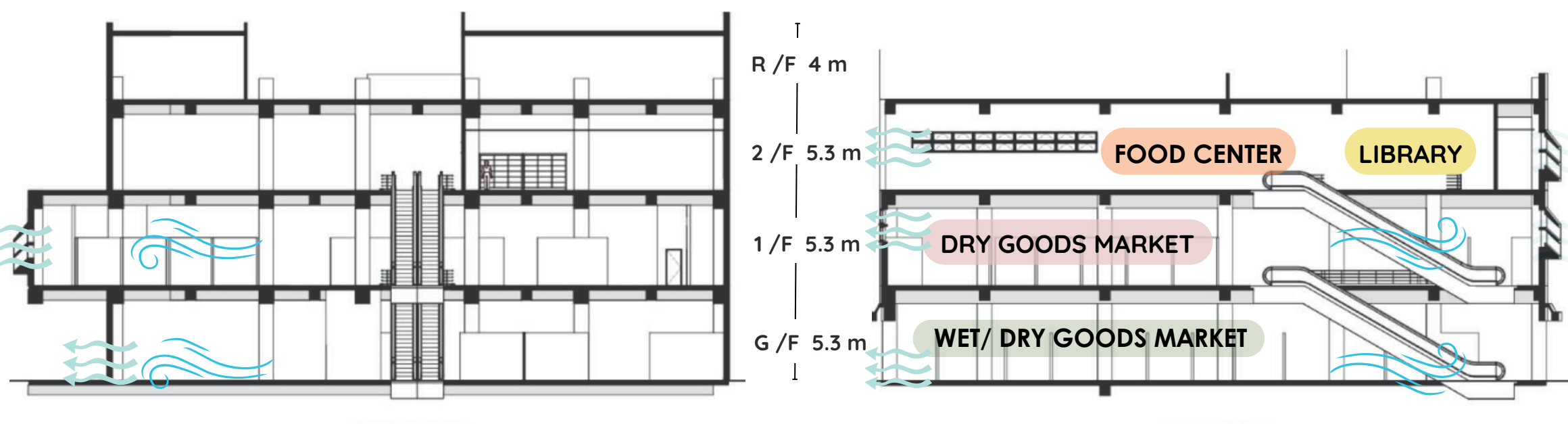
05. INTRODUCTION OF BUILDING



ELECTRIC ROAD MUNICIPAL SERVICES BUILDING, 229 ELECTRIC ROAD, FORTRESS HILL, HK

Electric Road Municipal Services Building is multi-purpose municipal building located in eastern district. Electric Road Market is located in the Electric Road Municipal Building in Fortress Hill. It is a two-story market in the area. The building also has a public library and is backed by an urban garden. The Municipal Building on Electric Road in Fortress Hill is incredibly convenient when it comes to transportation. It has a pedestrian bridge connecting to the MTR station.

TRAFFIC TRANSPORTATION MTR BUS TRAM



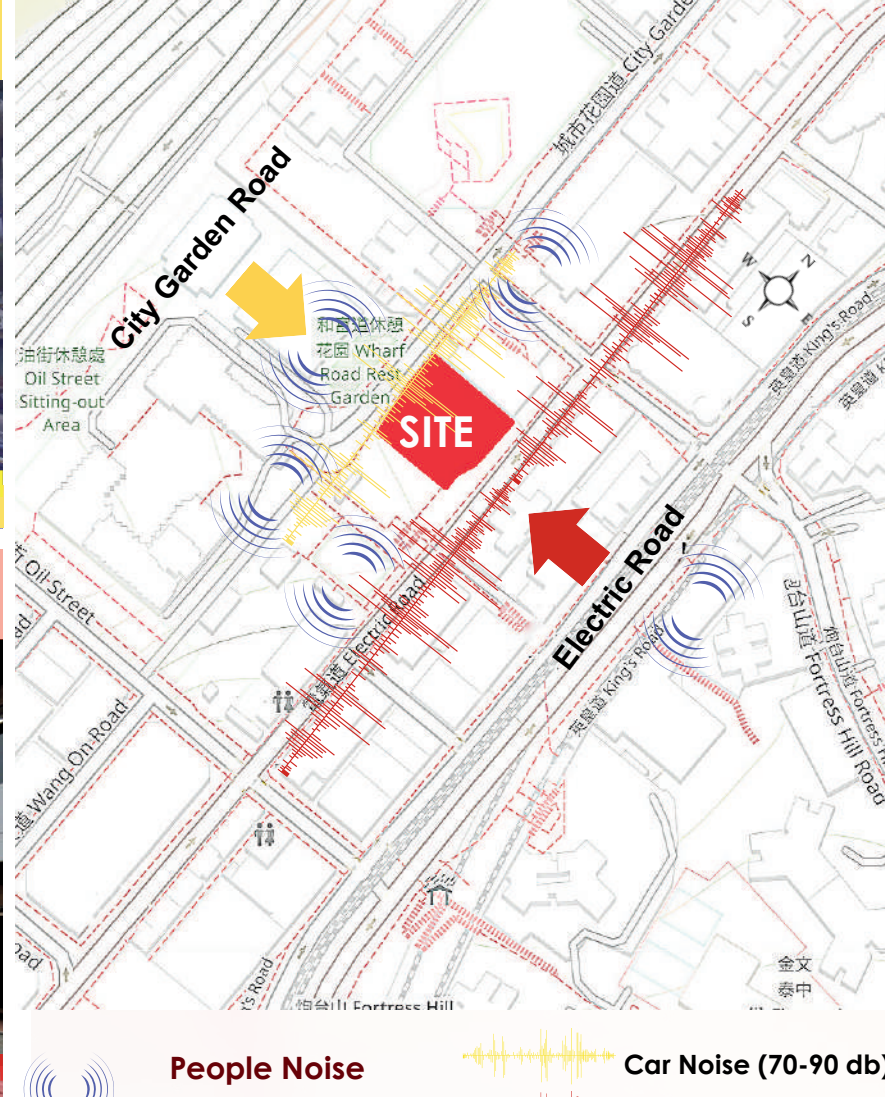
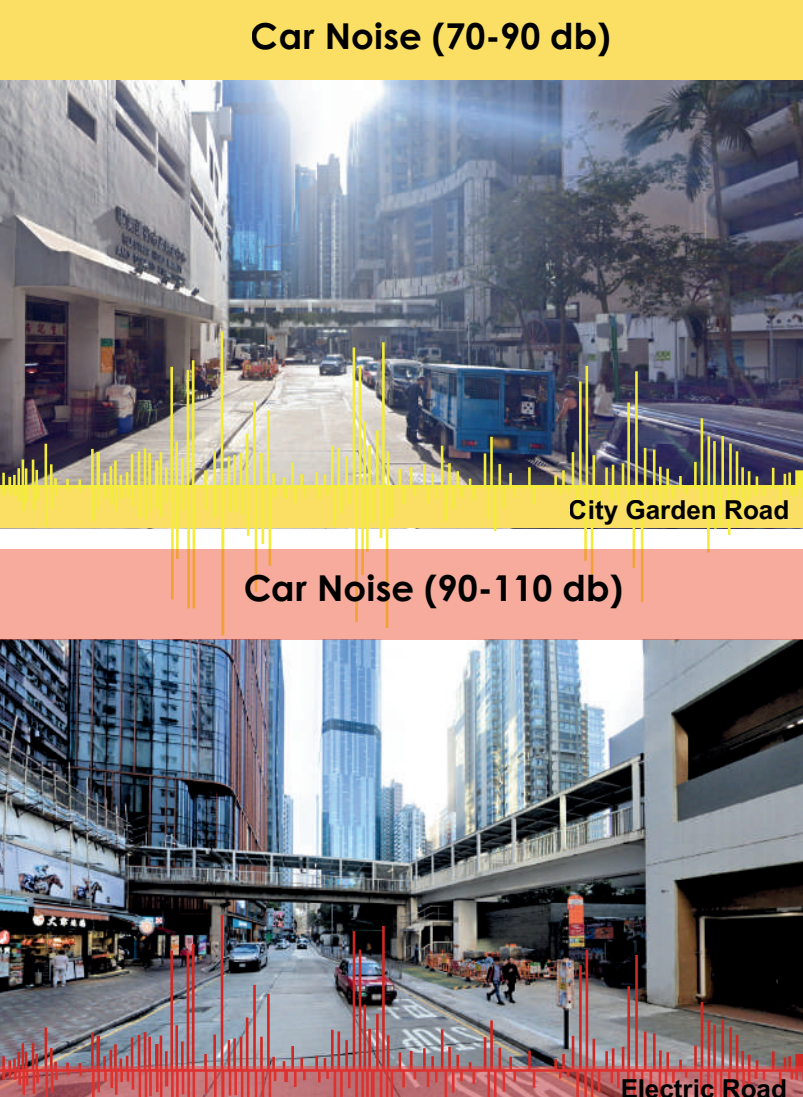
06. SITE CHARACTERISTICS

BUILDING MATERIAL



The original building's exterior and interior colours are dull and plain, lacking layers and contrast, creating a heavy and depressing atmosphere. The layout is closed, with too many columns blocking views and movement. Without clear wayfinding, users easily lose direction, and the circulation becomes confusing, making it hard to create a comfortable and continuous spatial experience.

07. NOISE

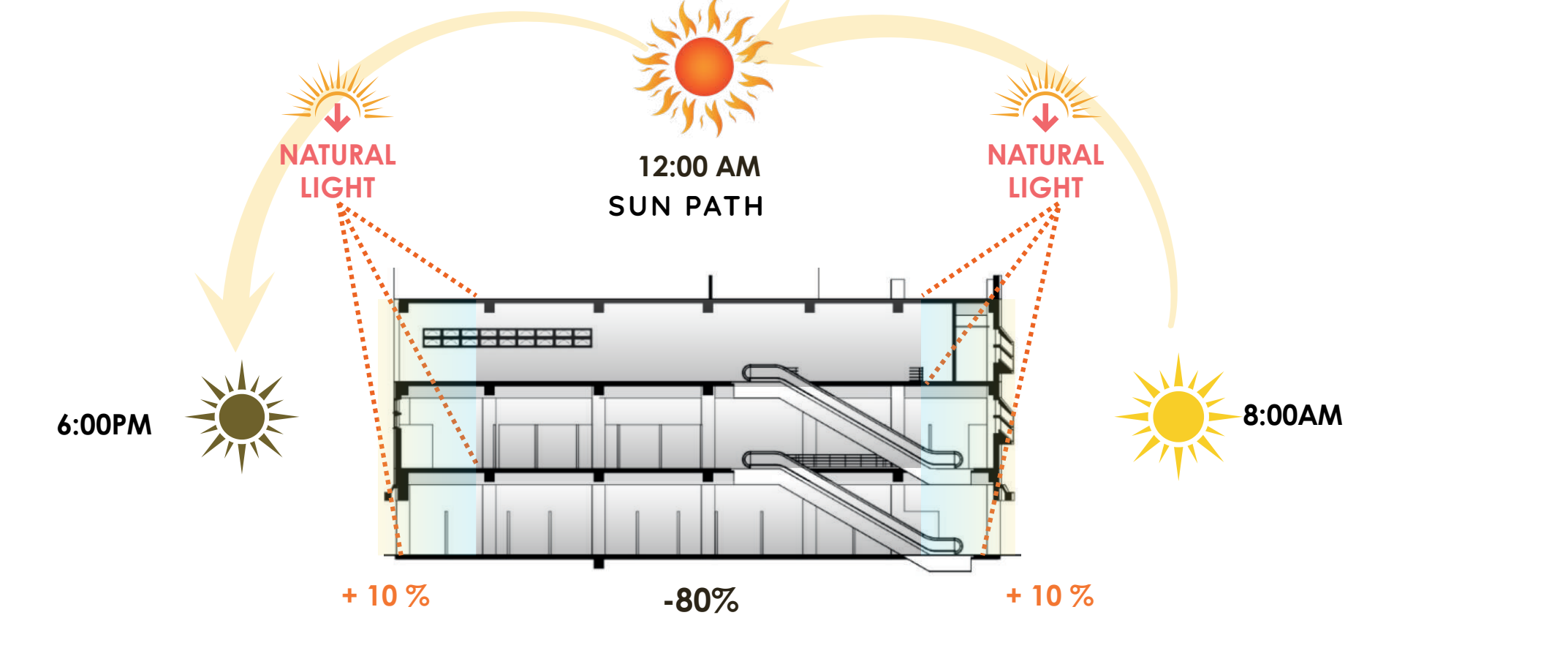


(City Garden Road)
Shows a relatively wide street with tall buildings and trees on both sides. In the image are cars and a blue tram (or bus).

(Electric Road)
This photo shows a busier, multi-level urban traffic junction. The scene includes ground traffic, an elevated pedestrian bridge system (with people walking), and shops along the street. The background features towering skyscrapers.

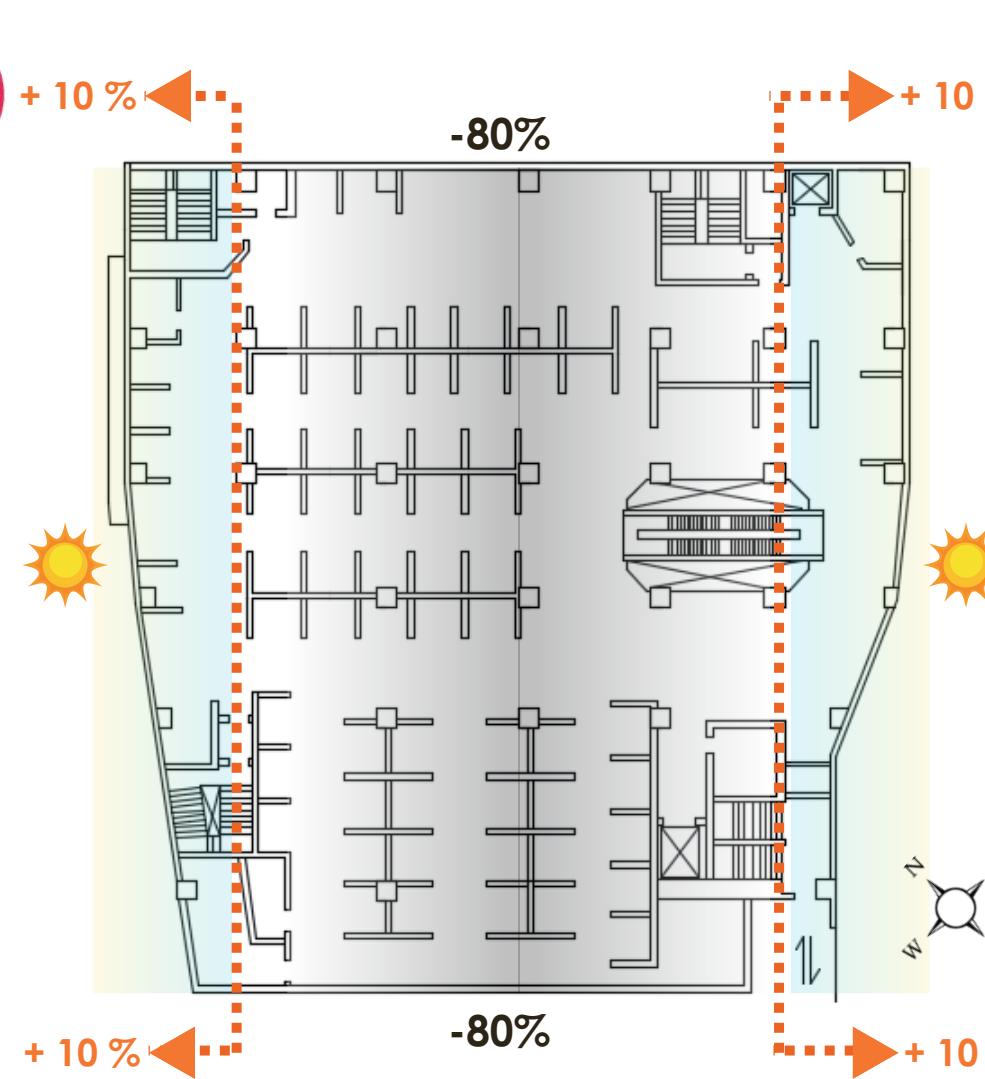


08. SITE ANALYSIS
Shortcomings of the Building



ISSUE 01
The ventilation is poor

- 01. Energy Efficiency Issues: Using lights instead of sunlight uses more electricity and lowers energy efficiency.
- 02. Spatial Perception Issues: Not enough light makes rooms look small and narrow, and people feel less comfortable.
- 03. Emotional and Psychological Impact: Not enough light can make people feel sad, anxious, or depressed.

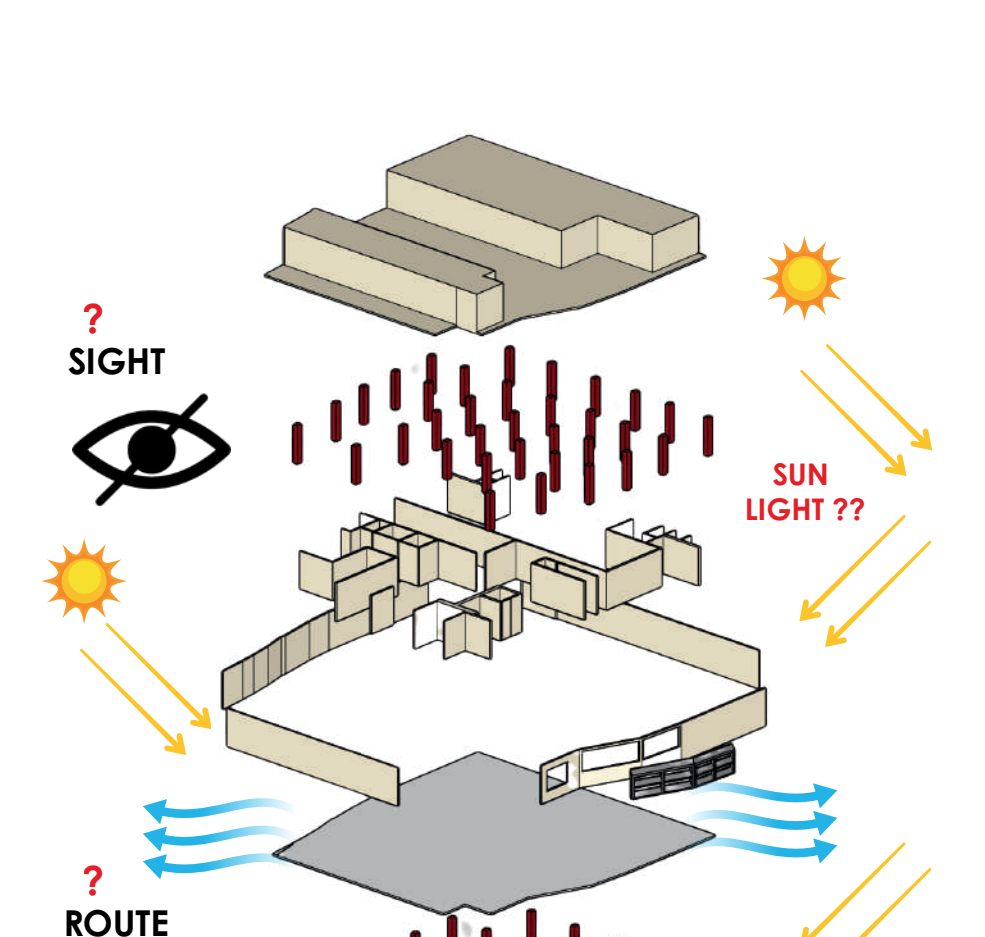


ISSUE 01
Design Strategies

- 01. Increase Window Area: Design larger windows or floor-to-ceiling windows to bring in more natural light.
- 02. Use Natural Light: Install natural lights in the roof, especially in deeper spaces, to effectively bring in natural light.
- 03. Atrium design: Because atrium design can bring in natural light and promote ventilation, it helps reduce energy consumption for heating, cooling, and lighting, thus improving the building's energy efficiency.

ISSUE 02
The ventilation is poor

- 01. Decreased Air Quality: Polluted air and bad gases cannot leave. Indoor air gets worse and hurts health.
- 02. Bad Smell: Stagnant air can cause odors to linger, resulting in unpleasant indoor smells that affect the comfort of occupants.
- 03. Impact on Mental Health: Poor air quality and an uncomfortable environment place can make people feel tired, and hurt their mental health.

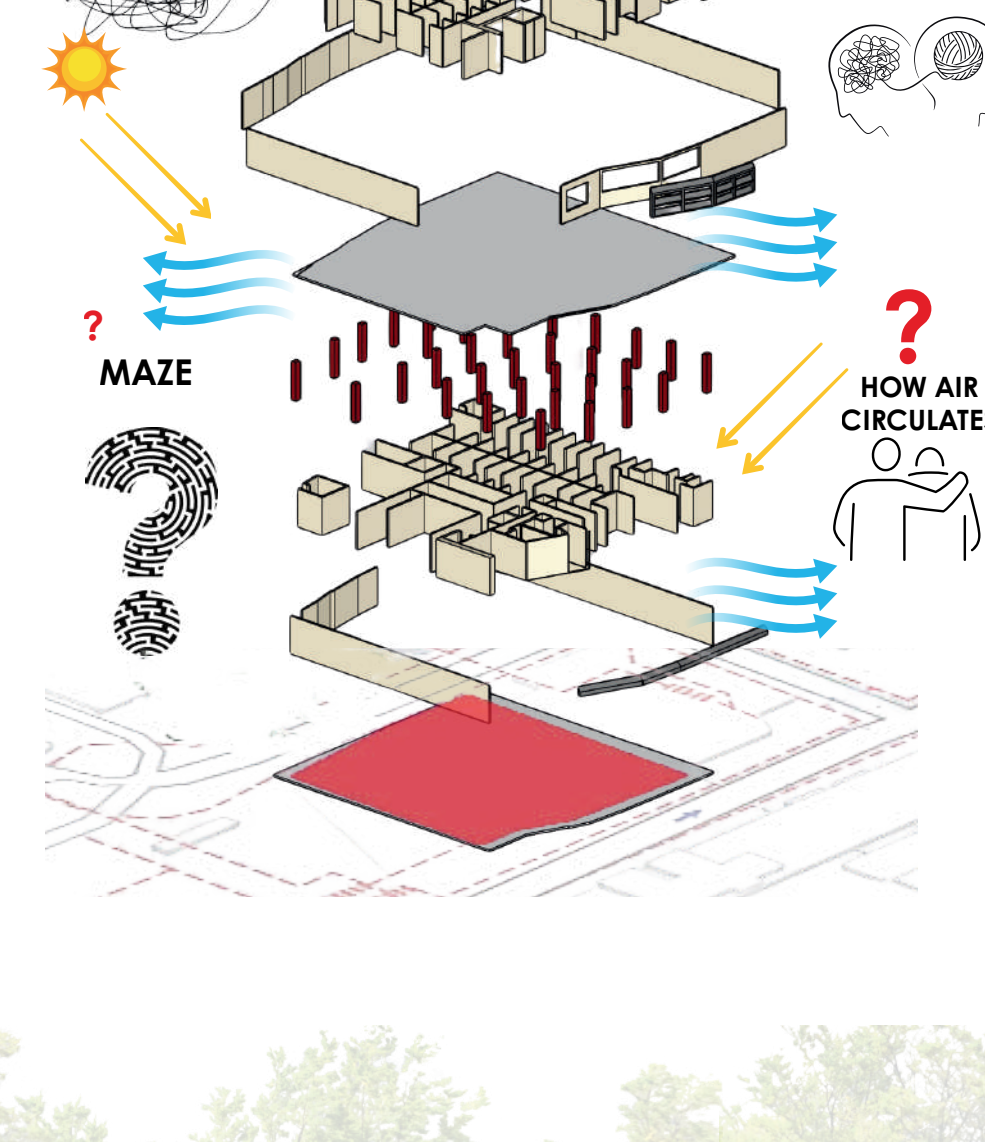


ISSUE 02
Design Strategies

- 01. Increase natural ventilation: Design windows and vents to promote natural airflow, reducing reliance on air conditioning.
- 02. Incorporate green plants: Plant greenery indoors or around the area, which can improve air quality and increase oxygen levels.
- 03. Improve building materials: Choose low volatile organic compounds (VOCs) building materials to reduce the release of harmful gases.

ISSUE 03
Space Utilization Efficiency

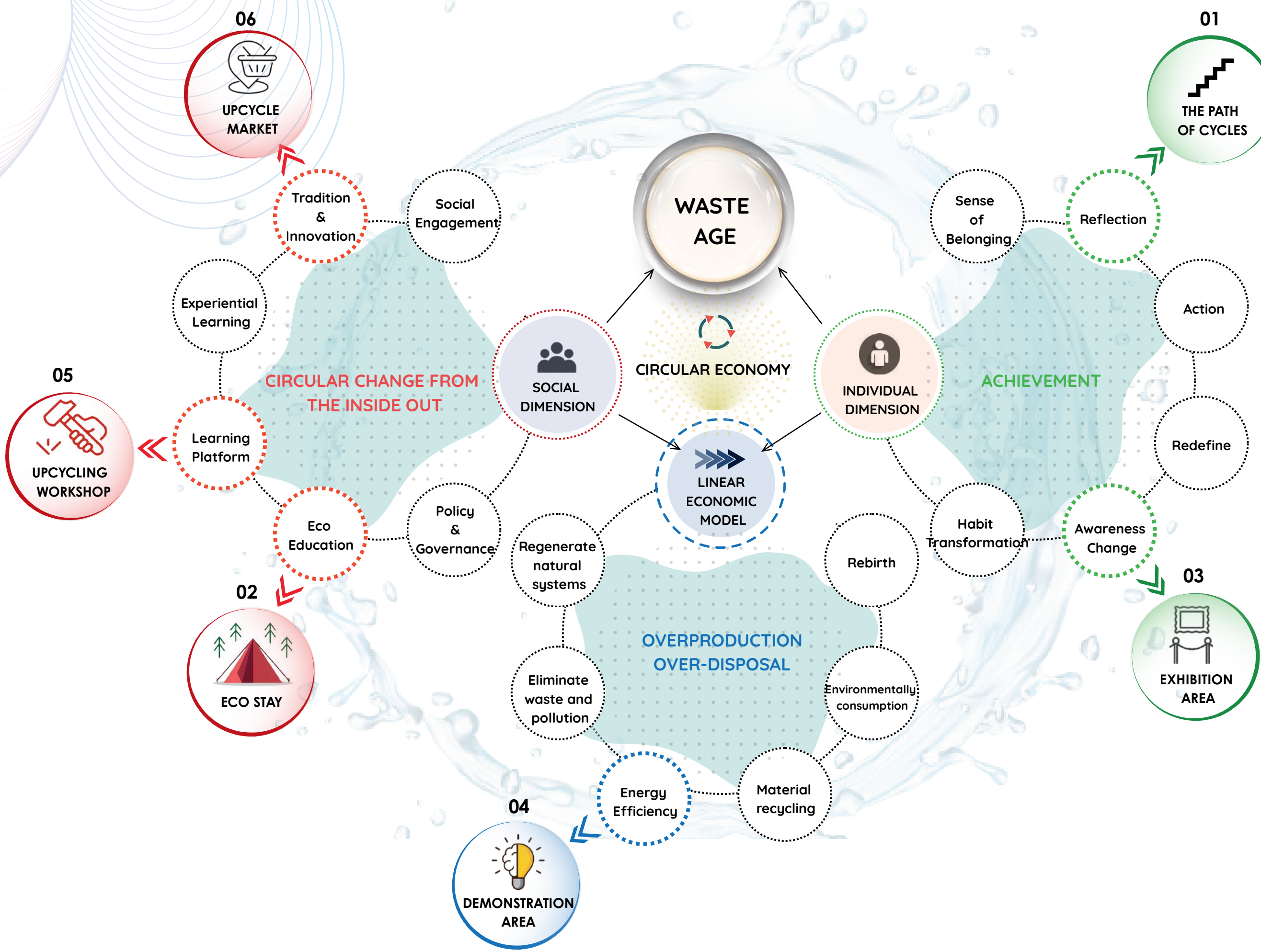
- 01. Low Space Utilization Efficiency: Too many columns take up space. Hard to put furniture and move.
- 02. Confusing Circulation Design: Columns block the way. People can't walk easily.
- 03. Visual Obstruction: Too many columns block the view. Space looks messy.
- 04. Reduced Flexibility: Too many columns make it hard to change or fix the space.



ISSUE 03
Design Strategies

- 01. Open Design: Design windows and vents to promote natural airflow, reducing reliance on air conditioning.
- 02. Consider Structural Alternatives: Consider alternative structural solutions, such as steel frames or cantilever structures, during the initial design phase to reduce the number of columns.
- 03. Increase Natural Light: Design large windows or skylights to increase the influx of natural light, making the space feel more open and reducing the sense of oppression from columns.

This mind map takes the "Waste Age" as its core, exploring the structural problems of overproduction and over-disposal in modern society, and seeking pathways to a circular economy from social, economic, and personal levels. The social level emphasizes the importance of policy, governance, eco-education, and community participation, encouraging value change through learning and experiential education. The economic level reflects on the linear economic model's resource consumption, promoting energy efficiency, material recycling, and the regeneration of natural systems to rebuild sustainable production cycles. The personal level focuses on reshaping behavior and mindset, moving from action and reflection to self-awareness, fostering a sense of belonging and responsibility toward the environment. The mind map shows a transformation from the "Waste Age" to the "Regeneration Age," suggesting that only when institutions, culture, and personal consciousness evolve together can a true circular economy and sustainable future be achieved.



10. BUBBLE DIAGRAM
LIFE CONTINUATION

The exhibition-style staircase (THE PATH OF CYCLES) serves as the core circulation path of the entire project.

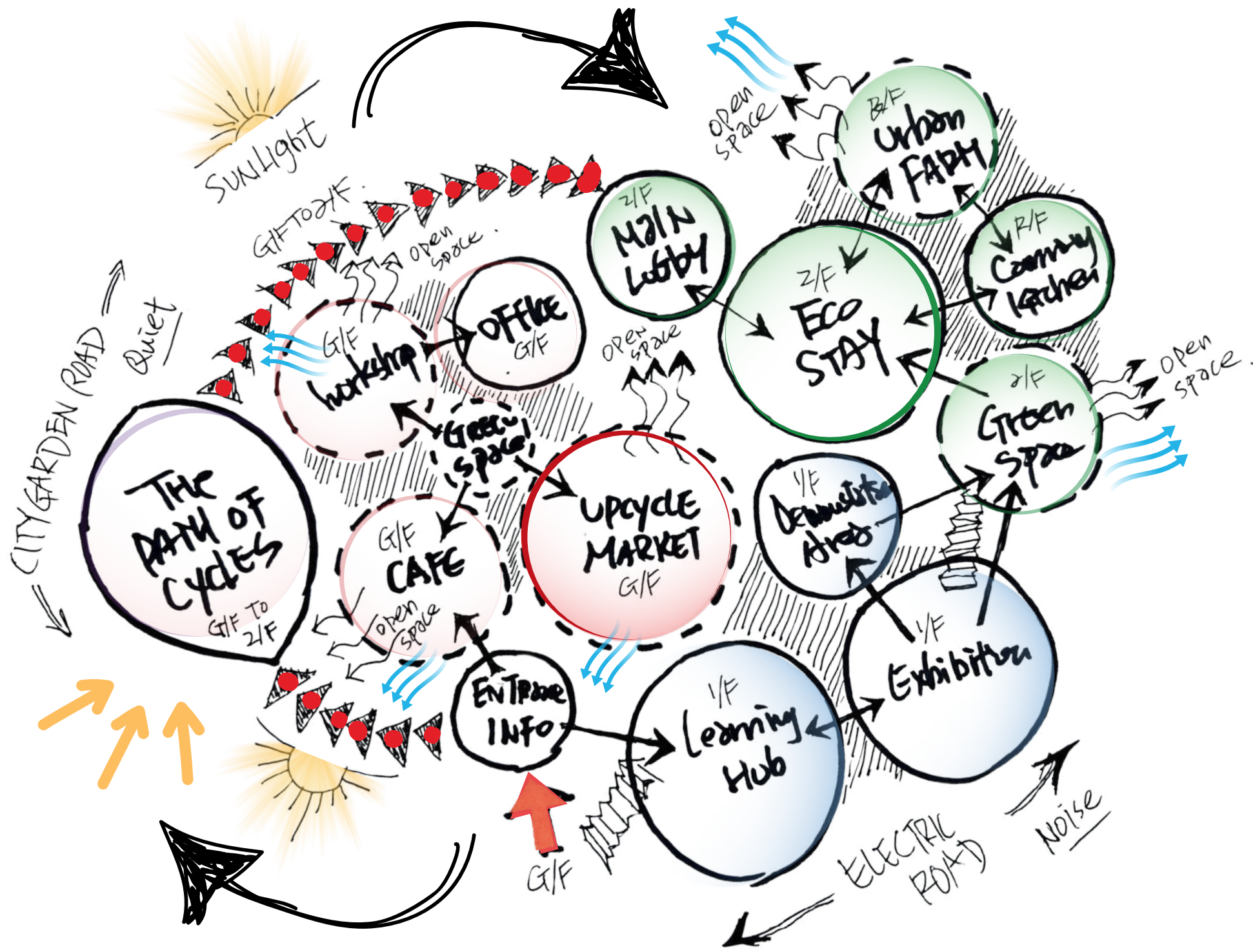
The staircase ascends through the exterior wall, gradually brightening with light.

The entire building is themed around "Filter"

through the design of space and circulation, allowing users to gradually ascend from the "chaotic ground floor" to the "purified upper floors", and then return to the ground, completing a "cyclical filtering process from matter to consciousness".

> Design Metaphor:

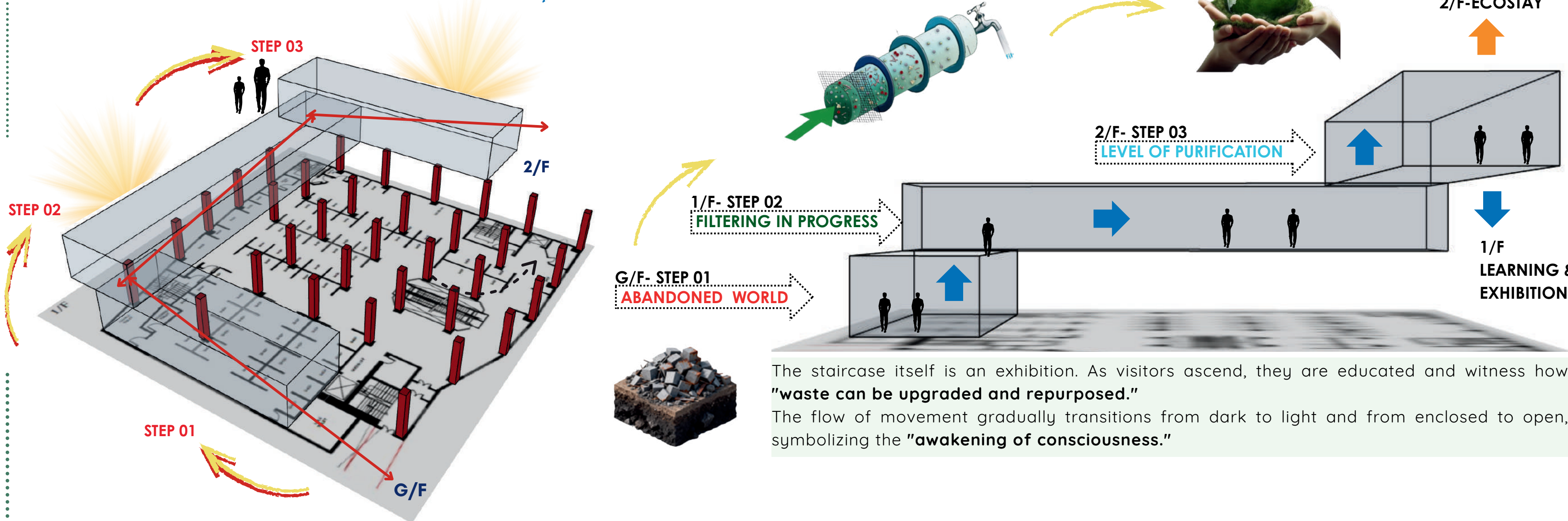
- Ground floor = Waste world (unfiltered state)
- Ascending the staircase = Filtering in progress (transformation of thought and behavior)
- Second floor = Purified level (awakening of consciousness)
- Descending process = Reflection and reconnection



11. PEOPLE CIRCULATION

THE PATH OF CYCLES G/F-2/F

CUSTOMER (ECO STAY) →
CUSTOMER →

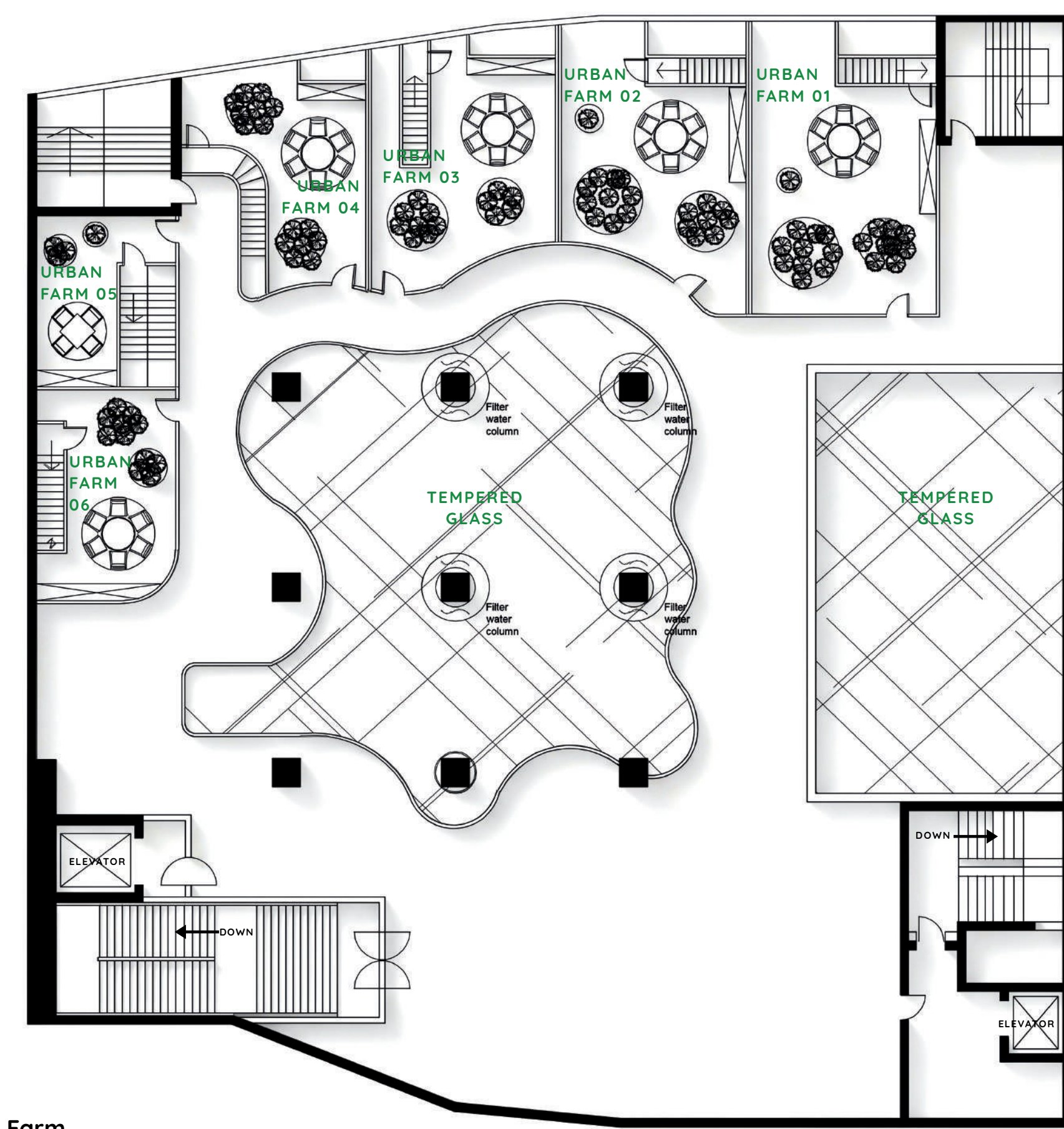
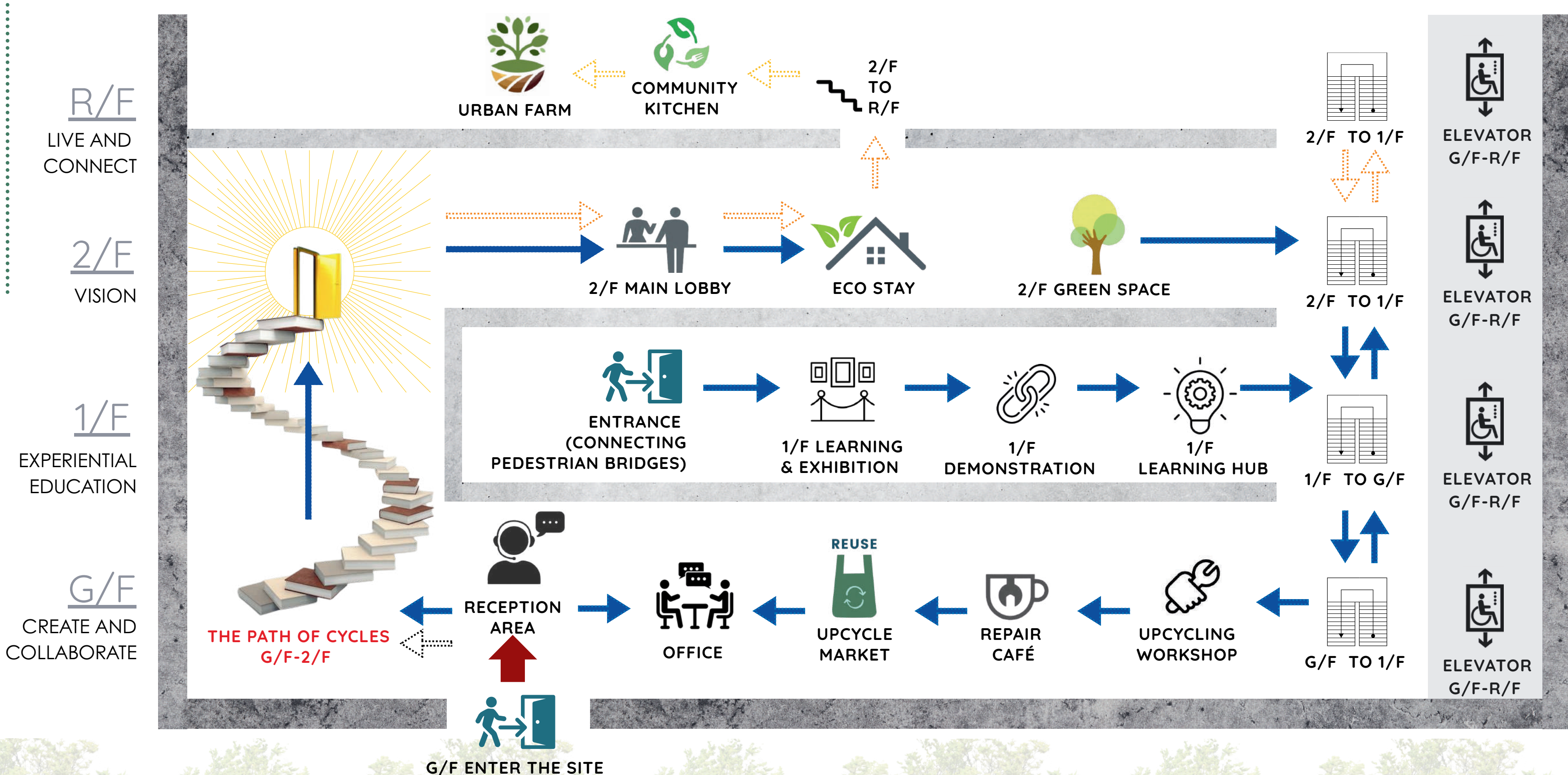


The staircase itself is an exhibition. As visitors ascend, they are educated and witness how "waste can be upgraded and repurposed." The flow of movement gradually transitions from dark to light and from enclosed to open, symbolizing the "awakening of consciousness."

12. SPACE NARRATIVE
VISITOR FLOW

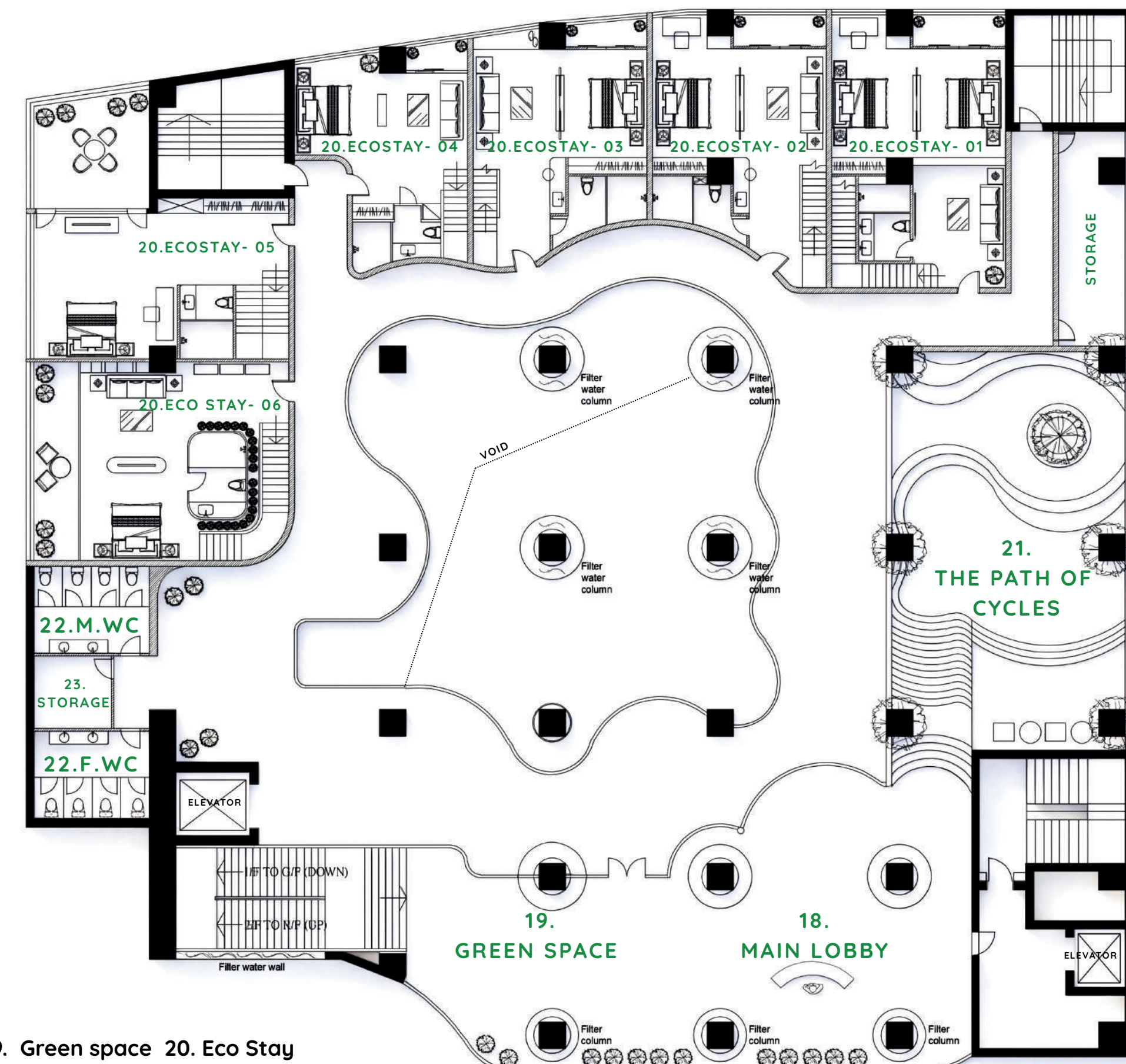
- >The Path of Cycles linking the basement to the second floor, then descending back to the ground.
- > is not merely circulation — it is a loop of consciousness and time.
- > Visitors ascend from the darkness of waste to the light of rebirth,
- > and return to the everyday world, carrying the idea of sustainability into real life

CUSTOMER (ECO STAY) →
CUSTOMER →
INTERNAL STAFF →



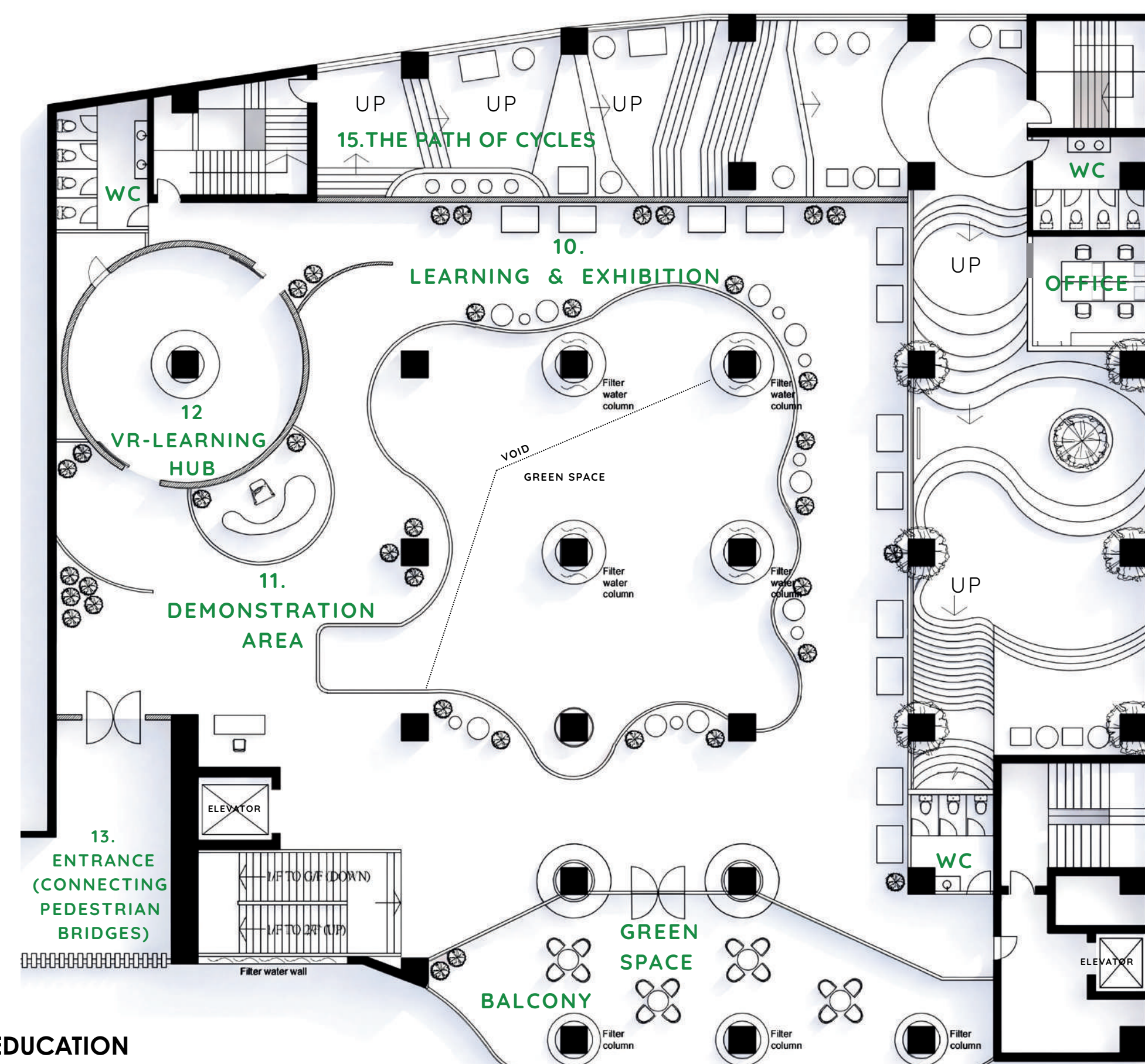
ROOFTOP
LIVE AND CONNECT

24. Community Kitchen/ Urban Farm



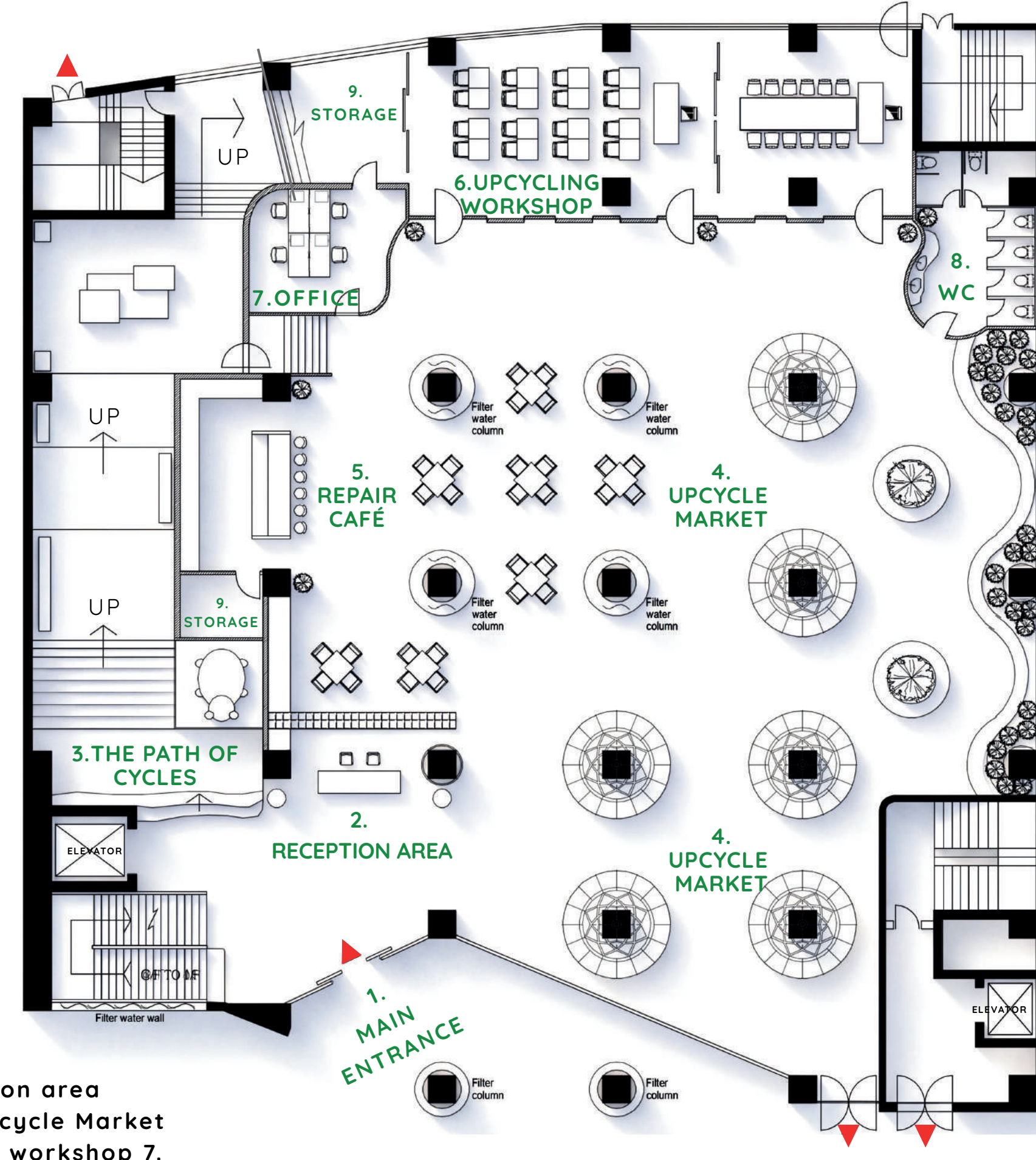
2/F
VISION

18. Main Lobby 19. Green space 20. Eco Stay 21.The Path of Cycles 22.WC 23.Storage



1/F
EXPERIENTIAL EDUCATION

10. Learning & Exhibition 11. Demonstration area 12.VR- Learning Hub 13.Entrance 14.Green space 15.The Path of Cycles 16.WC 17.Office



G/F
CREATE AND COLLABORATE

1.Main Entrance 2.Reception area 3.The Path of Cycles 4.Upcycle Market 5.Repair Café6. Upcycling workshop 7. office 8.wc 9. storage

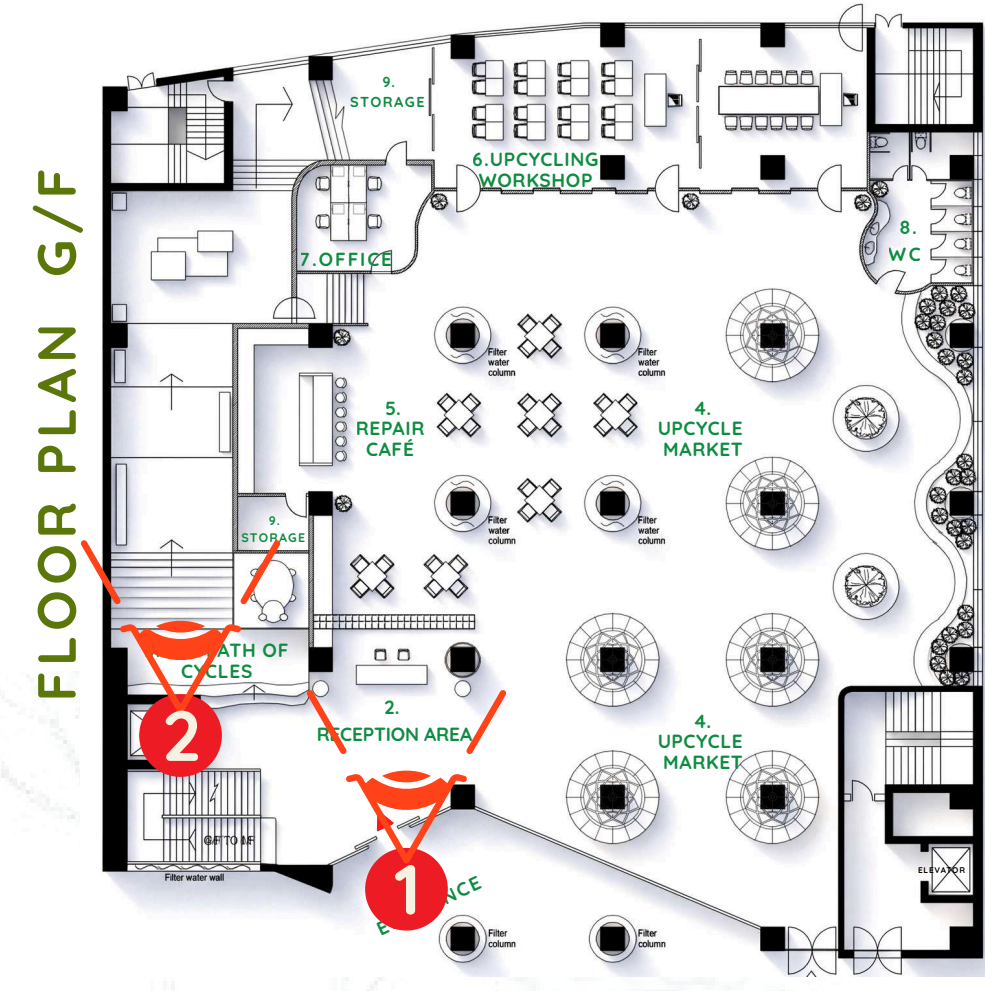
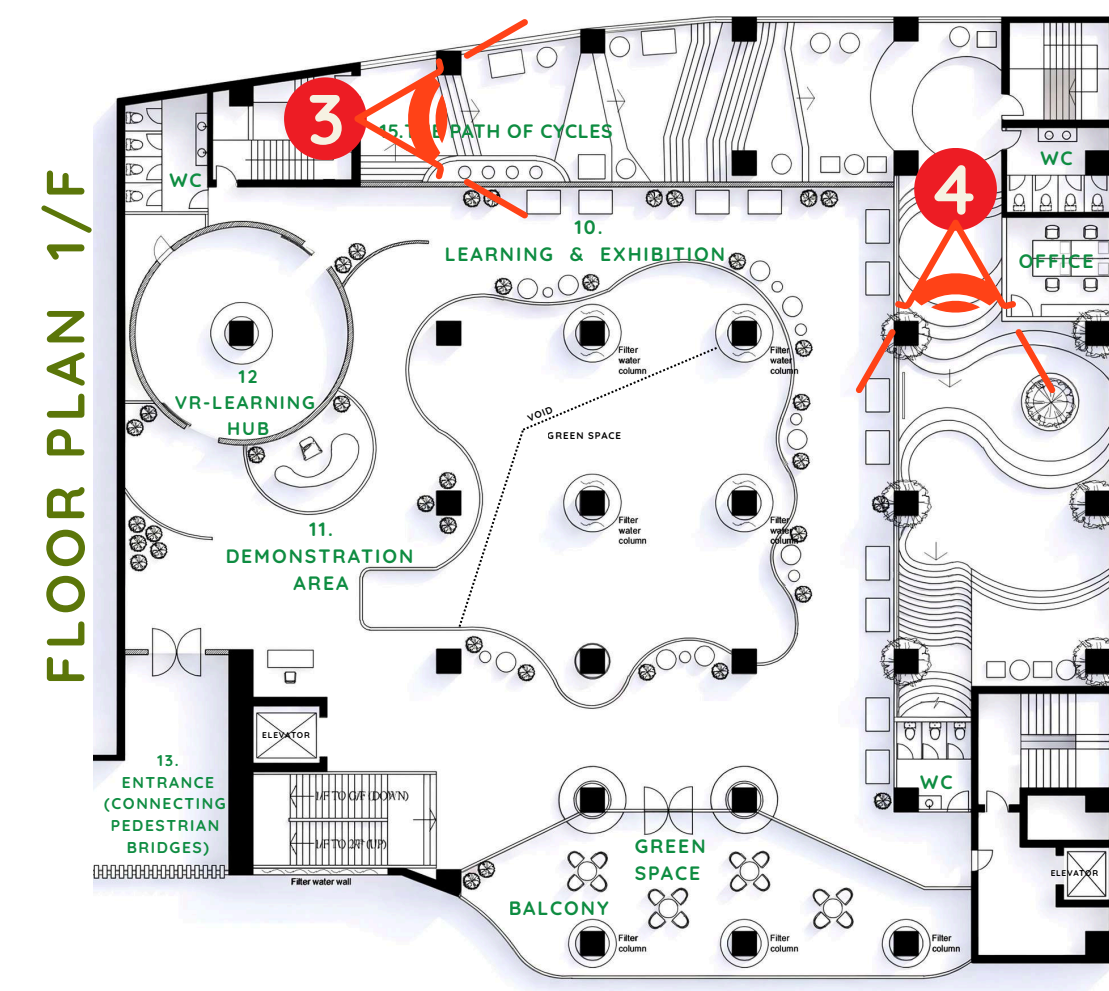
THE PATH OF CYCLES >>> G/F-2/F



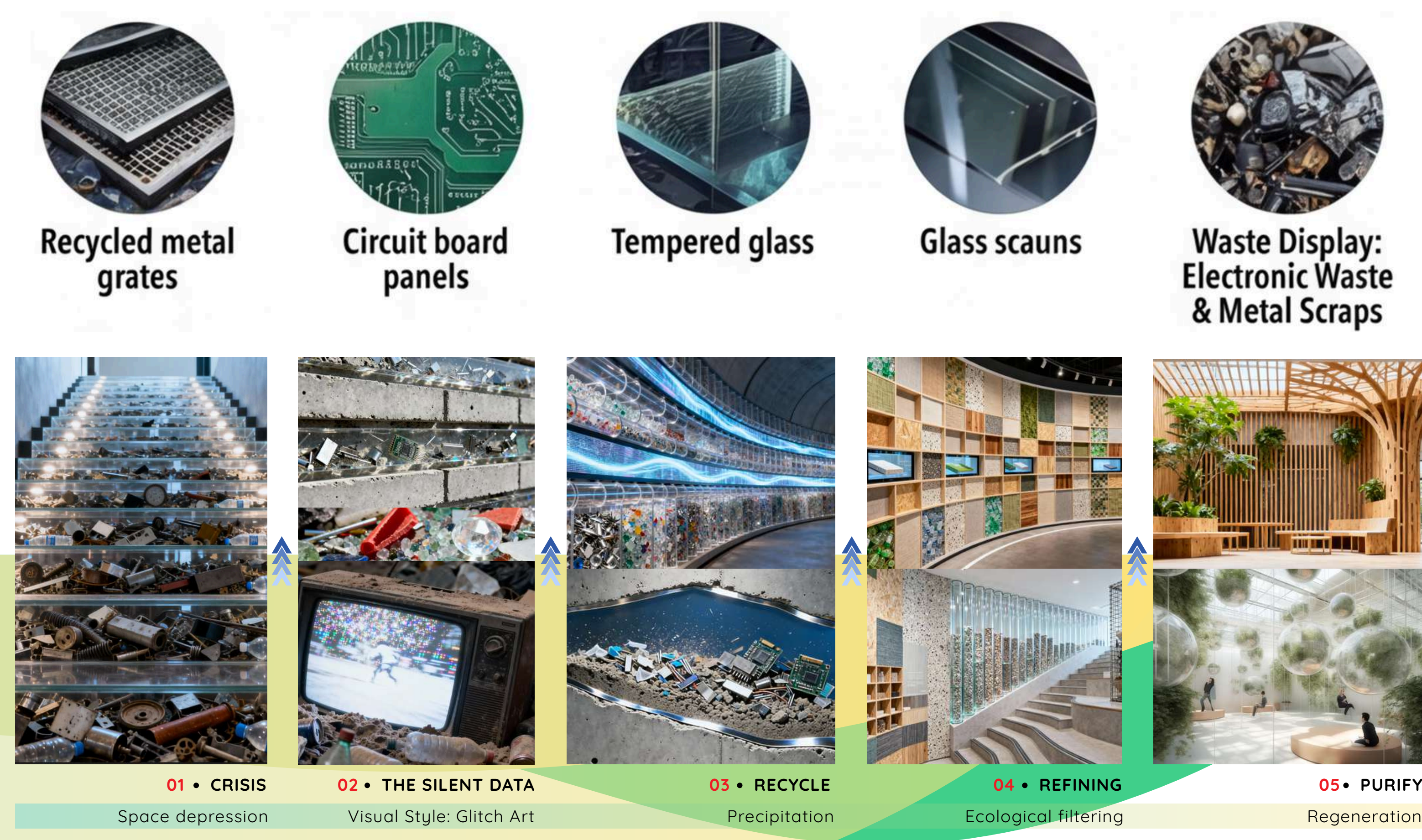
"Layers of Peeling and Ascension"

Is an environmental-themed installation that uses vertical space to symbolize humanity's journey from waste to rebirth. Visitors pass through an "Ascending Passage", experiencing a process of purification — both physical and mental.

The exhibition's three levels represent transformation: the "underground" reveals waste and pollution, the "first floor" reflects decomposition and reflection, and the "second floor" signifies new materials and life. This upward journey invites visitors to rethink regeneration, environment, and renewal.



A CONVERTER THAT TRANSFORMS "WASTE" INTO "CONSCIOUSNESS"



起 ONE THE EXTRACTION & UPSTREAM OF TURBIDITY

This is the process of "extracting hope from ruins." "The withdrawal of civilization." This passage is a giant "extraction pipe." It forcibly elevates visitors from a "harmful" environment, forcing them to confront waste and prepare them to witness how waste can be reshaped into resources.

During the ascent, visitors are not "purified," but rather "informed." This passage is like a geological fault line of human waste. The steps beneath their feet are made of recycled metal, even retaining traces of car parts and old water pipes.

Visitor Experience: Confronting the Truth. This journey is designed to help visitors see "why we need purification." They ascend with their original, clouded understanding.



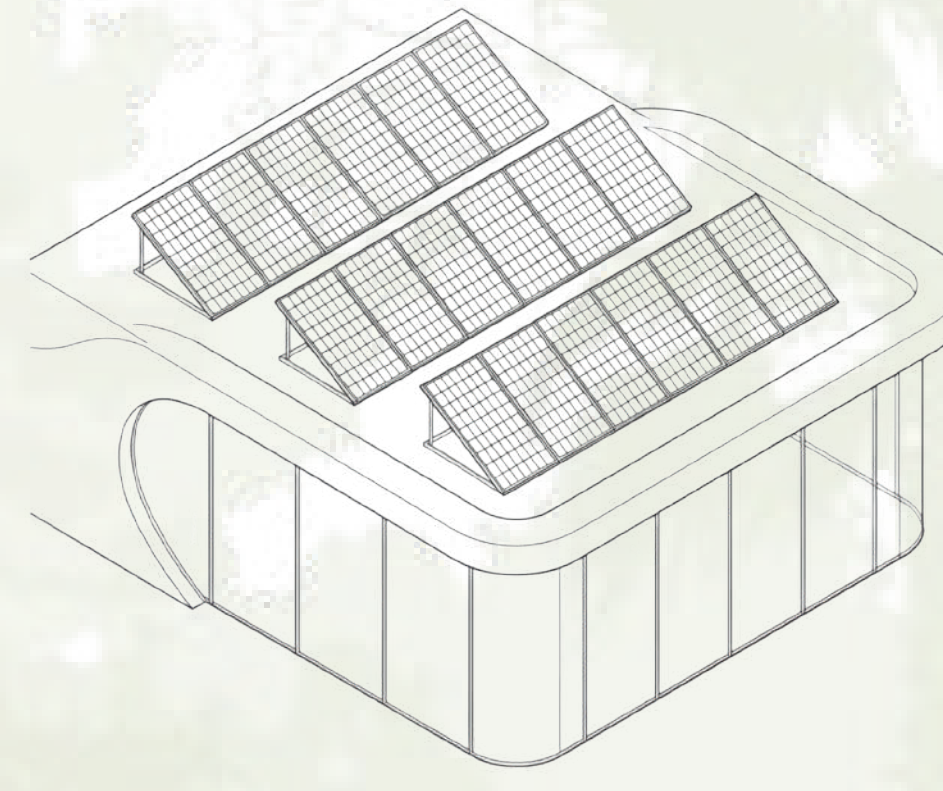
1. G/F - RECEPTION AREA



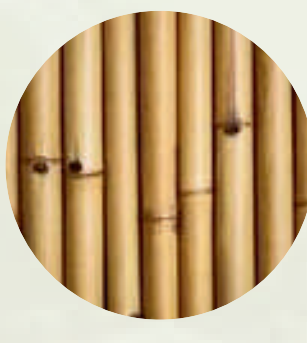
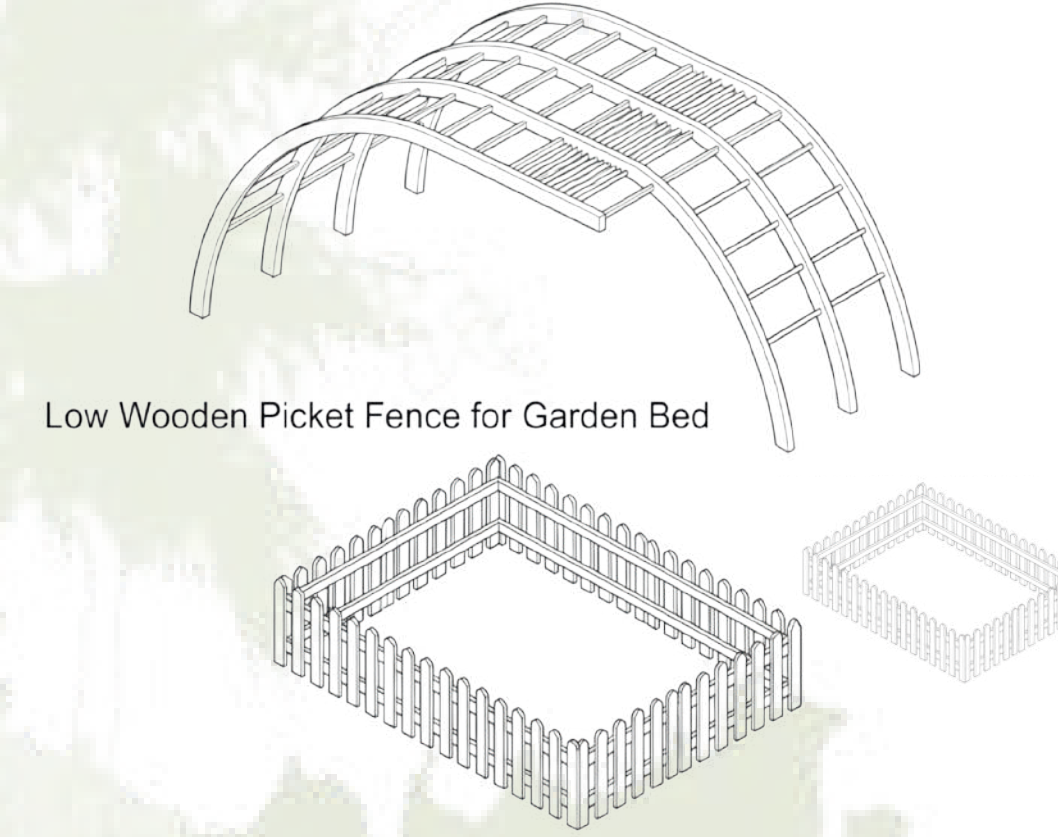
TWO SYMBIOSIS & TRANSFORMATION

The gaze passes through the green plants, and visitors arrive at the experience core of "zero waste living". Every detail here tells a story. Visitors walk closer to a seemingly ordinary wooden table, or the warm lamp by the bed, and find an exquisite card attached next to it. Visitors pick up the card, which reads: "I used to be scrap wood abandoned at a construction site, and now I hold the time for your reading"; or "I used to be a discarded glass bottle, and now I light up the night for you". The facilities here guide visitors to pay attention to every daily detail, from energy usage and diet to garbage classification.

1. SOLAR PANELS
Roof-mounted PV Modules for Renewable Energy



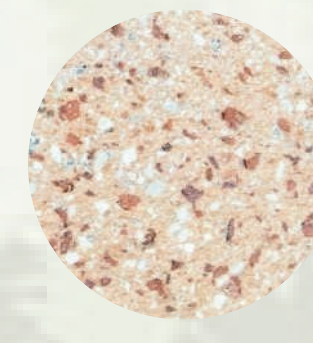
2. WOODEN STRUCTURES
Curved Pergola for Shade & Support



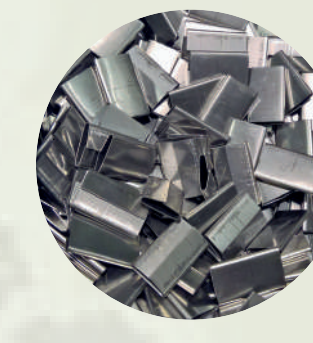
01. BAMBOO



02. MOSS



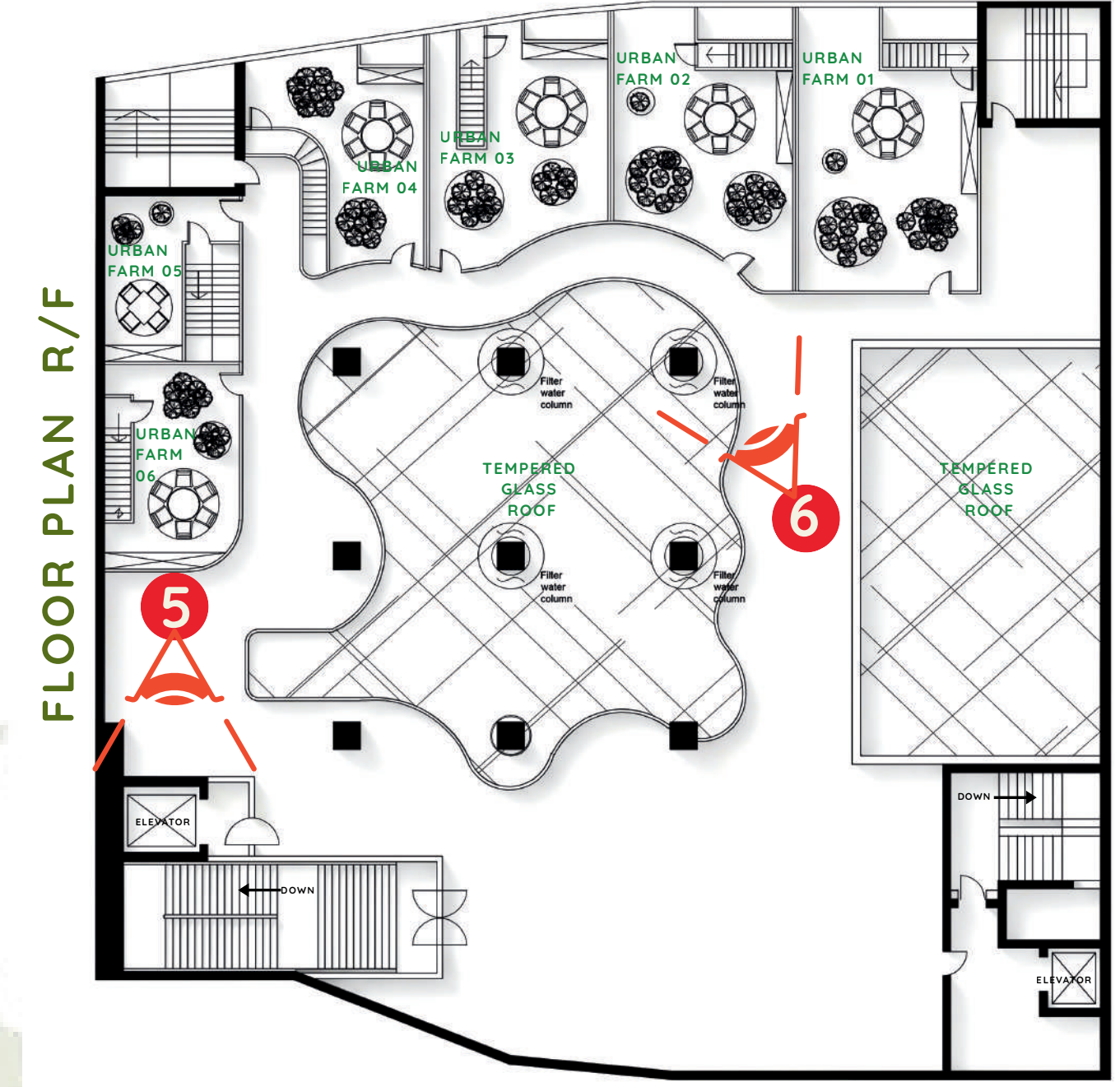
03. RECYCLED BRICKS



04. RECYCLED ALUMINIUM



05. ECO-FRIENDLY PLASTIC FLOORING



COMMUNITY KITCHEN / URBAN FARM >>> R/F



5. COMMUNITY KITCHEN R/F



6. URBAN FARM R/F



7. GREEN SPACE 2/F

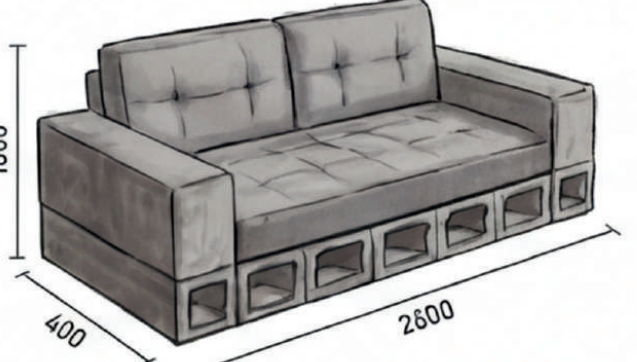
ECO STAY >>> 2/F

THIS SPACE EXTENDS THE "CIRCULAR REGENERATION" PHILOSOPHY FROM PUBLIC EDUCATION TO THE PRIVATE LIVING DOMAIN, CREATING A MULTI-SENSORY BIOPHILIC SANCTUARY.

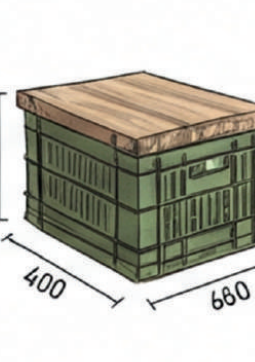
The Second Life of Materials: The interior features an artistic reconstruction of urban waste. The bed and sofa bases are repurposed from reclaimed wooden shipping crates, while the signature chandelier and translucent partitions are handcrafted from recycled glass bottles, casting a soft, dappled glow.



01. LOG



02. PLASTIC LUMBER



03. RECLAIMED WOOD

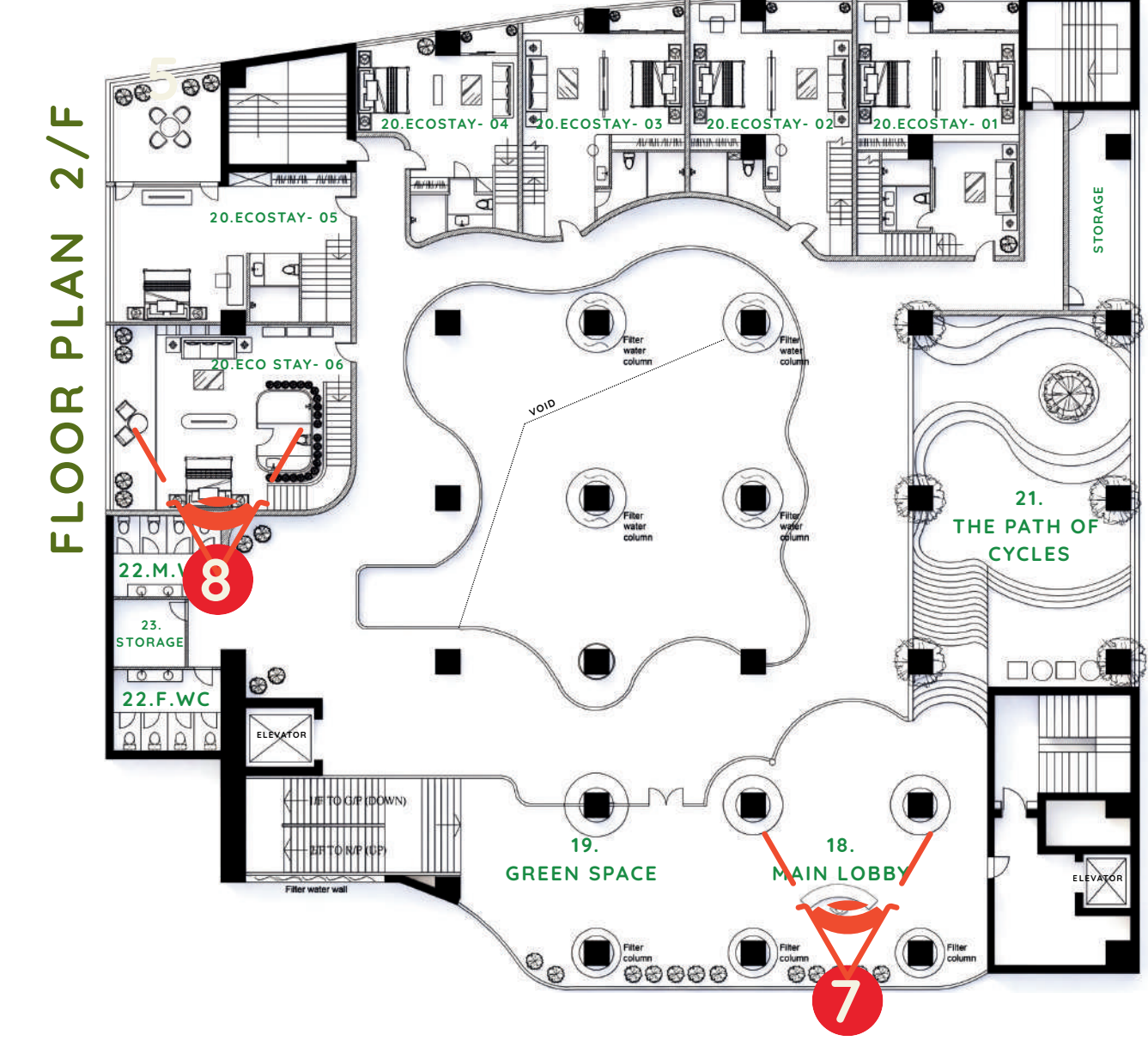


04. RECYCLED GLASS



05. RECYCLED CONCRETE

06. GLASS BLOCK



8. ECO STAY 2/F

轉 THREE

1/F LEARNING HUB

THE PENETRATION OF KNOWLEDGE AND THE CONSTRUCTION OF RATIONALITY

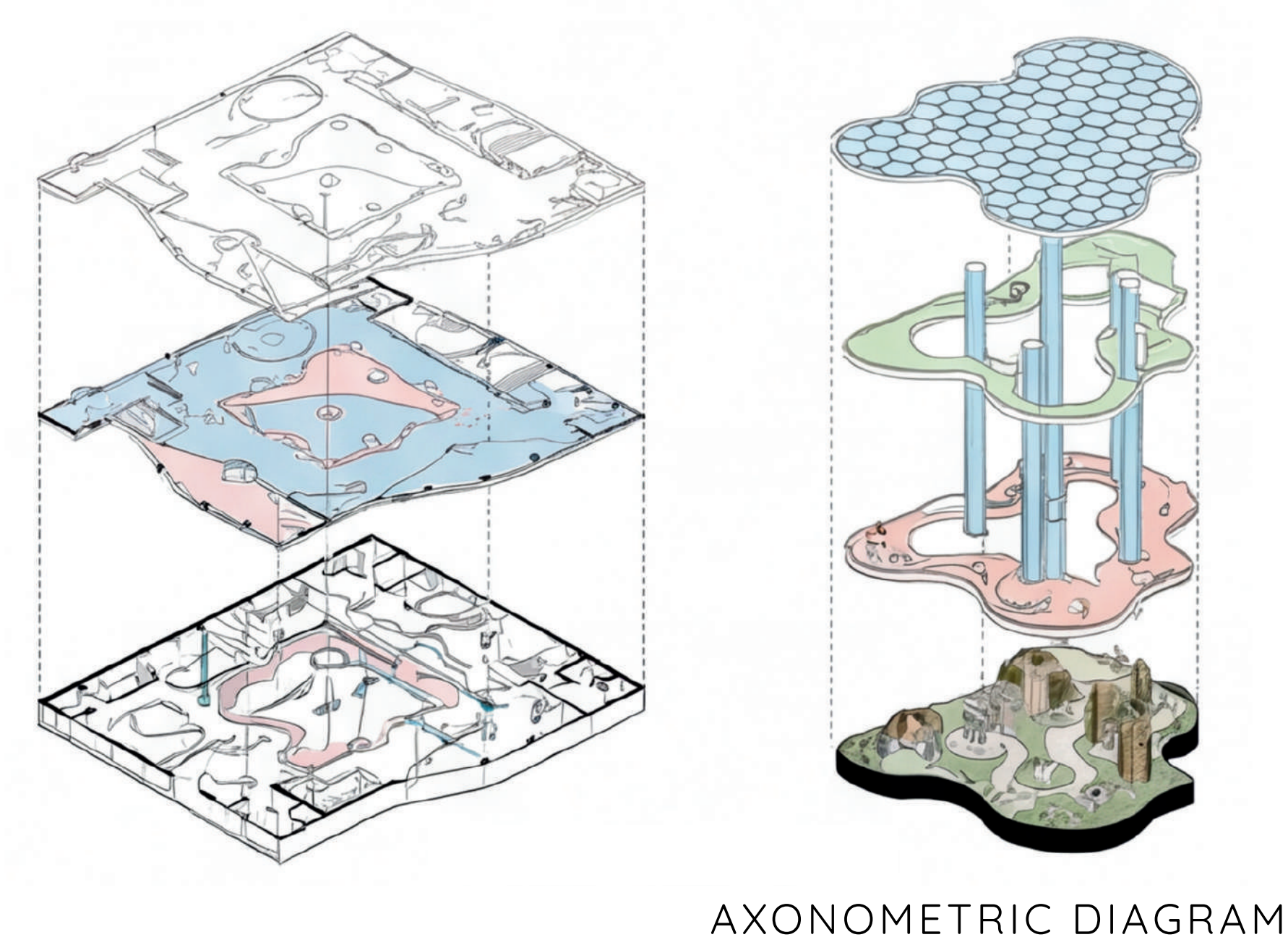
In this "transformation," we complete the shift from "seeing" to "understanding." When they carry this knowledge and prepare to move towards the final layer (the bottom layer), they are no longer ordinary consumers, but potential actors. This lays the most solid foundation for the "creation" in the final scene.



9. LEARNING & EXHIBITION 1/F



10. VR-LEARNING HUB 1/F



AXONOMETRIC DIAGRAM



Natural Light Integration

SECTIONAL ELEVATION

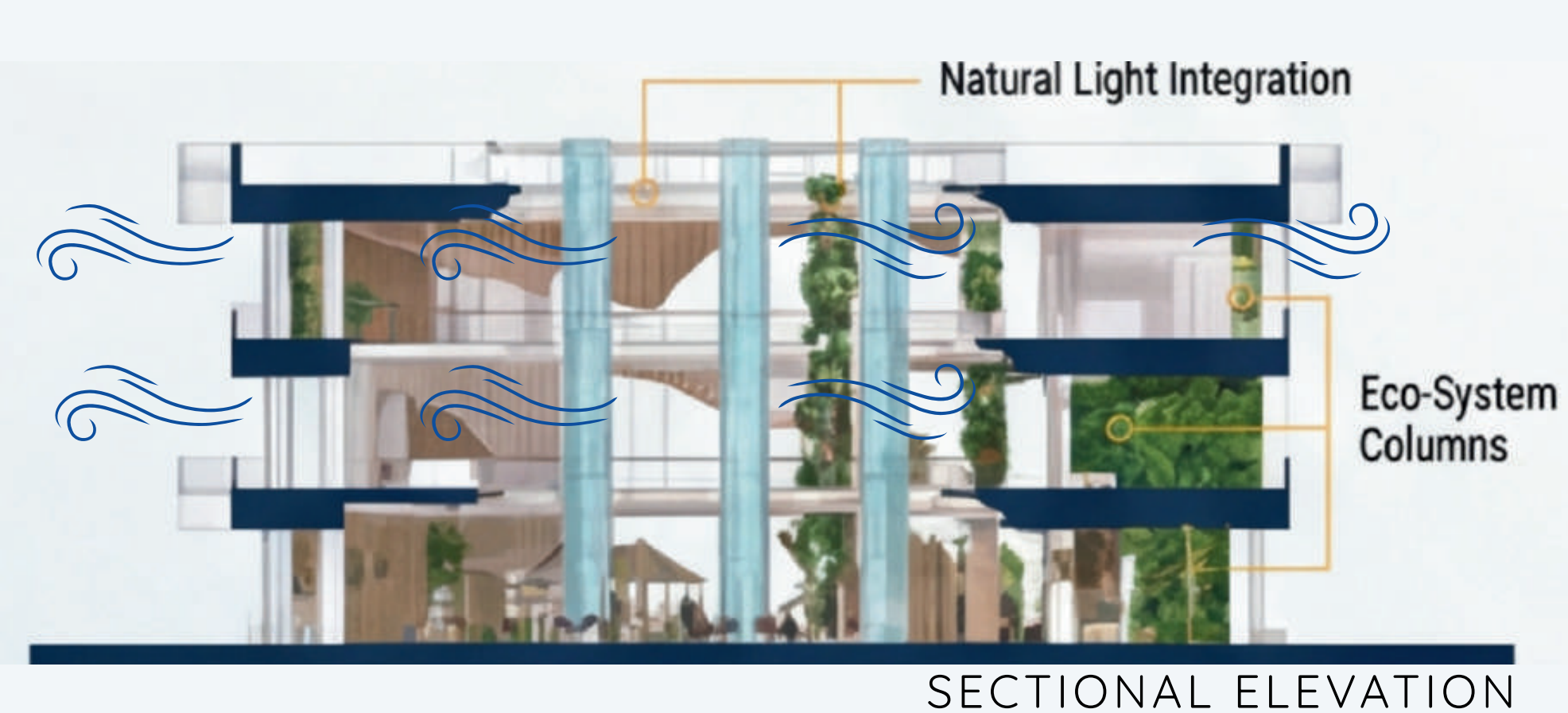
IMMERSIVE LEARNING EXPERIENCE

Create a fun and engaging circular education exhibition space. The space can incorporate interactive and playful designs to encourage animal participation and, consequently, teach environmental protection knowledge.



furniture & installations

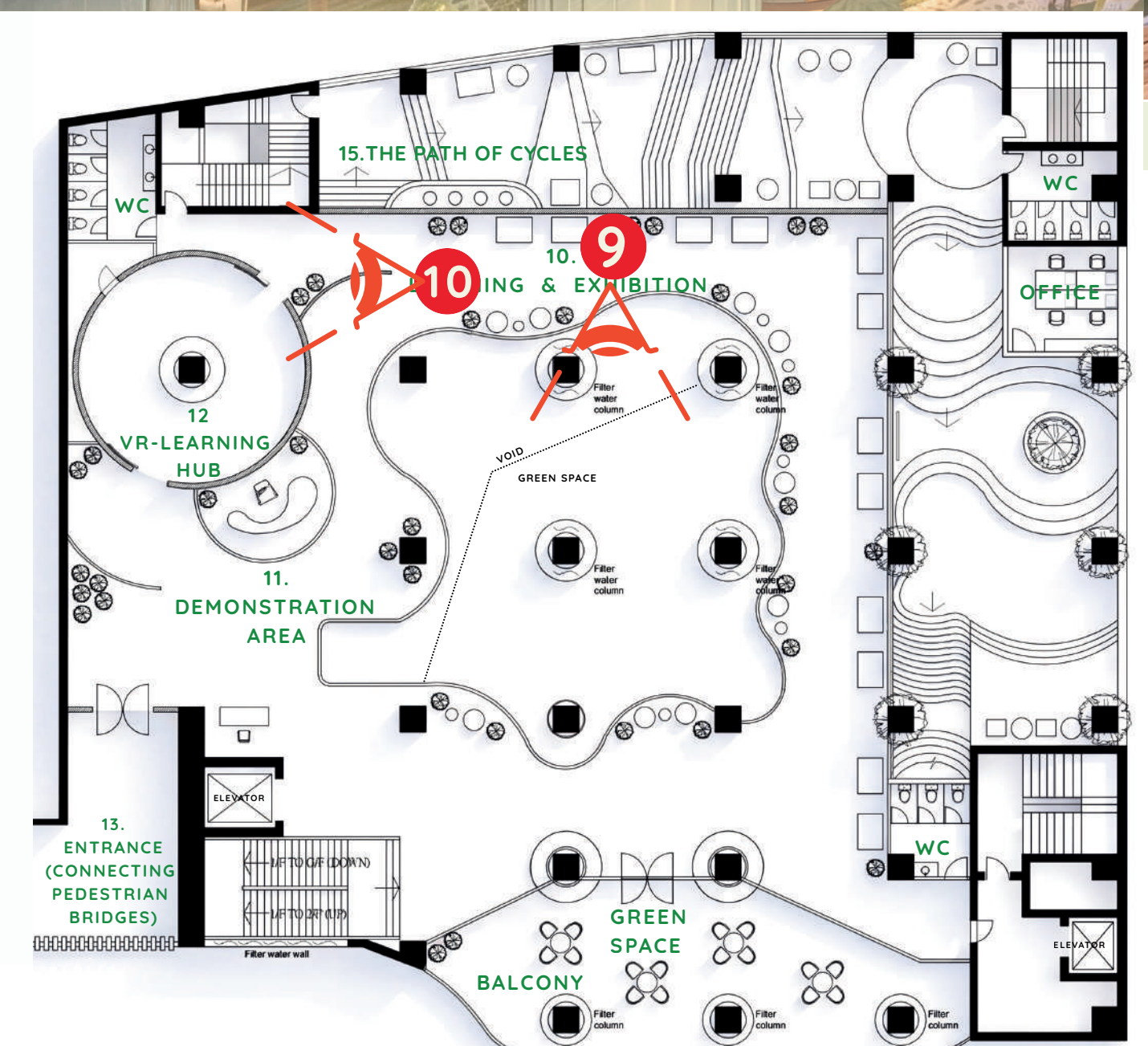
waste demonstration items



Natural Light Integration

Eco-System Columns

SECTIONAL ELEVATION





11. UPCYCLING PLAZA G/F

G / F UPCYCLE MARKET PLAZA



FOUR SYMBIOSIS & TRANSFORMATION

Concept Description: The Social Filter of Urban Life The G/F Market Park depicted here serves as a social filter for the Fortress Hill community. Between these monumental, flowing water columns, we filter out not just pollutants, but also the noise and isolation of urban life. The intentional interplay of stone and turf creates an indoor park experience, fostering natural social bonds in a stress-free, upcycled environment. The small pavilions made of reclaimed timber and the textured gabion walls serve as more than material showcases; they advocate a lifestyle where sustainability enhances domestic warmth. It is a sanctuary where everyone can reconnect with the city by touching upcycled textures and feeling the cool mist of the water columns.

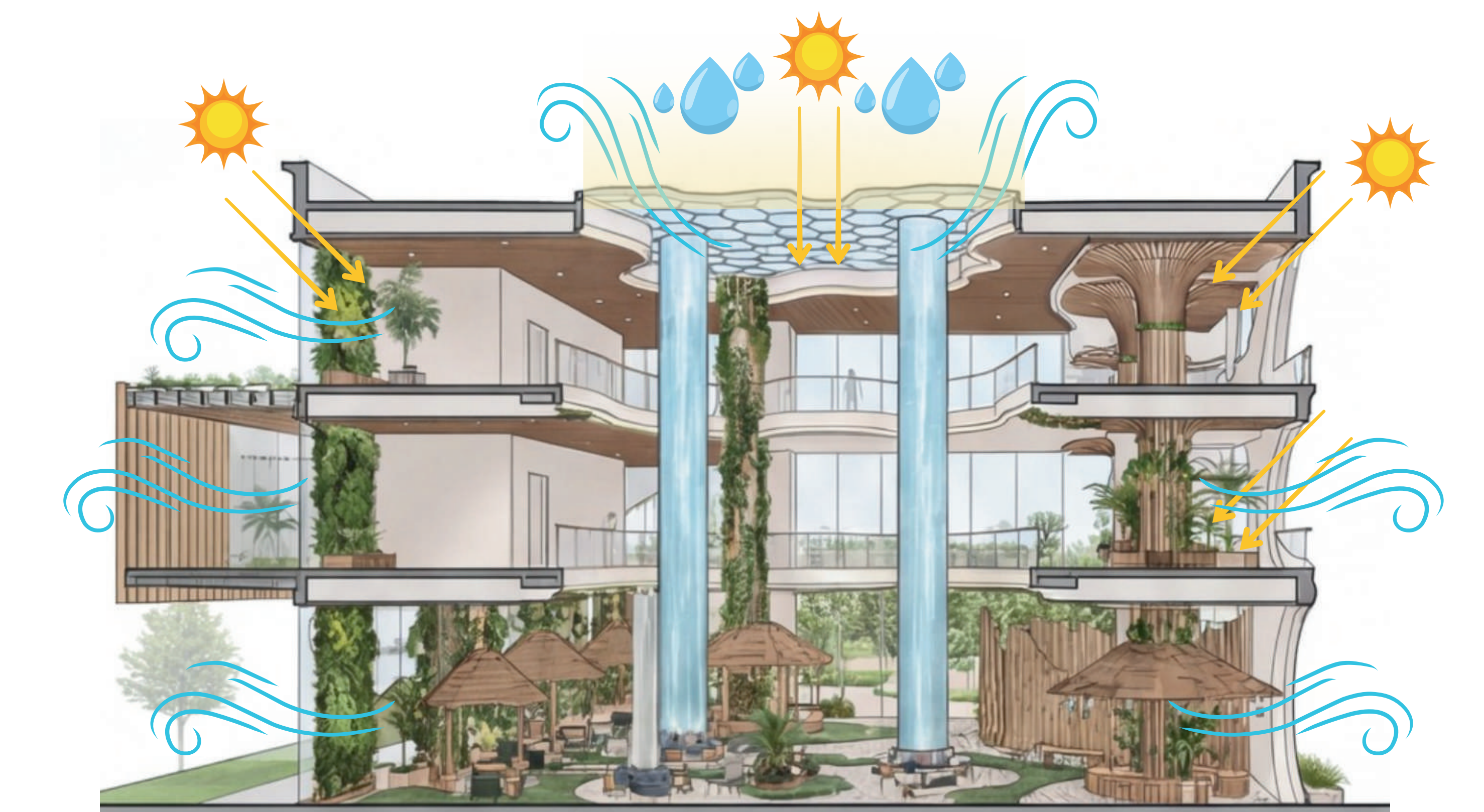
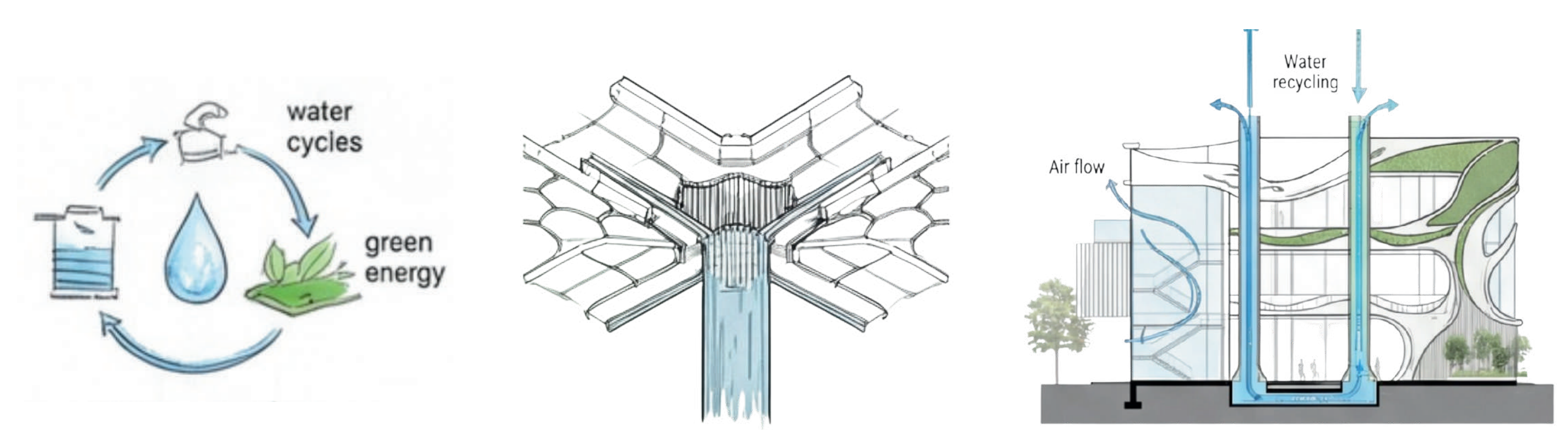


12. VIEW UP THE VOID G/F



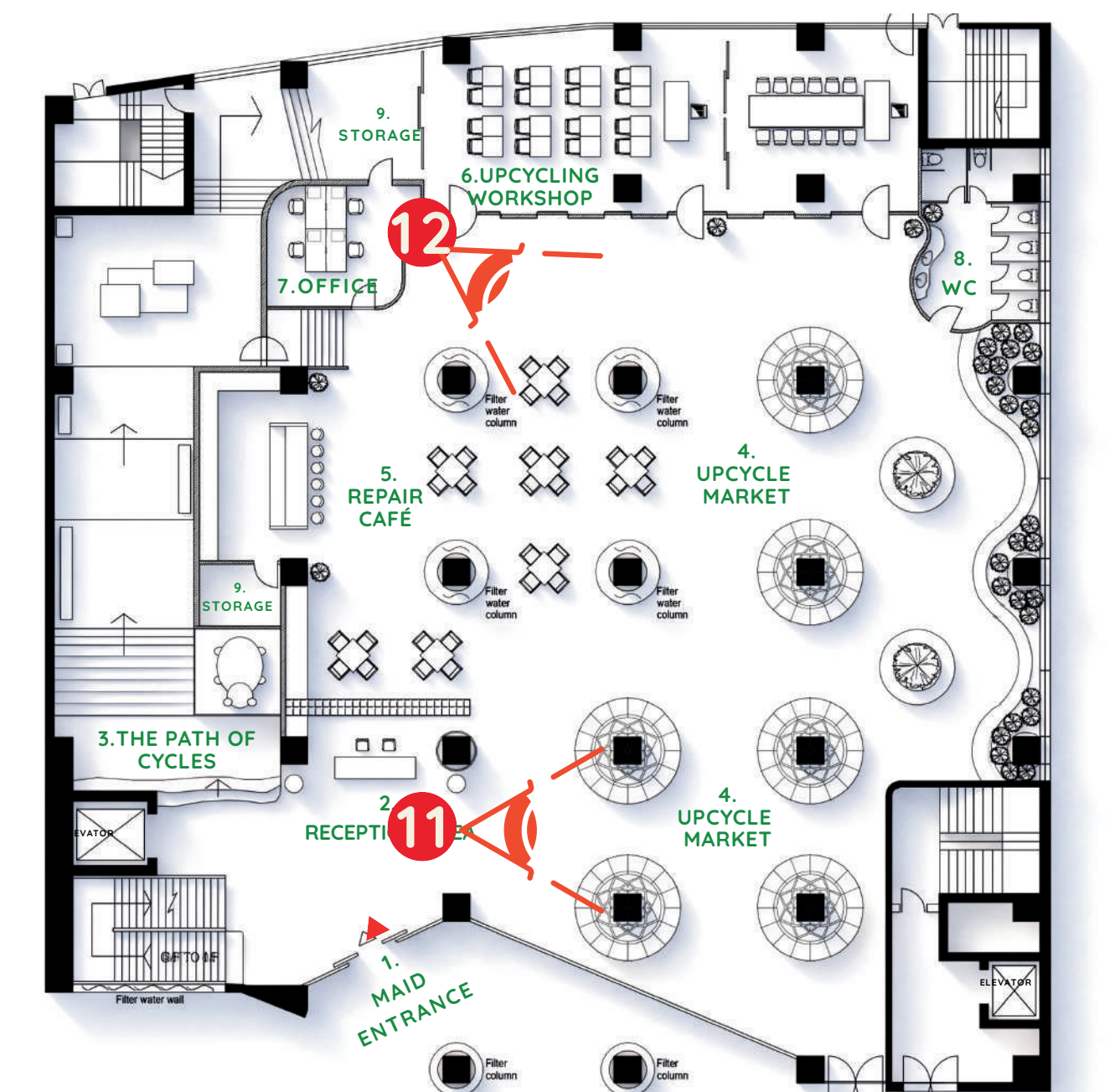
13. UPCYCLING PLAZA G/F

CONCEPTUAL DRAWING



SECTIONAL ELEVATION

MATERIAL



MATERIAL BOARD & OBJECT EXTRACTIONS



ORTHOGRAPHIC VIEW ELEMENTS

