



## FUTURE NARRATIVE

Future Narratives Studio uses experimental design methods to develop and visualize speculative architectural ideas and future spatial concepts. As a design research unit, the studio explores speculative fiction and emerging NBIC (Nano-Bio-Info-Cogno) technologies to imagine future cities and technological utopias.

Responding to global challenges such as the climate crisis, social justice, human well-being, and technological convergence, the studio positions architecture as a tool for envisioning and communicating progressive futures. Through drawings, models, and animations, students create speculative architectural proposals that function as thought experiments addressing real-world issues through imaginative yet tangible scenarios.

## PROJECT INFO

Name: New Gaia  
Role: Concept Design  
Location: Indian Ocean Gyre  
Area: >175000 m2  
Status: Pending  
Software: Revit, Blender

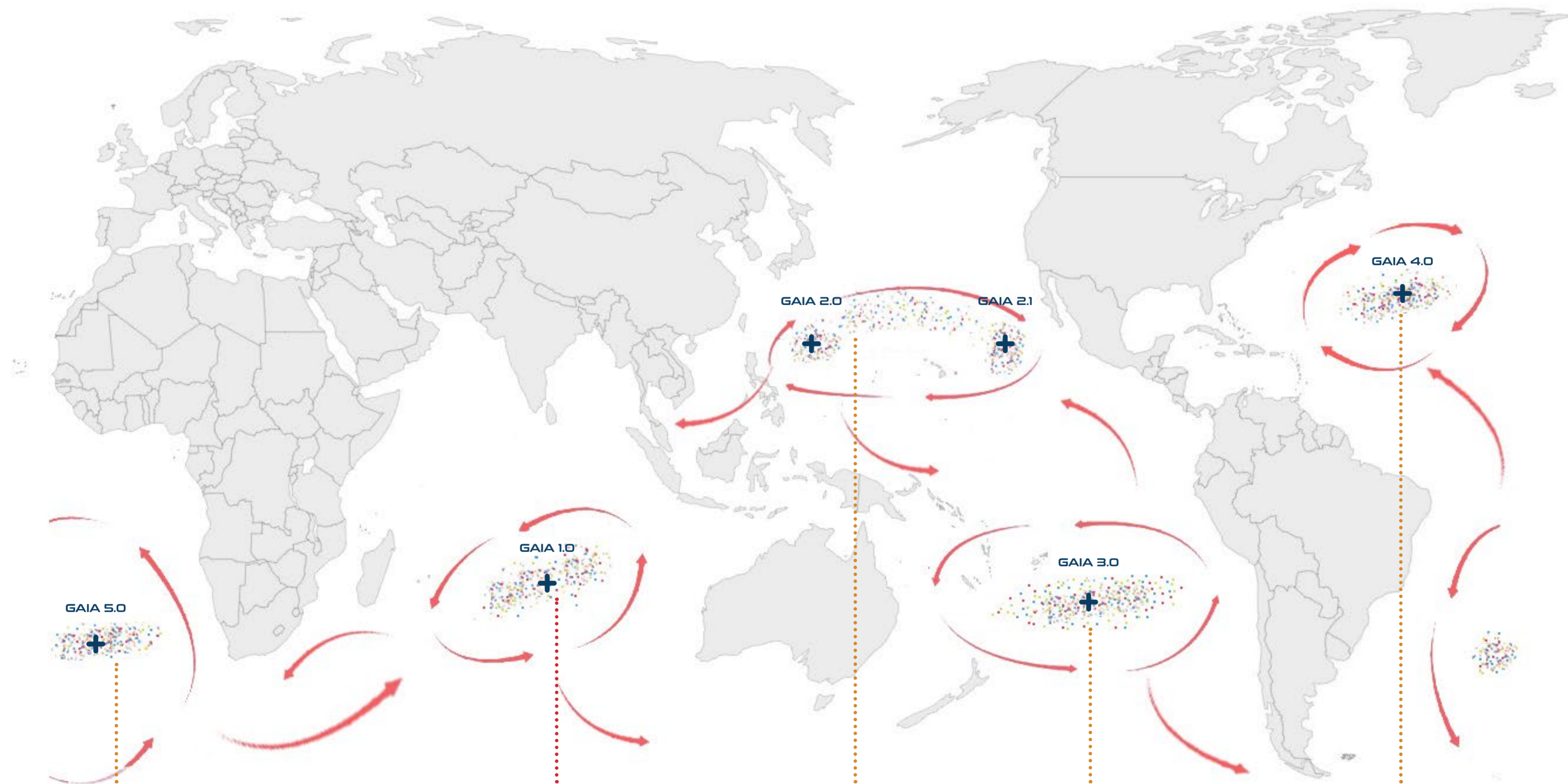
## PROJECT NARRATIVE

New Gaia is a speculative city located within the Indian Ocean Garbage Patch in 2056, where ocean waste is reimagined as a resource to sustain and grow the entire urban system. The project challenges the linear model of extraction, use, and disposal by proposing a "circular" system that works with ecological processes, turning waste into energy, food, and architecture. It also rejects architecture's obsession with purity and cleanliness, instead embracing the messiness form as a new architectural language.



With the data collected from trends and the leak of garbage patches, it is believed that by 2056, all Oceanic Patches are **connected by Subtropical Convergence Zone due to being tripple in sizes.**

In responses to this, the Gaia projects also dupplicate themselves. The end goal is to have a Gaia in each of the Garbage patches



#### SOUTH ATLANTIC

**Size:** ~2.4 million km<sup>2</sup>  
**Location:** Off coast South America  
**Mass:** ~30,000 tonnes  
**Sources:** Coastal cities, river discharge  
**Key features:** Less studied, mostly microplastics

#### INDIAN OCEAN

**Size:** ~4.5 million km<sup>2</sup>  
**Location:** Between Africa & Australia  
**Mass:** ~60,000 tonnes  
**Sources:** South Asia river systems, maritime trade  
**Key features:** Strong gyre; diverse debris mix

#### GREAT PACIFIC

**Size:** ~4.8 million km<sup>2</sup>  
**Location:** North Pacific  
**Mass:** ~240,000 tonnes  
**Sources:** Asia & N.America coastal runoff, fishing gear  
**Key features:** largest; 1,8 trillion plastic pieces

#### SOUTH PACIFIC

**Size:** ~7.8 million km<sup>2</sup>  
**Location:** South of Peru & Chile  
**Mass:** ~52,000 tonnes  
**Sources:** South America rivers & fisheries  
**Key features:** Spares but widespread microplastics

#### NORTH ATLANTIC

**Size:** ~2.1 million km<sup>2</sup>  
**Location:** US-Europe corridor  
**Mass:** ~60,000 tonnes  
**Sources:** Urban waste, shipping, fishing  
**Key features:** High density; near busy routes

# THE "GREAT" GREAT GARBAGE PATCHES 2056

Humanity has continued to expand—population, consumption, and ambition accelerating faster than at any point in history. Yet as humans grew and prospered, so did their waste:

2025  
(PRESENT)

Microplastic fibres and fragments found in commercially consumed fish, with average concentrations of approximately 8.95 particles per fish (Ibrahim et al., 2025)

2028

Marine species ingesting microplastics, leading to mass die-offs and genetic deformities.

2033

Bioaccumulation of toxic chemicals in the global food chain, threatening both wildlife and human health.

2038

Disruption of migratory routes, forcing fish, turtles, and birds into new, unstable ecological patterns.

Mechanical damage from ghost nets, which continued to trap and kill marine life decades after being discarded.

2050

Faced with this planetary emergency, the United Nations convened an unprecedented coalition. A radical intervention that rejected the old logic of cleanup and concealment, UN propose a project called:

2043

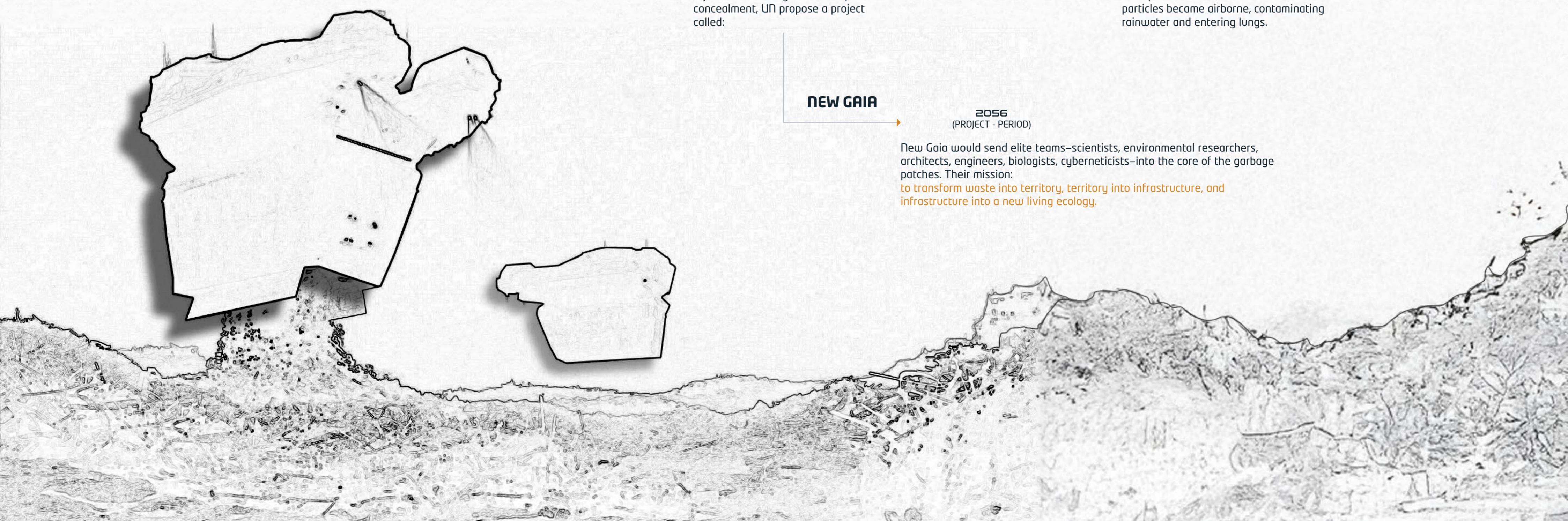
Breakdown of coastal economies, with fisheries collapsing and shorelines overwhelmed by drifting plastic tides.

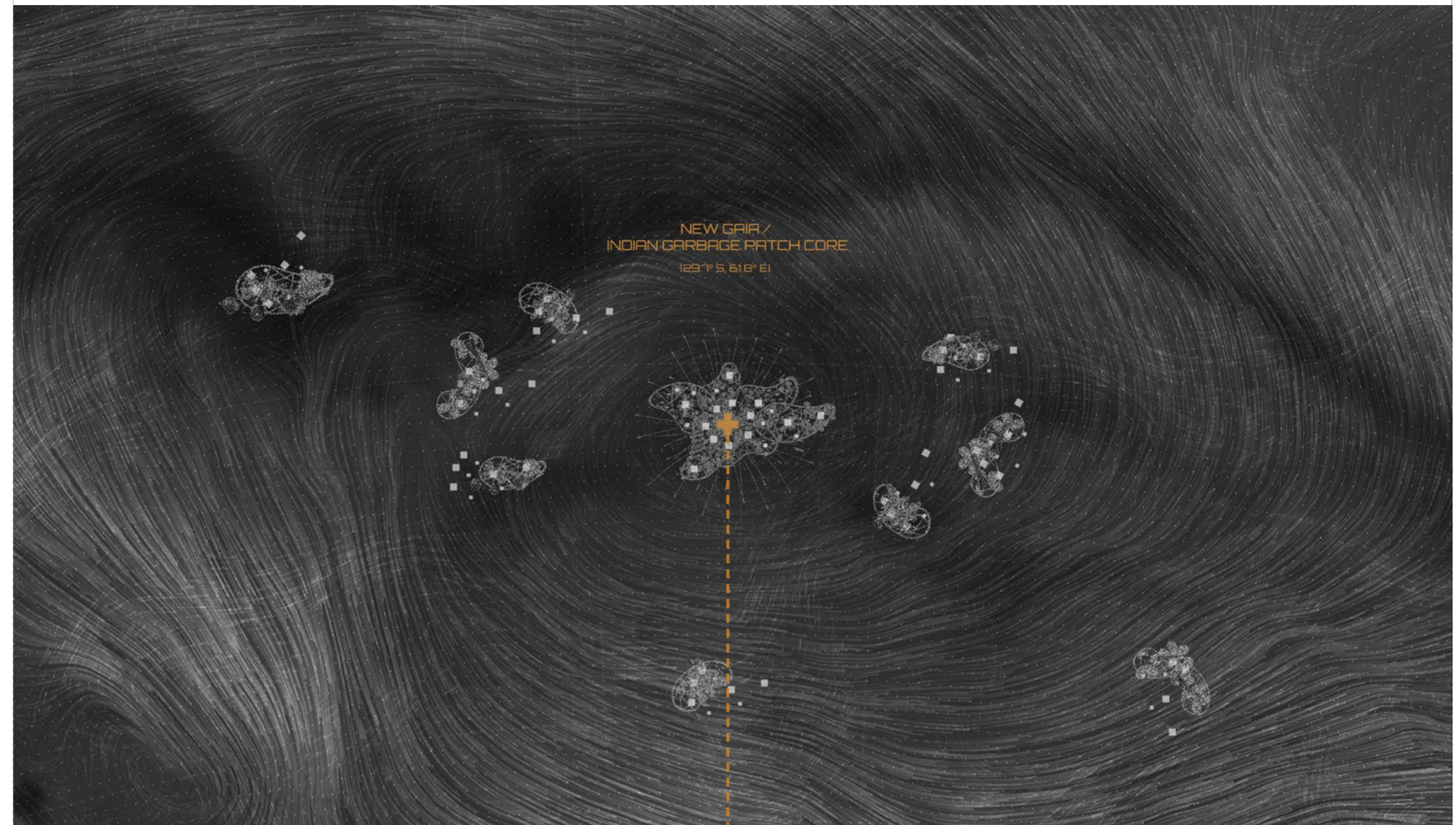
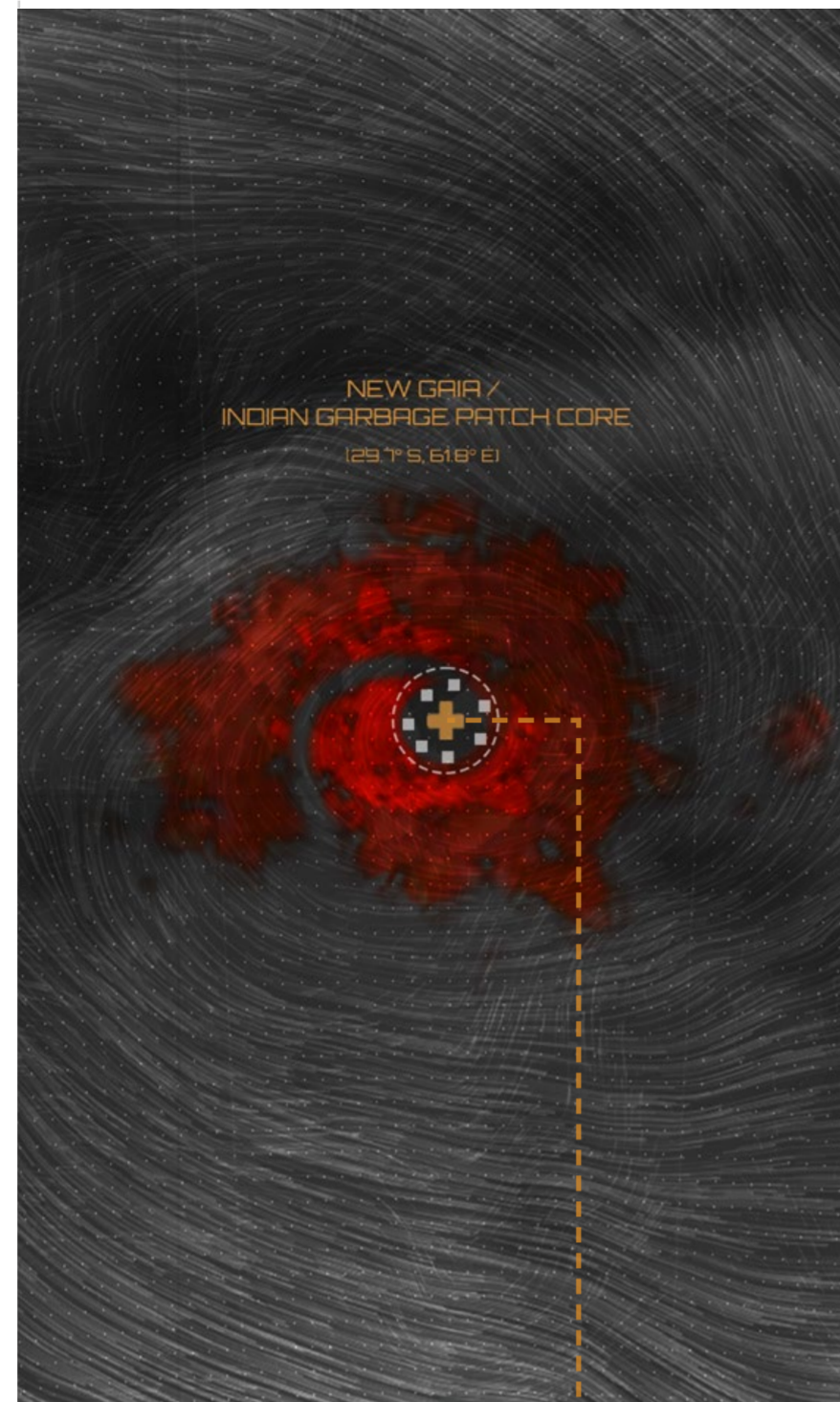
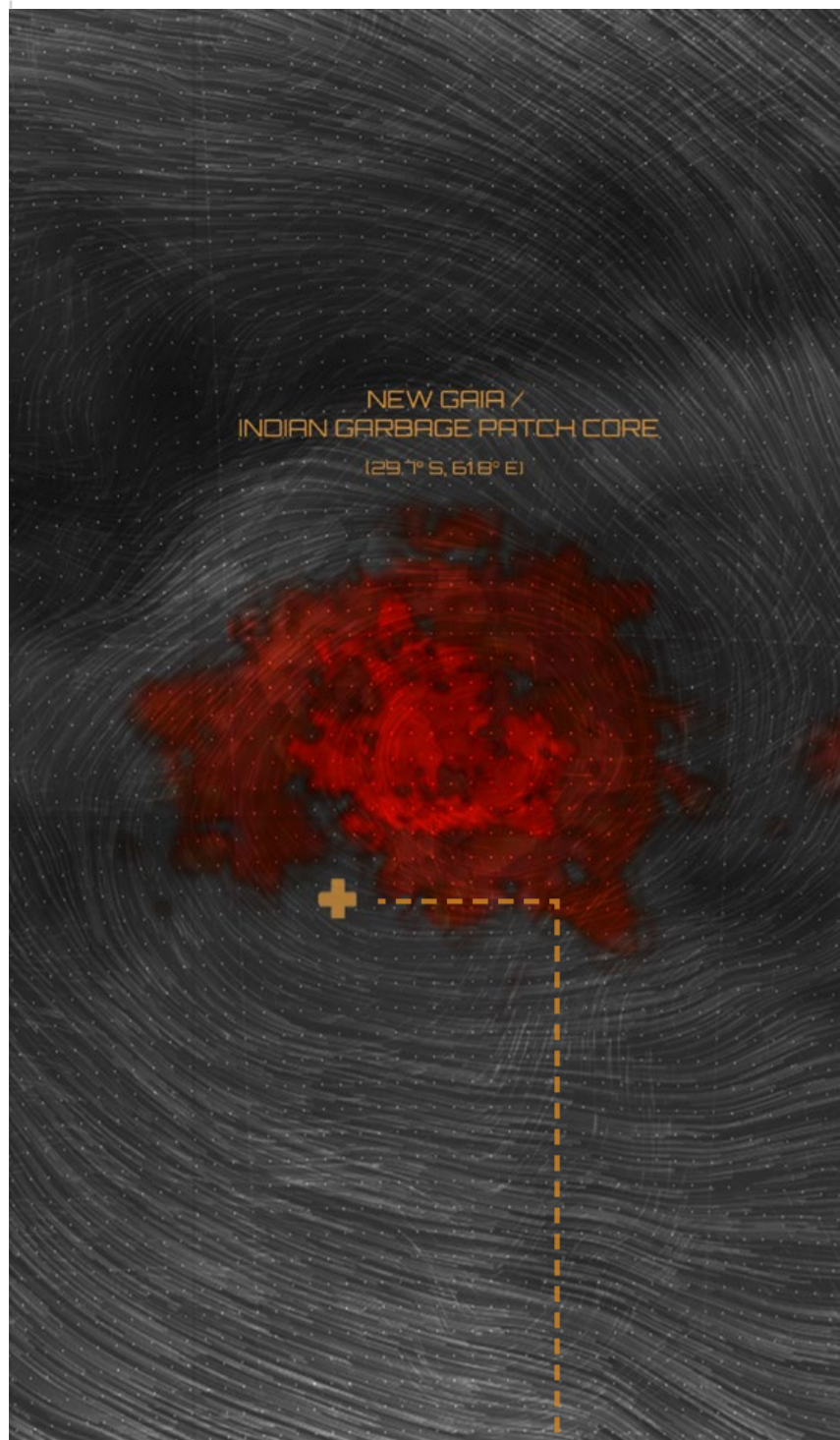
Microplastic storms, where shredded particles became airborne, contaminating rainwater and entering lungs.

**NEW GAIA**

2056  
(PROJECT - PERIOD)

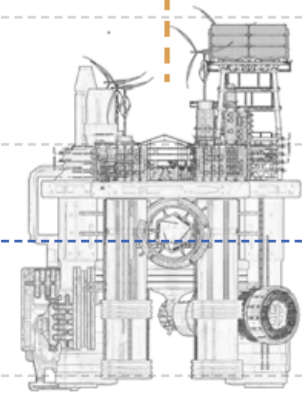
New Gaia would send elite teams—scientists, environmental researchers, architects, engineers, biologists, cyberneticists—into the core of the garbage patches. Their mission:  
**to transform waste into territory, territory into infrastructure, and infrastructure into a new living ecology.**





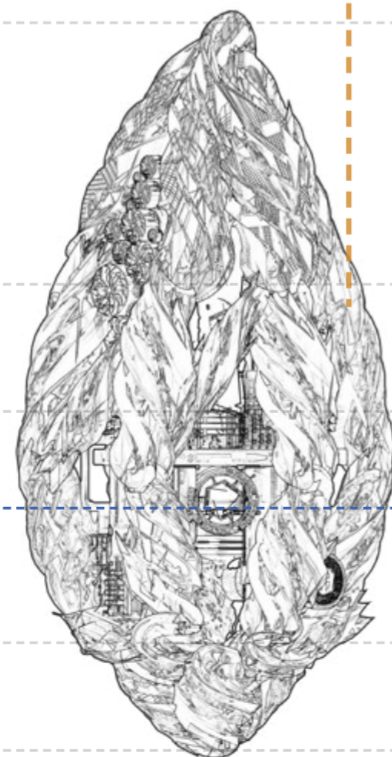
**PHASE 1 (2056)**

Everything begins with a single question: What can ocean's garbage become? The HQ emerges as a research outpost. It test whether the materials of environmental catastrophe can be transformed into the infrastructure of a new civilisation.



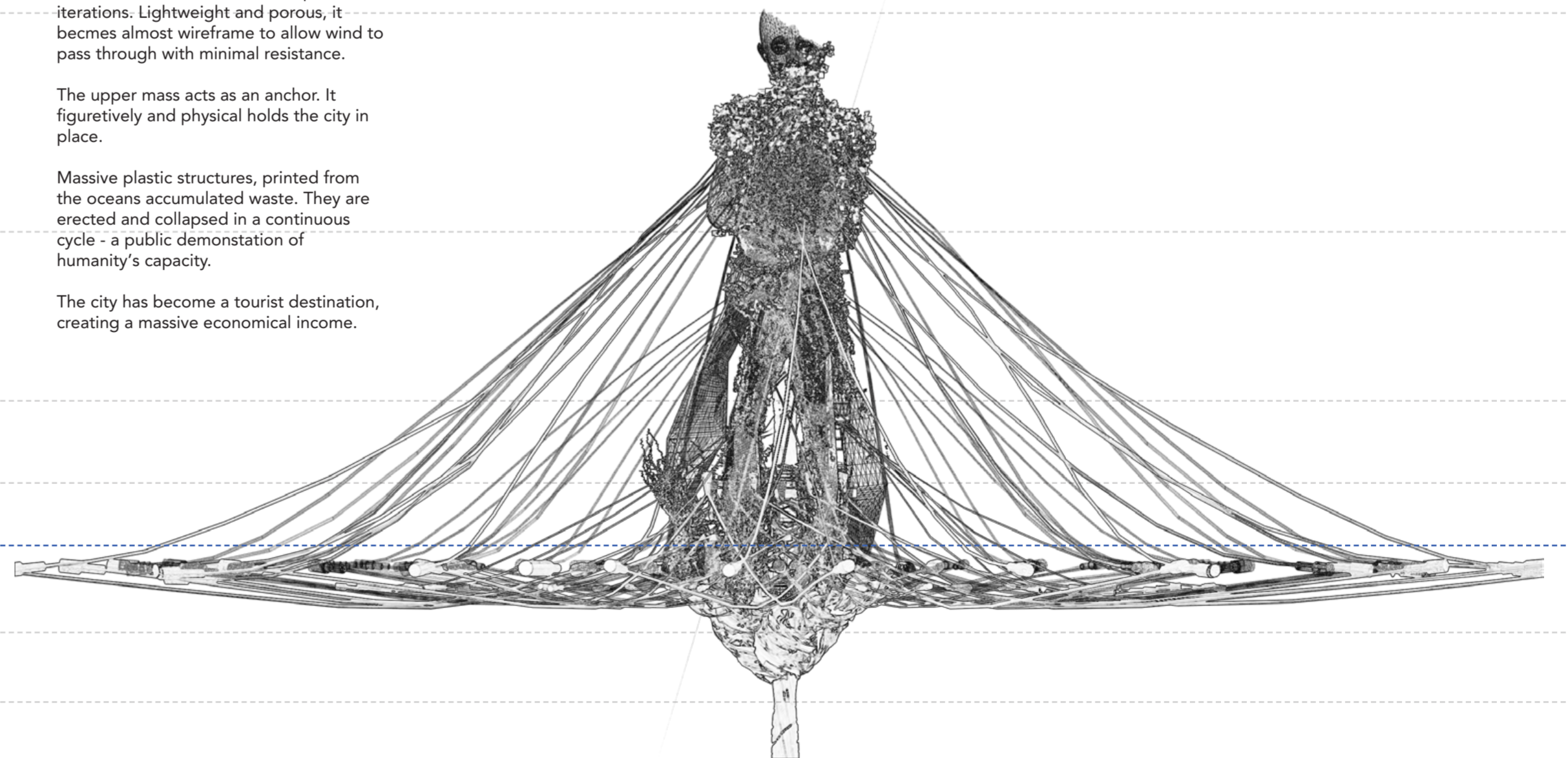
**PHASE 2 (2066)**

The structure begins to print on itself, using newly developed material. In response to increased energy demands, it extends upward to harvest solar power through modified surfaces. The stateless city opens its border. Climate refugees arrive as founders, they inhabit, work and build within a new socio-economic system.



**PHASE 3 (2076)**

The structure rest on microplastic legs - shedded and reformed from its previous iterations. Lightweight and porous, it becmes almost wireframe to allow wind to pass through with minimal resistance. The upper mass acts as an anchor. It figuretively and physical holds the city in place. Massive plastic structures, printed from the oceans accumulated waste. They are erected and collapsed in a continuous cycle - a public demonstration of humanity's capacity. The city has become a tourist destination, creating a massive economical income.

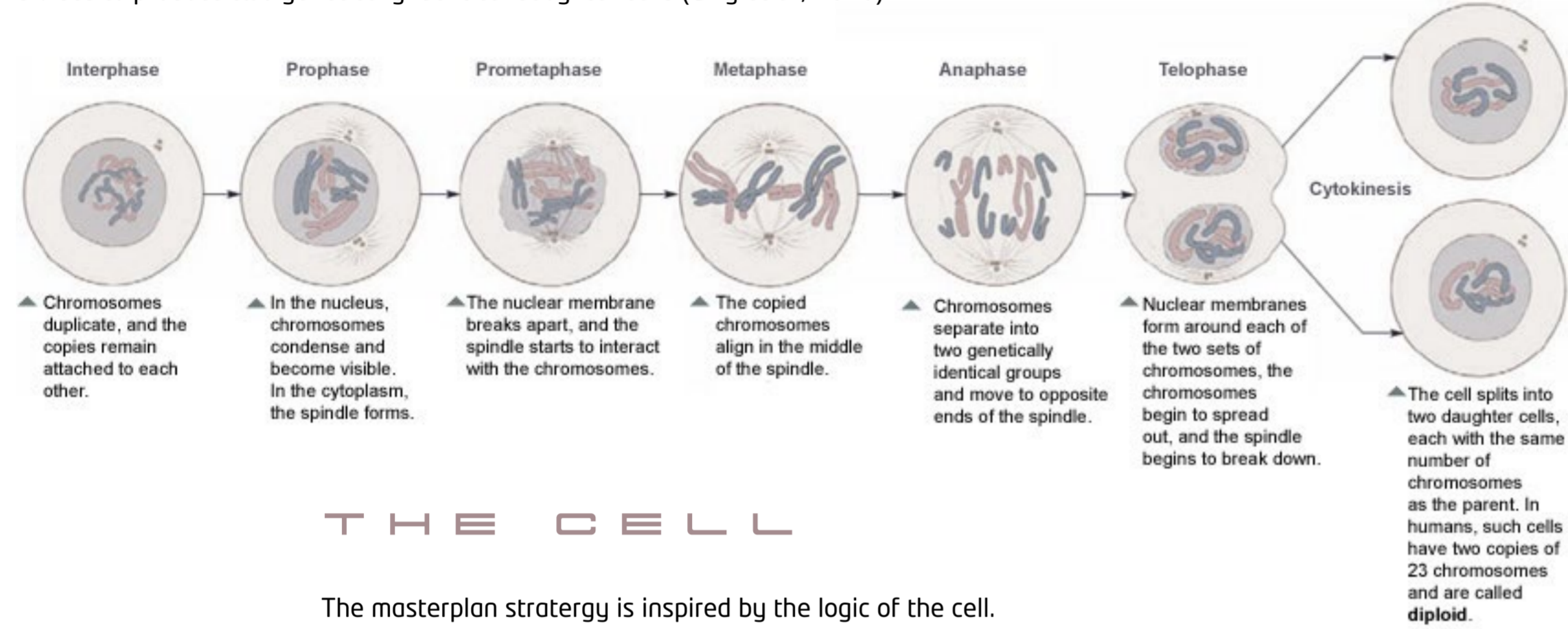


WATERLINE

# CITY CENTER

## MASTER PLAN STRATEGY

The image illustrates the process of mitosis, the method by which a eukaryotic cell divides to produce two genetically identical daughter cells (Urry et al., 2020).

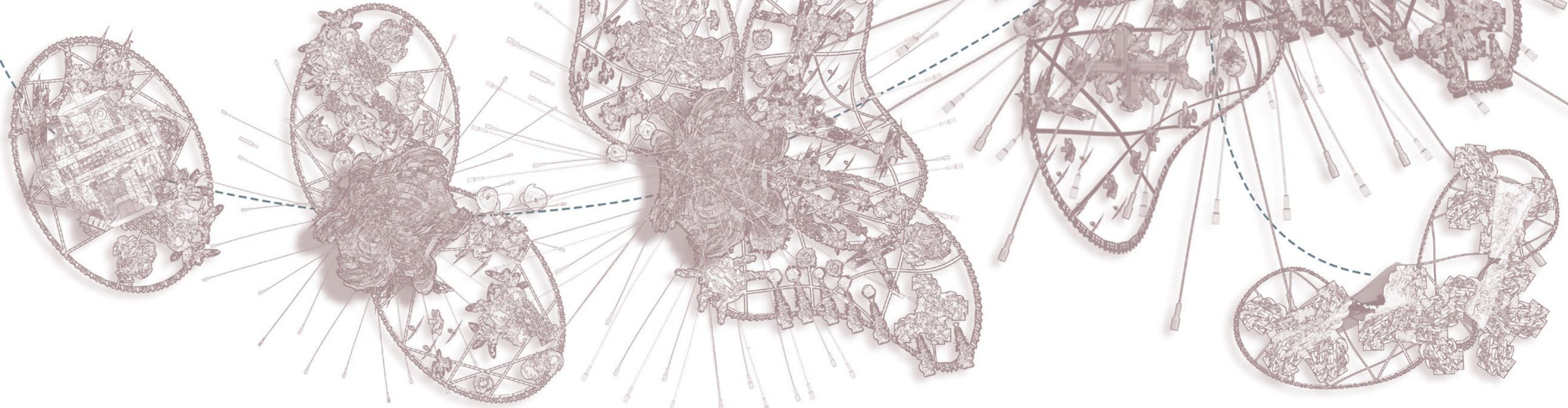
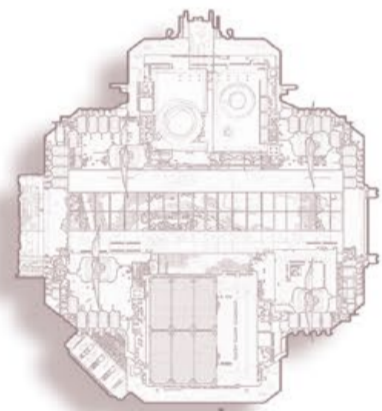


## THE CELL

The masterplan strategy is inspired by the logic of the cell.

As an ecological system, the city grows through multiplication. It expanded from unit to town, from town to district, and from district to city. Each "bubble" operates as a self-sustaining entity and equipped with sufficient follies to support its own survival.

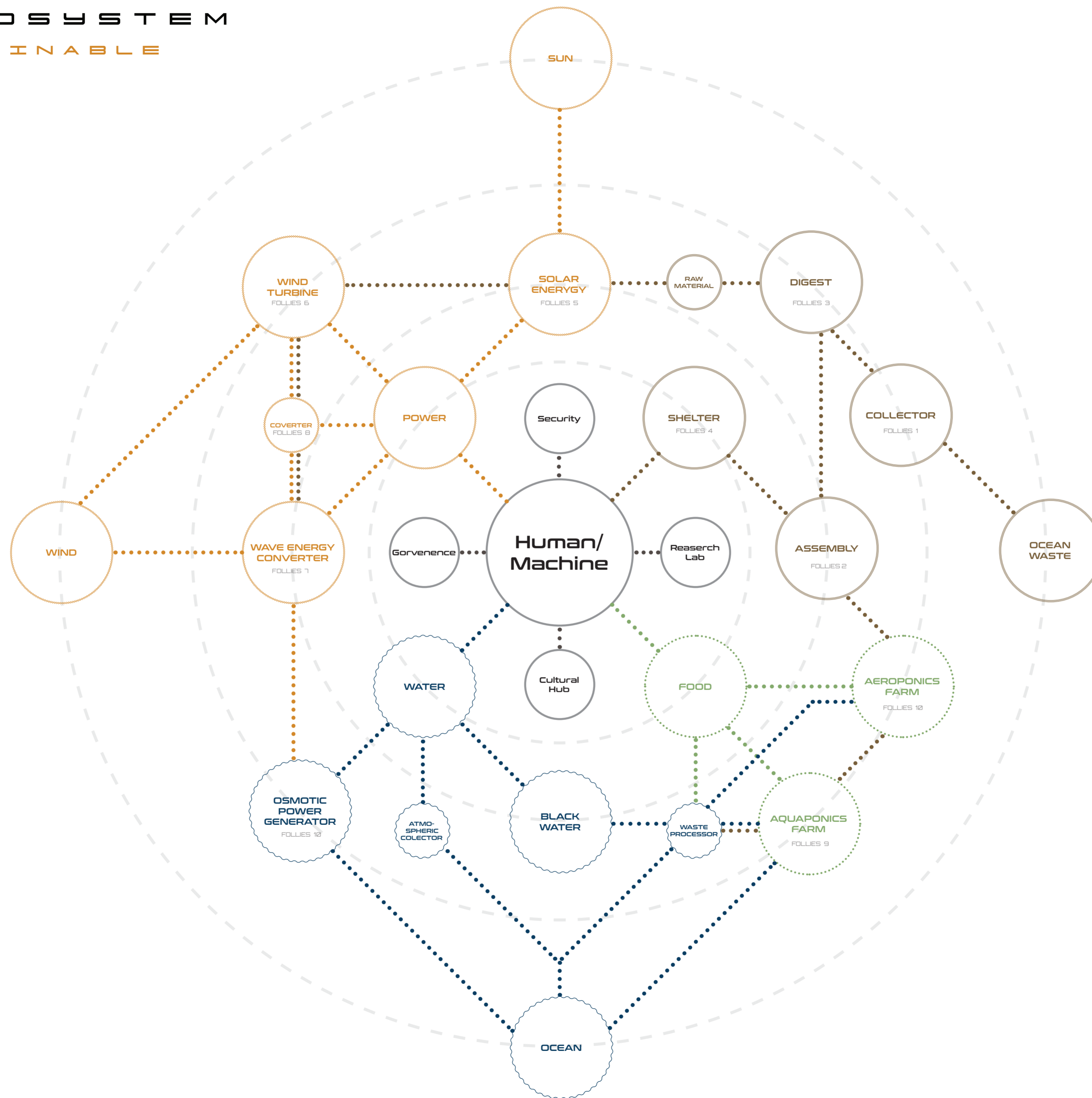
When the system scales, differentiation appears. Each district develops a distinct function, forming a network of interdependent yet autonomous parts.

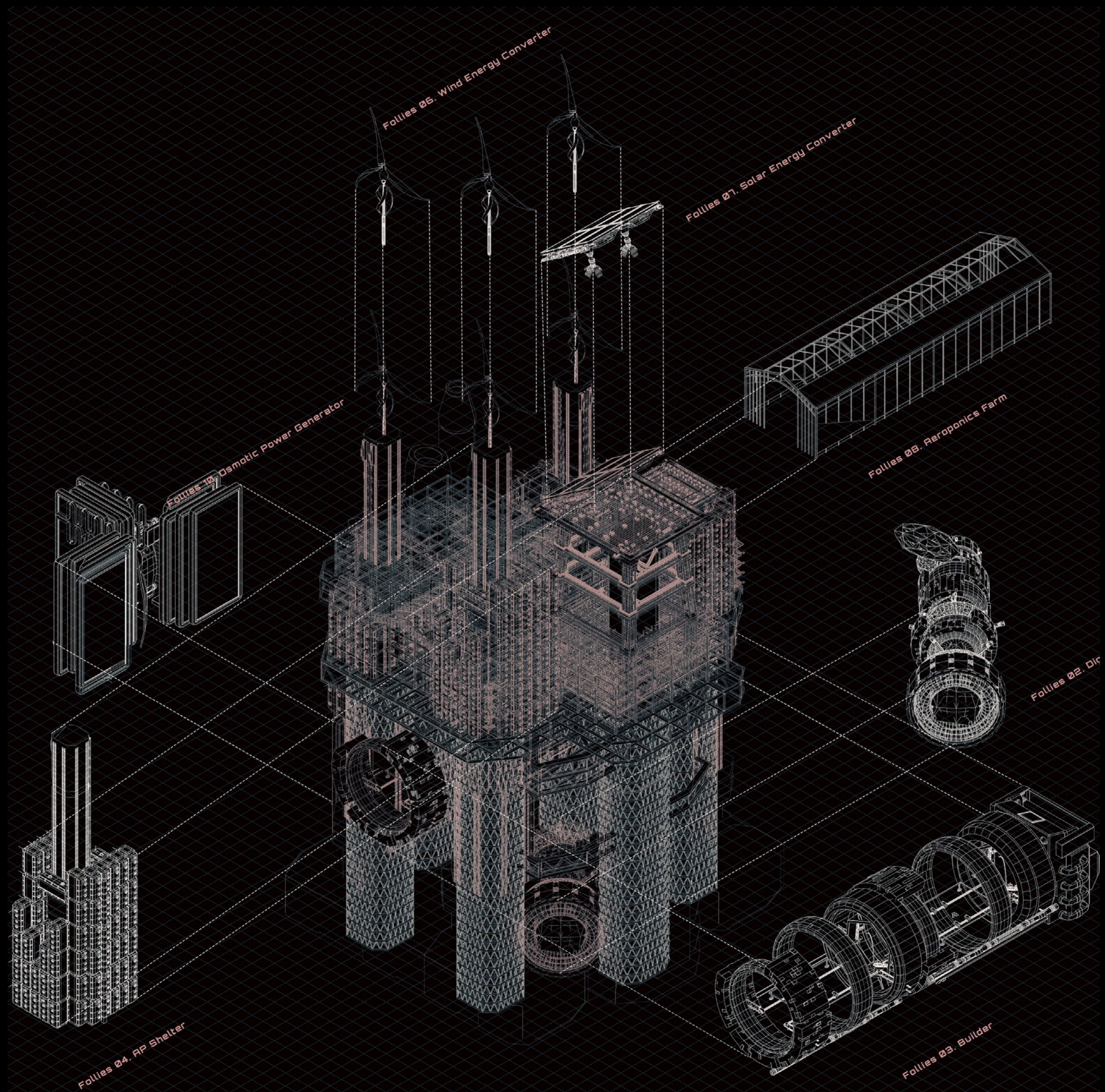


# G A I A E C O S Y S T E M

S E L F S U S T A I N A B L E

C I T Y



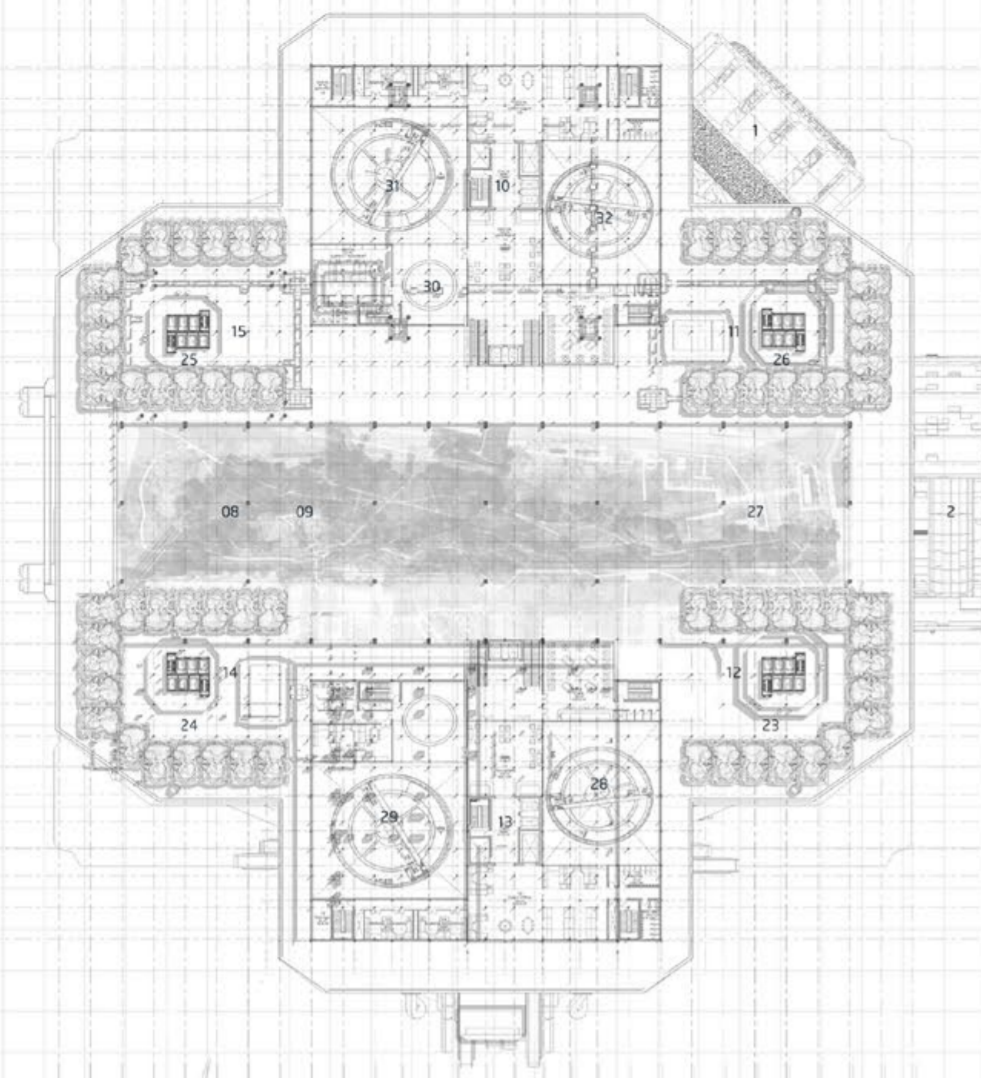


## NEW GAIA'S HQ

At the centre of the city, preceding all printed formations, stands the original structure of New Gaia - the headquarters.

Conceived as a compact ecological system, it consolidates the city's essential functions within a single marine-grade steel framework. Drawing from the typology of offshore oil rigs, it reinterprets a structure once dedicated to extraction into one of transformation. Instead of drawing resources from the earth, it processes oceanic waste - converting plastic into reusable material for construction and growth.

Unlike the surrounding city, which is continuously generated by AI-driven systems optimised for efficiency and impermanence, the headquarters remains an anomaly. It is entirely designed and constructed by human.



### CIRCULATION

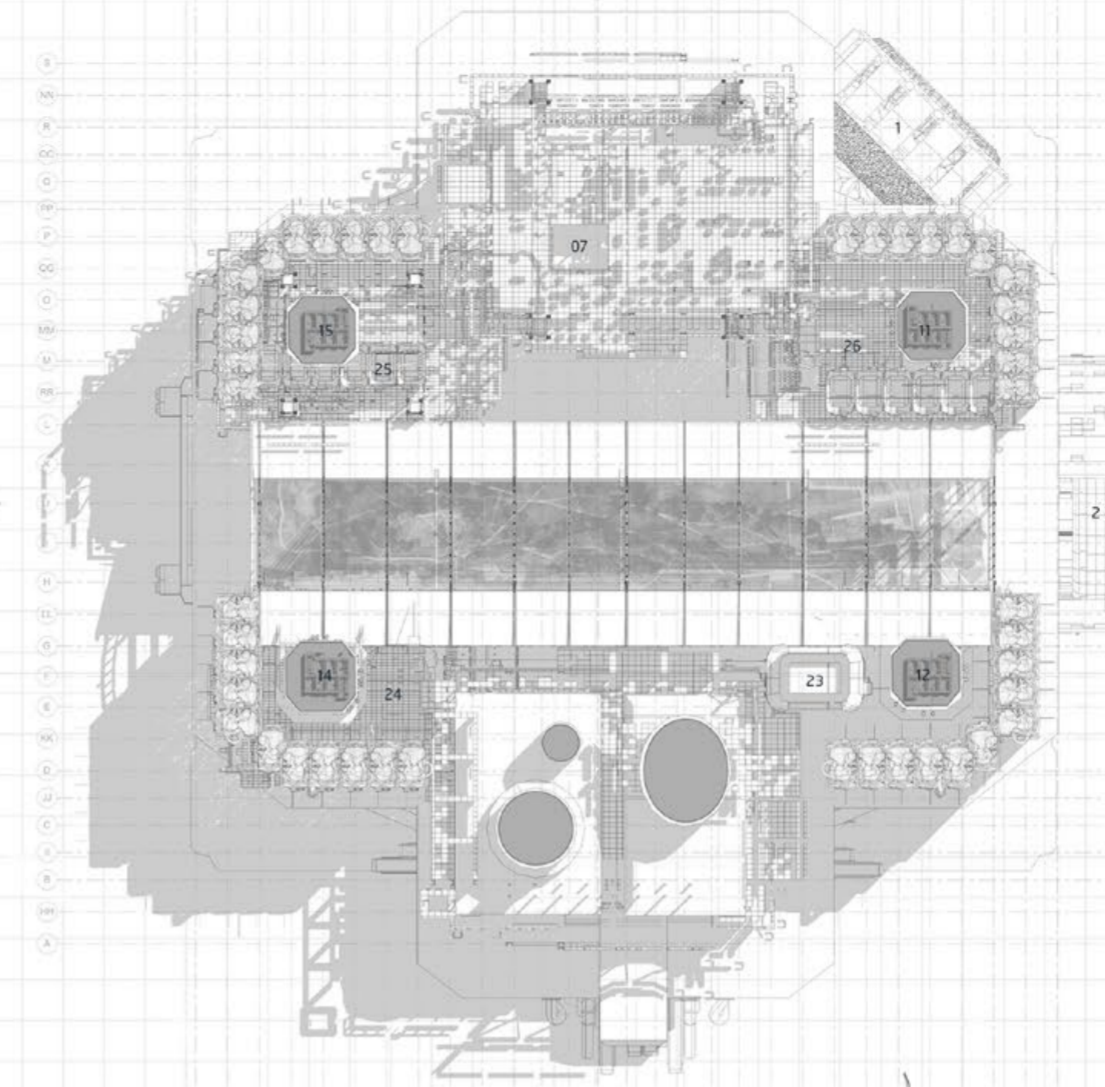
- 1 Follies 02. Digest
- 2 Follies 03. Builder
- 3 Follies 04. Shelter
- 4 Follies 05. Wave Energy Converter
- 5 Follies 06. Wind Energy Converter
- 6 Follies 07. Solar Energy Converter
- 7 Follies 08. Aeroponics Farm

### CIRCULATION

- 10 Shaft A
- 11 Shaft B
- 12 Shaft C
- 13 Shaft D
- 14 Shaft E
- 15 Shaft F

### MAIN SPACES

- 16 Maintenance
- 17 Storage
- 18 Loading
- 19 Boiler room
- 20 Services
- 21 Stack C
- 22 Stack E
- 23 Stack F
- 24 Stack B
- 25 Park
- 26 Material Lab
- 27 Chem Lab
- 28 Dark room
- 29 Reactor control
- 30 Counting room



Follies 06. Wind Energy Converter

Follies 07. Solar Energy Converter

Follies 04. Shelter

Follies 09. Aquaponics Farm

Follies 08. Aeroponics Farm

Follies 03. Builder

Follies 02. Digest

Follies 10. Osmotic Power Generator

### LEVEL 2

Reserved for future expansion and system growth  
Allows adaptive reconfiguration over time  
Functions as a strategic buffer for unknown demands

### HABITAT. LEVEL 4-20

Predominantly residential and living environments  
Includes studio spaces for work and creative production  
Supports daily life and community interaction

### PLATFORM. LEVEL 0

Hosts research laboratories and experimental systems  
Provides shared spaces for recreation and well-being

### WATER SURFACE. LEVEL -6

Main docking and logistical interface with the ocean  
Spaces for builder systems and material intake  
Primary entry and transition threshold into the city

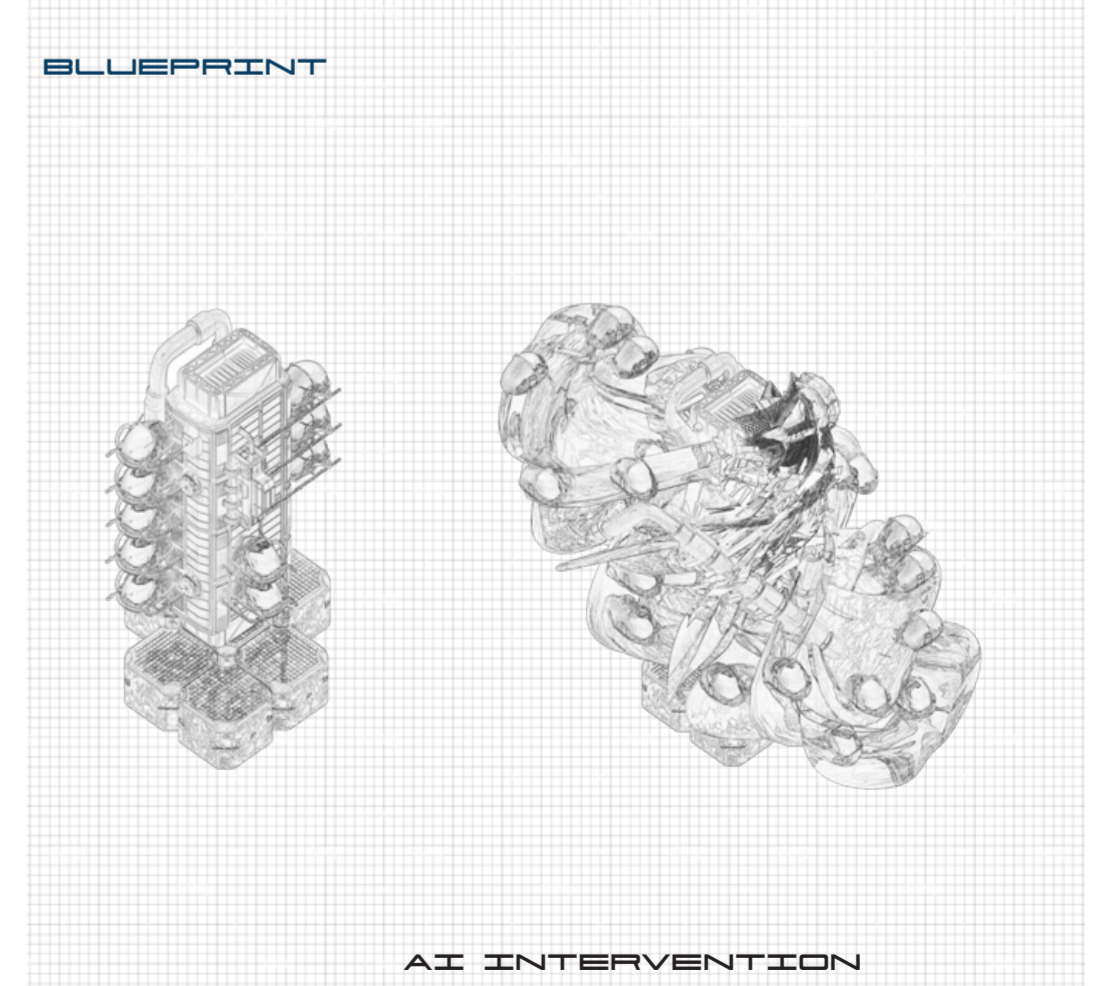
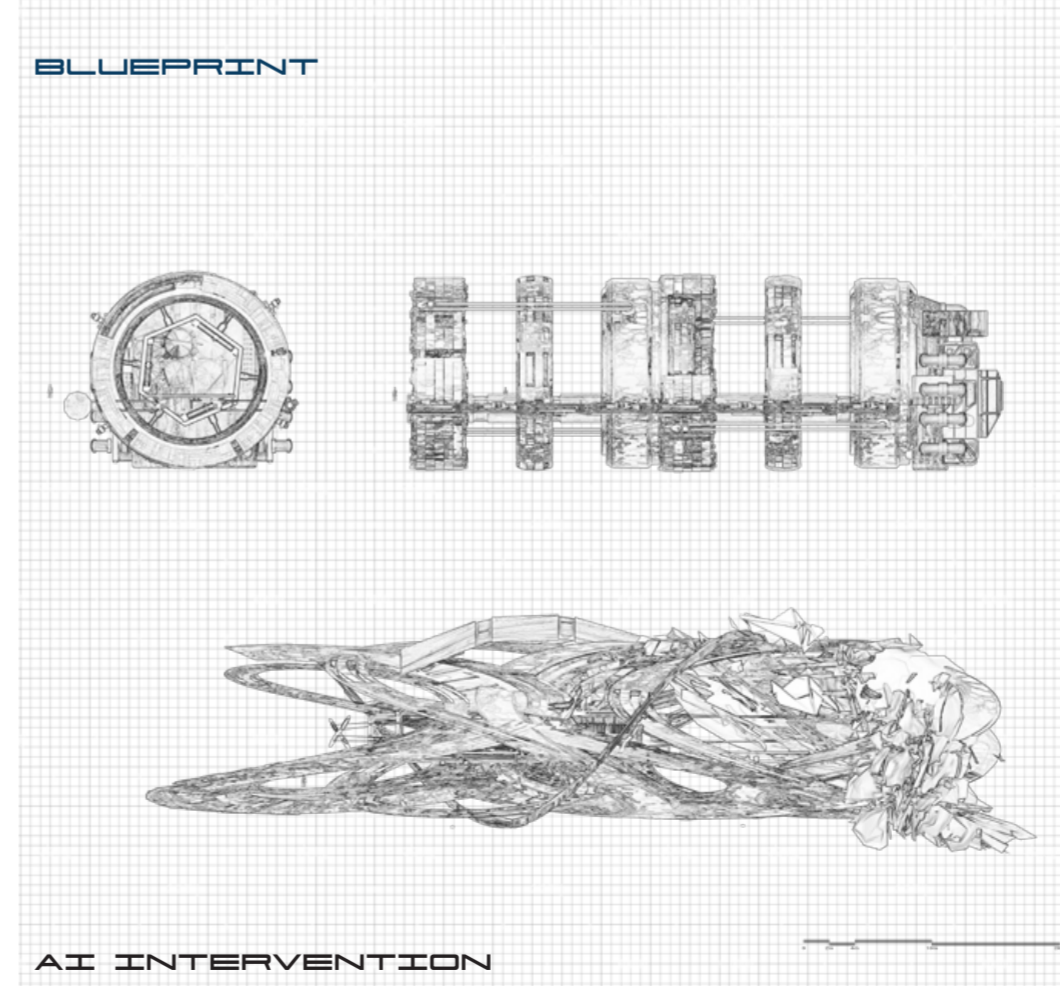
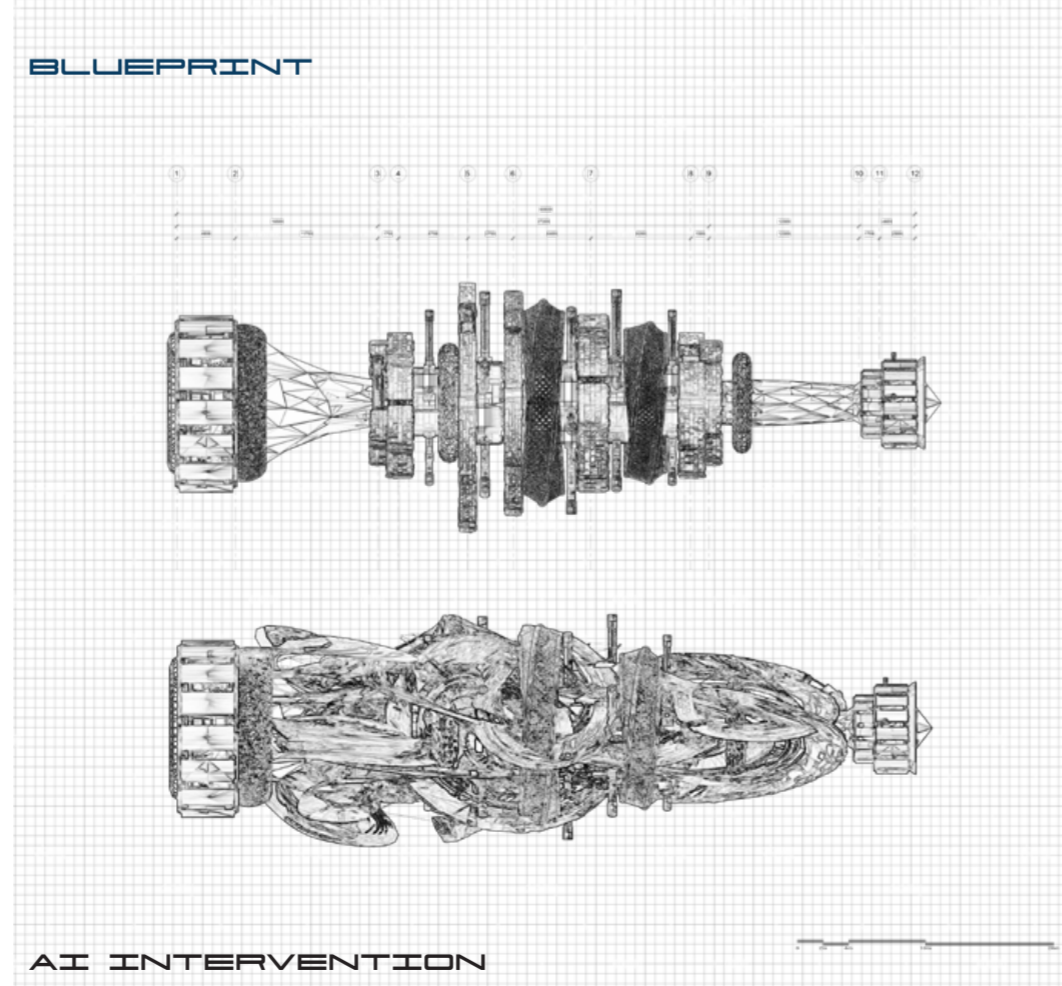
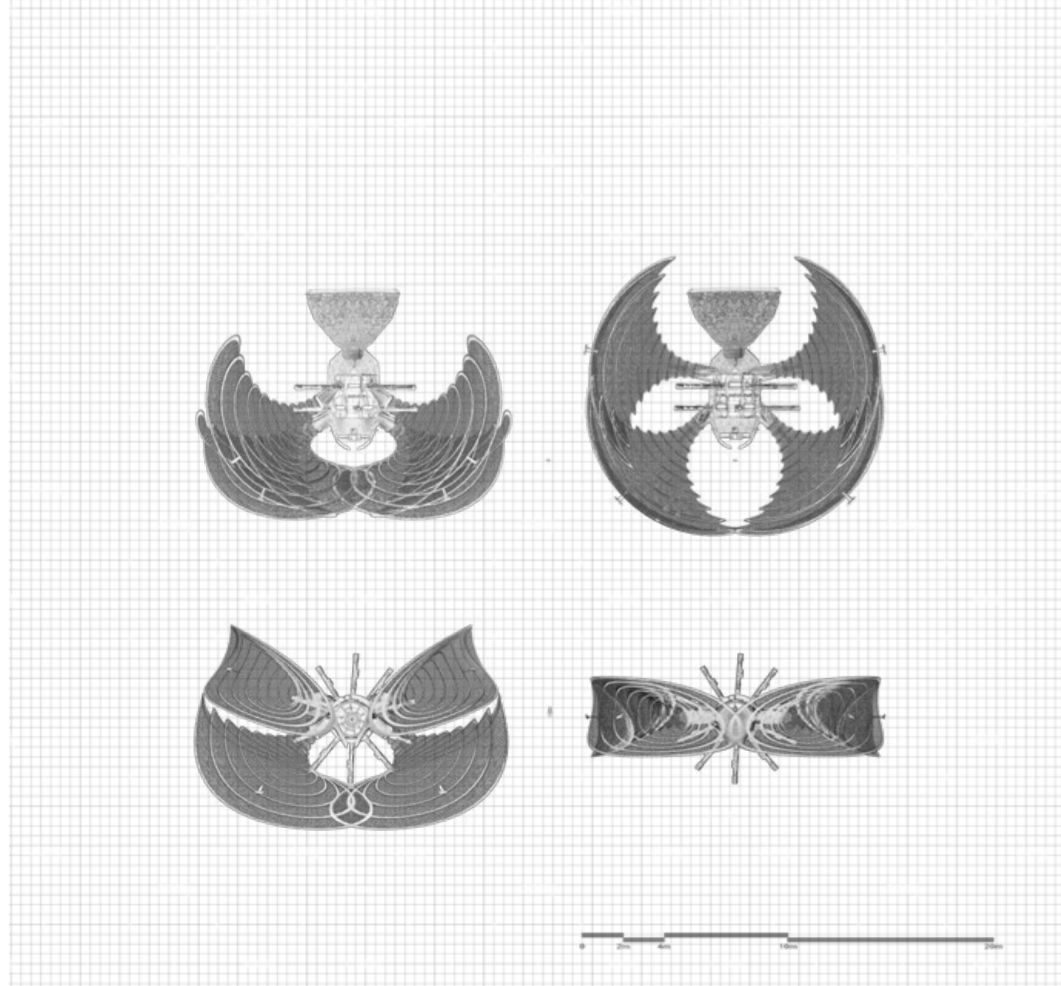
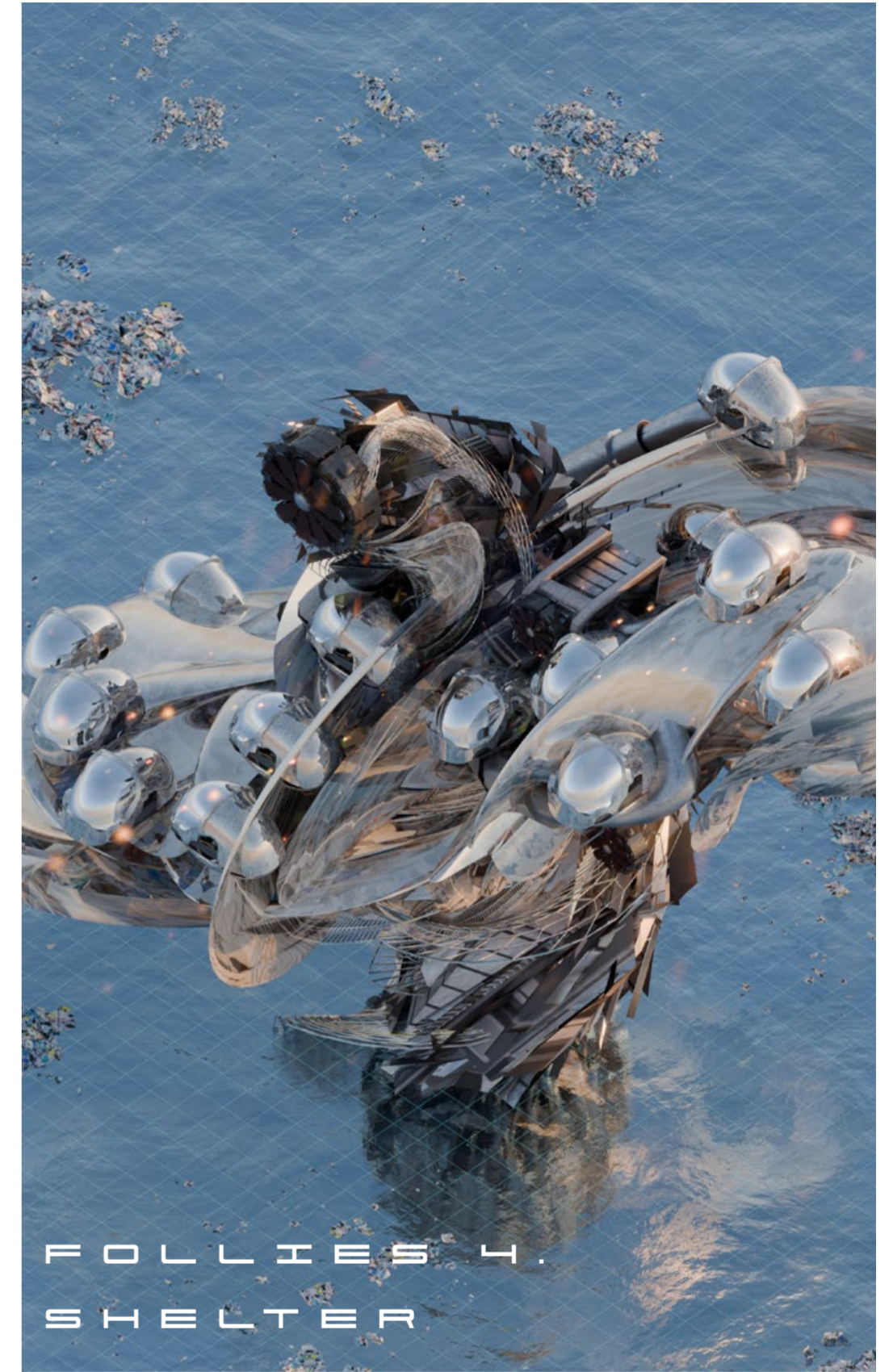
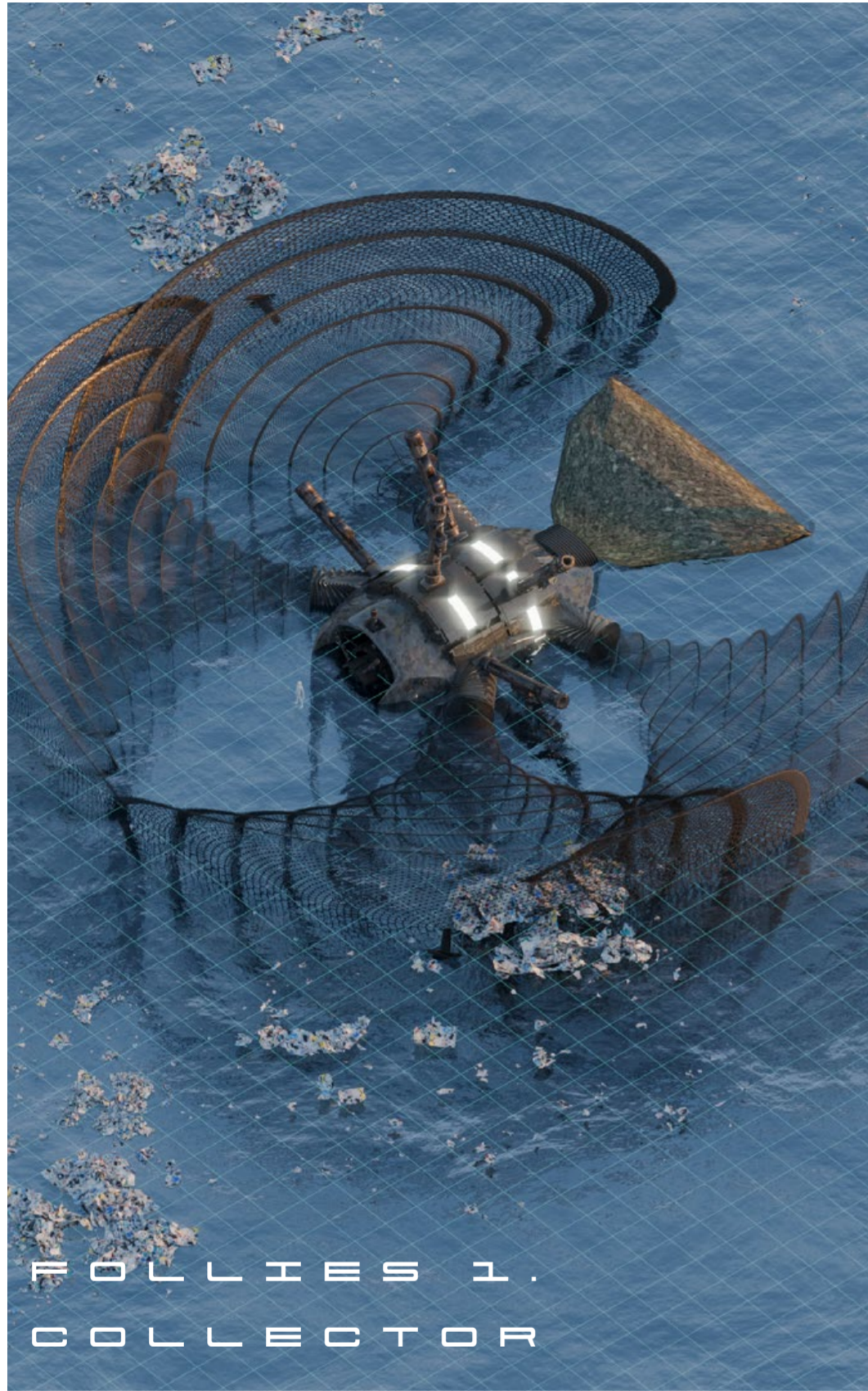
### DIGEST. LEVEL -13

Primary material digestion and processing zone  
Houses enzymatic, chemical, and recycling systems  
Limited human access, restricted to maintenance

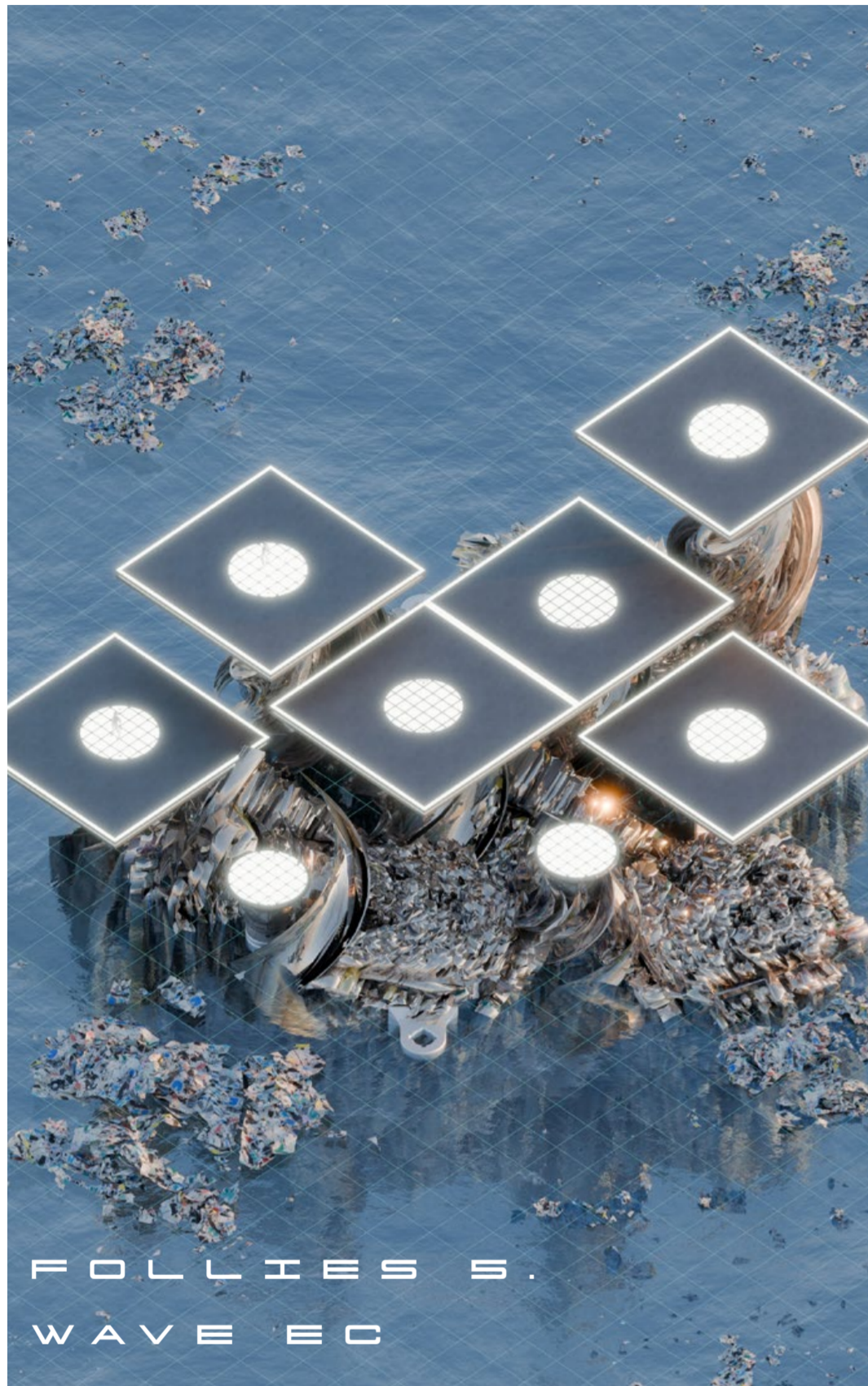
### SUBMERSIBLE PONTOONS



— RECYCLE SYSTEM —

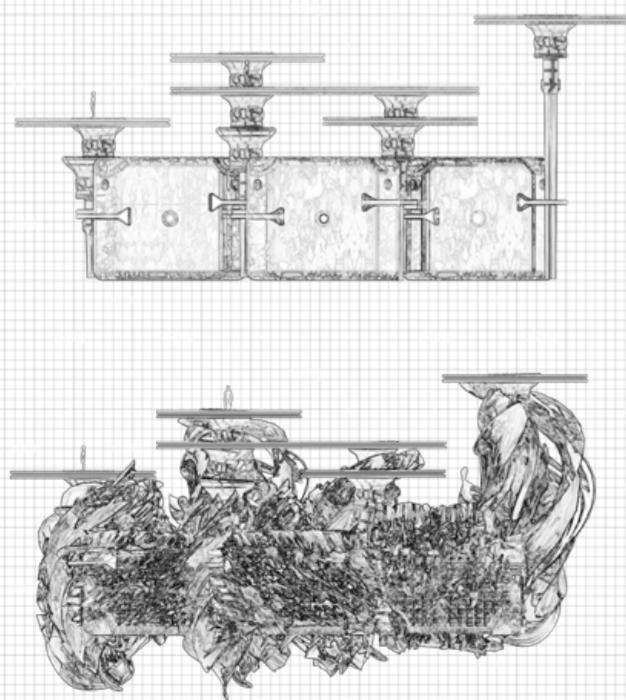


— ENERGY SYSTEM —



FOLLIES 5.  
WAVE EC

BLUEPRINT



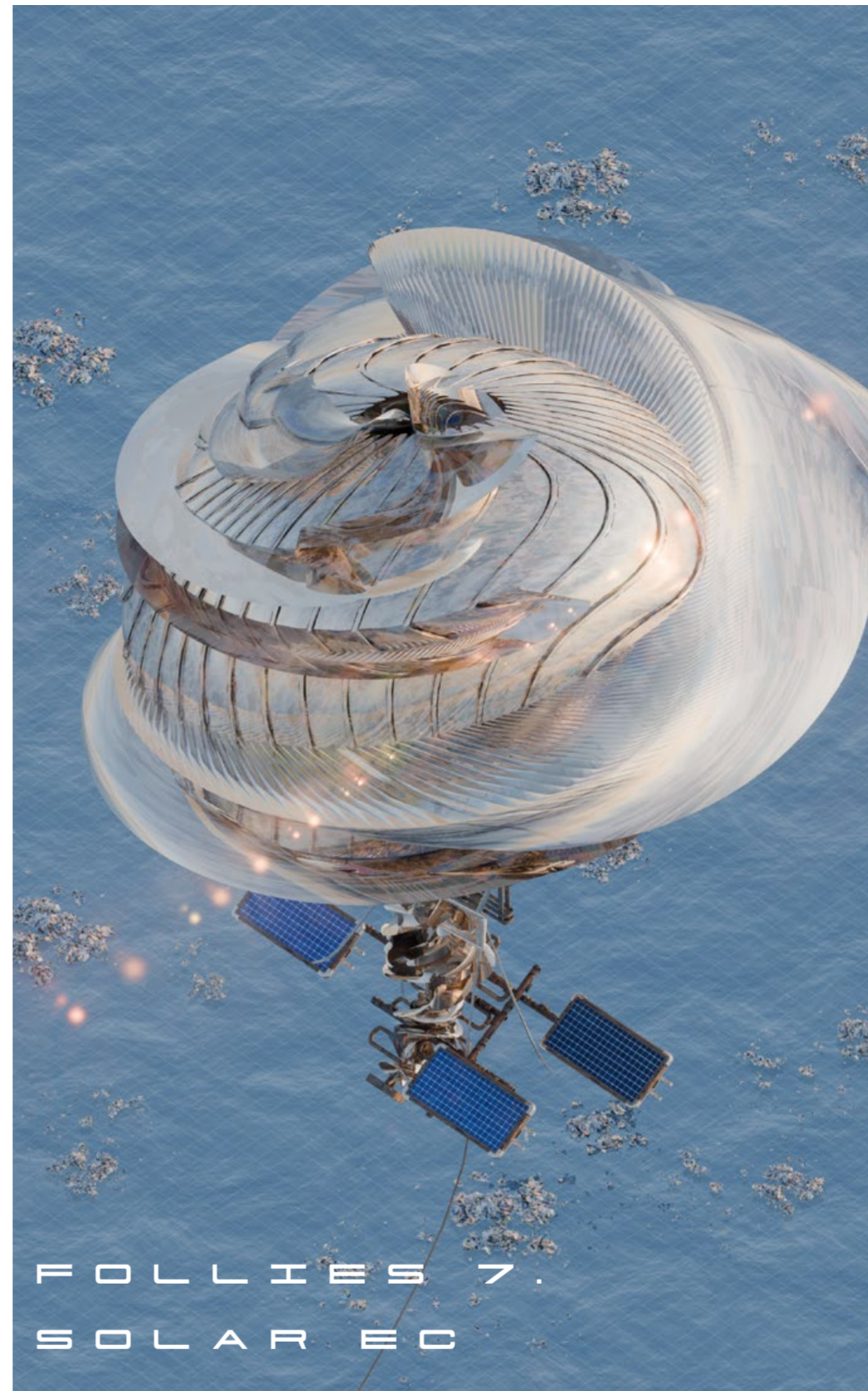
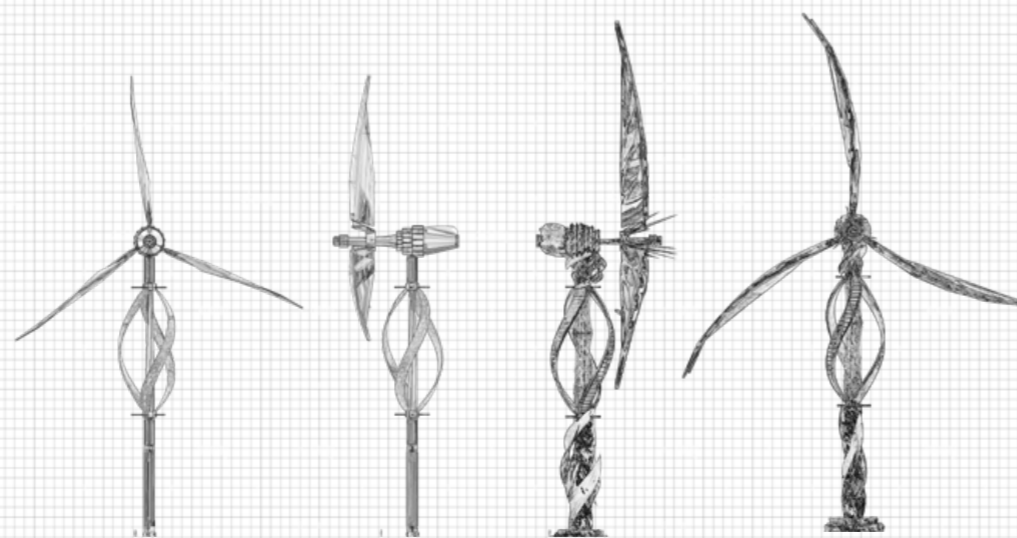
AI INTERVENTION



FOLLIES 6.  
WIND EC

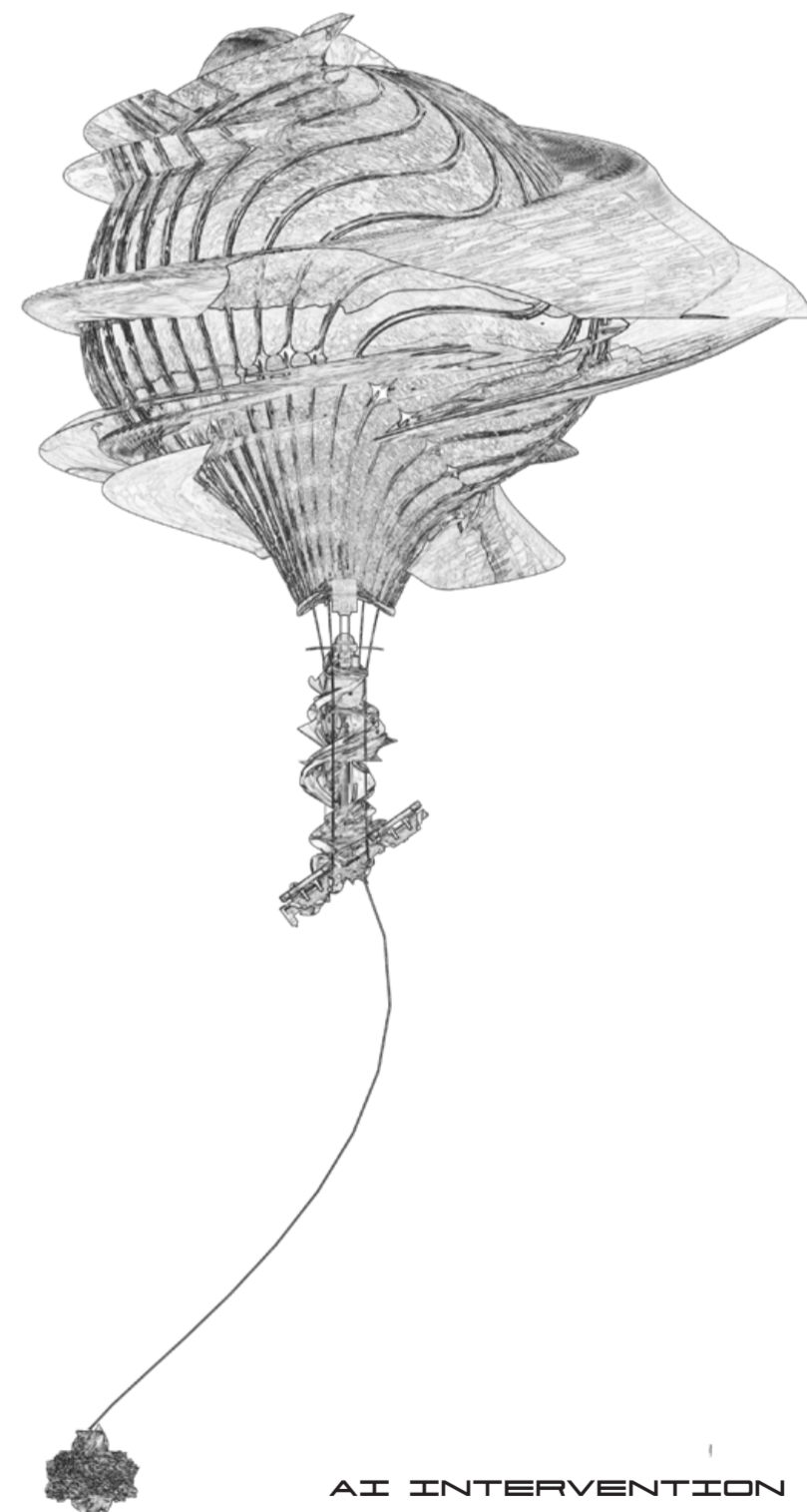
BLUEPRINT

AI INTERVENTION



FOLLIES 7.  
SOLAR EC

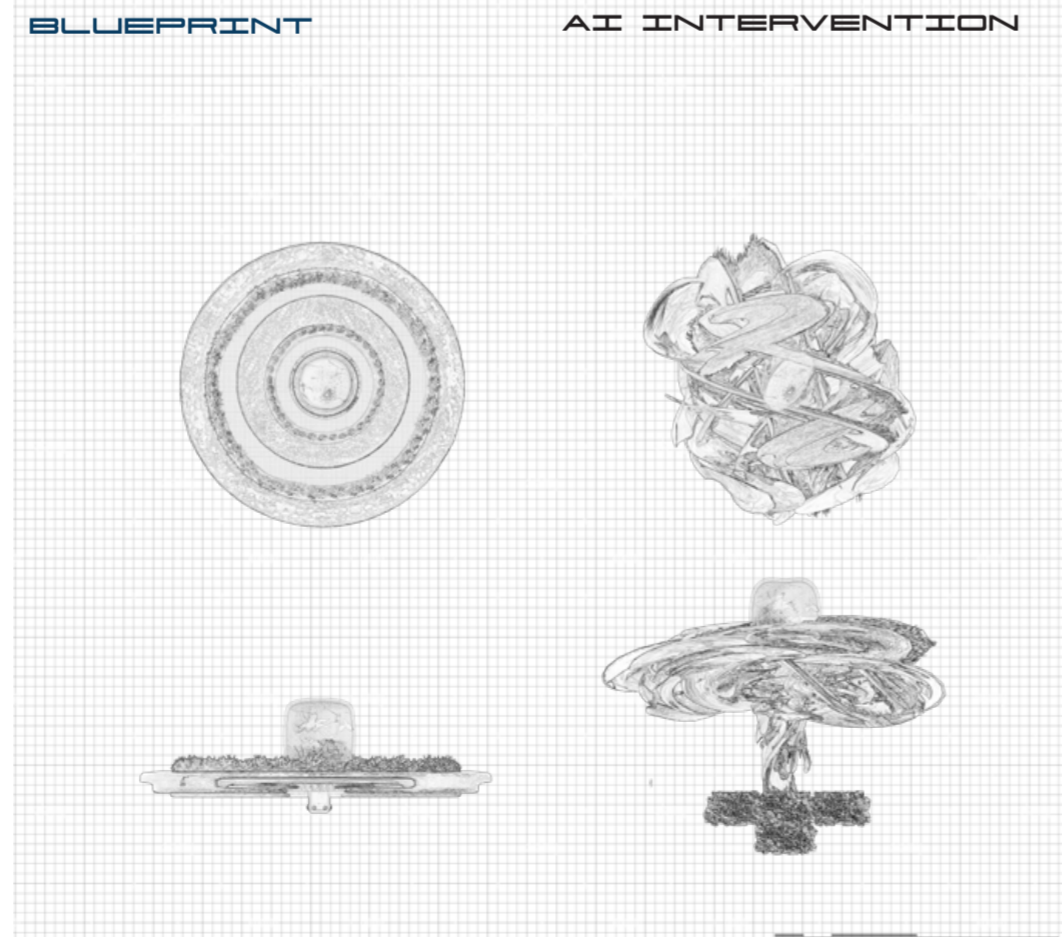
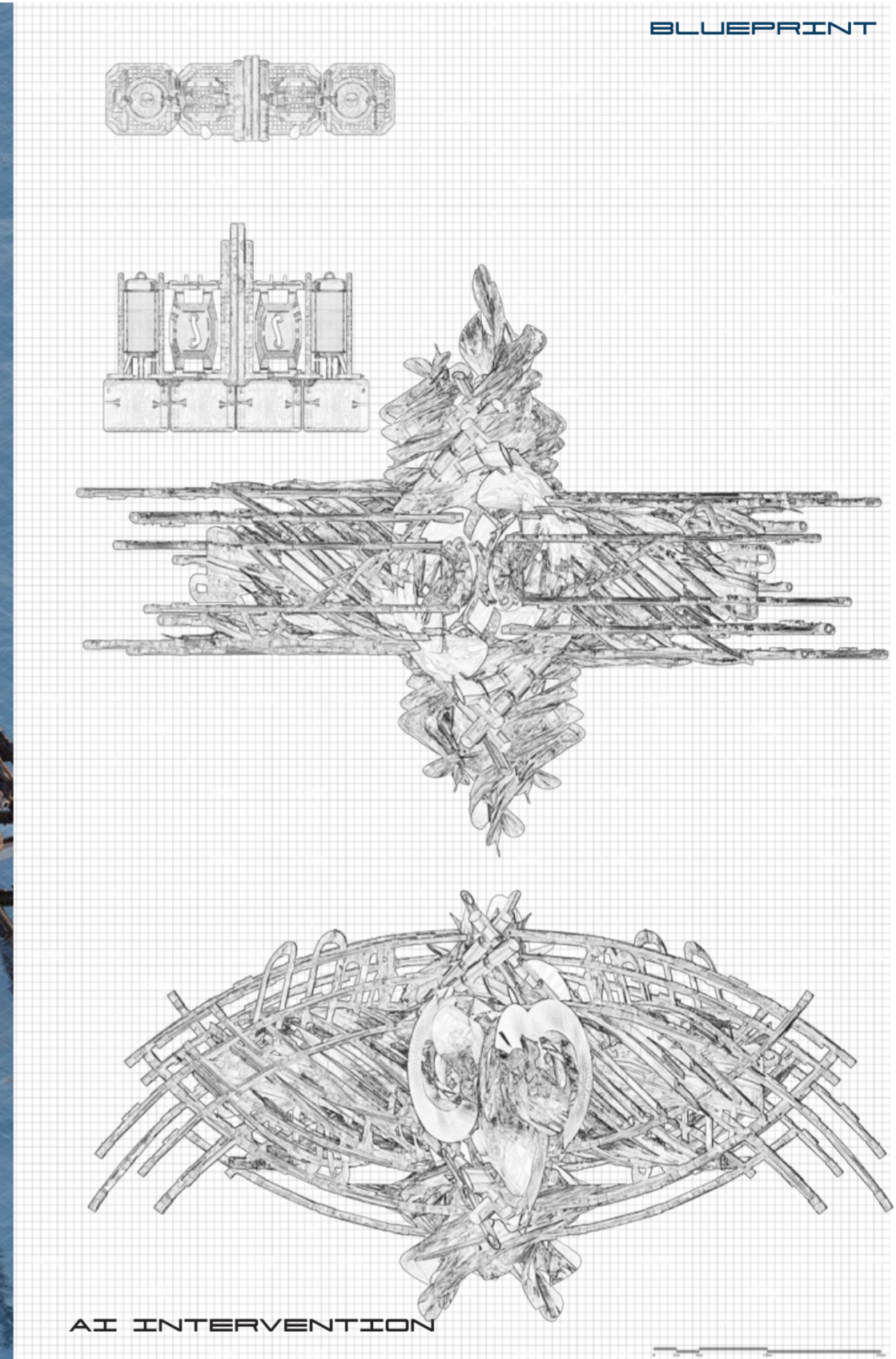
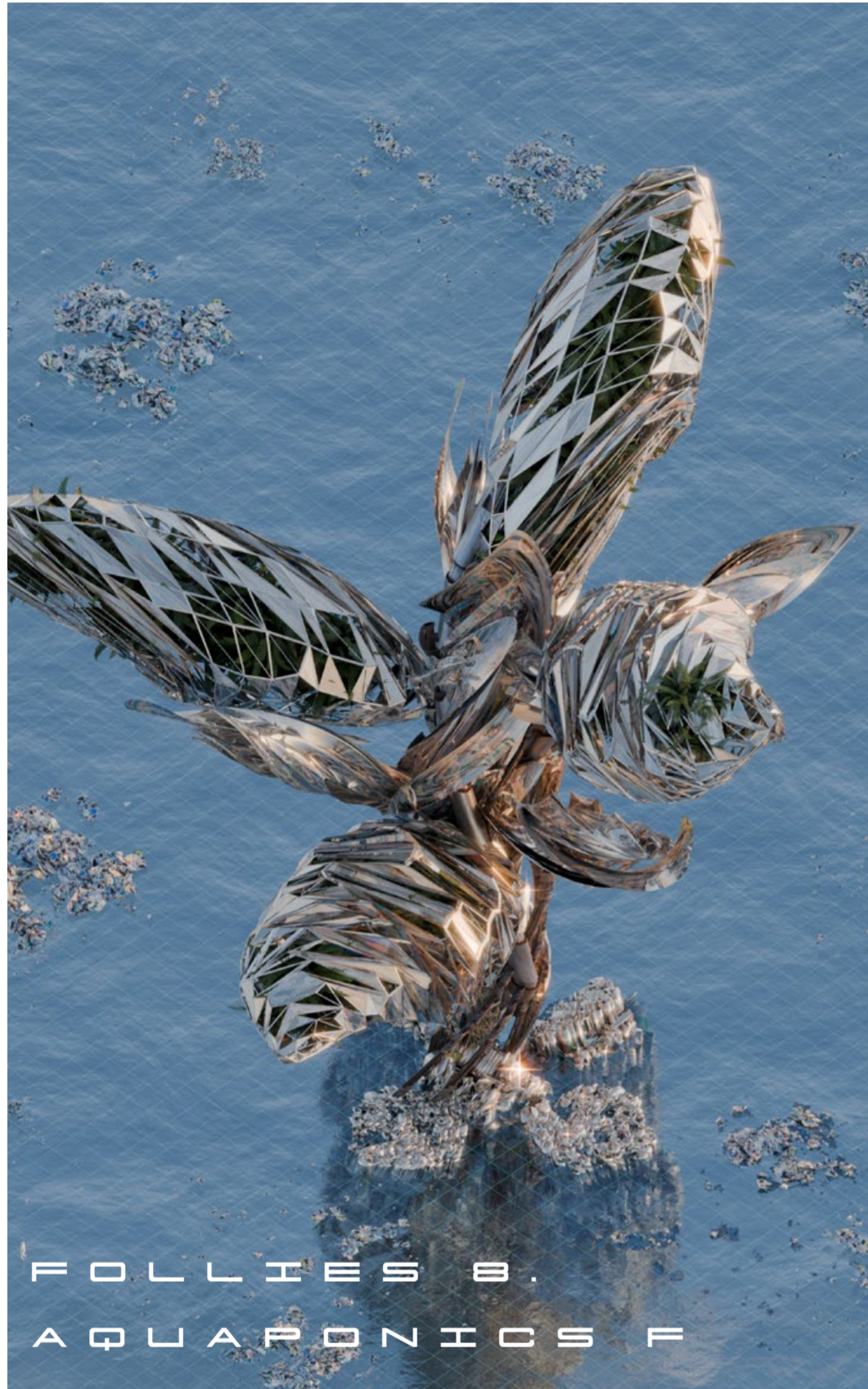
BLUEPRINT



AI INTERVENTION

— FARMING SYSTEM —

— WATER SYSTEM —



# COMPOSITIONS

## BUILDER DISTRICT

### FOLLIES

The Chosen Follies:

- » Follies 02. Digest
- » Follies 03. Builder
- » Follies 05. Wave Energy Converter
- » Follies 06. Wind Energy Converter
- » Follies 08. Aeroponics Farm
- » Follies 09. Aquaponic Farm
- » Follies 10. Osmotic Power Generator

### STAGE 1 COMPOSITION

STAGE 1 MAJOR BUILDER

- » Follies 02. Digest
- » Follies 03. Builder
- » Follies 06. Wind Energy Converter
- » Follies 10. Osmotic Power Generator

STAGE 1 FOOD FARM

- » Follies 05. Wave Energy Converter
- » Follies 08. Aeroponics Farm
- » Follies 09. Aquaponic Farm

### STAGE 2 COMPOSITION

STAGE 2: MAJOR BUILDER

- » STAGE 1 MAJOR BUILDER
- » Follies 02. Digest
- » Follies 03. Builder
- » Follies 05. Wind Energy Converter
- » Follies 10. Osmotic Power Generator

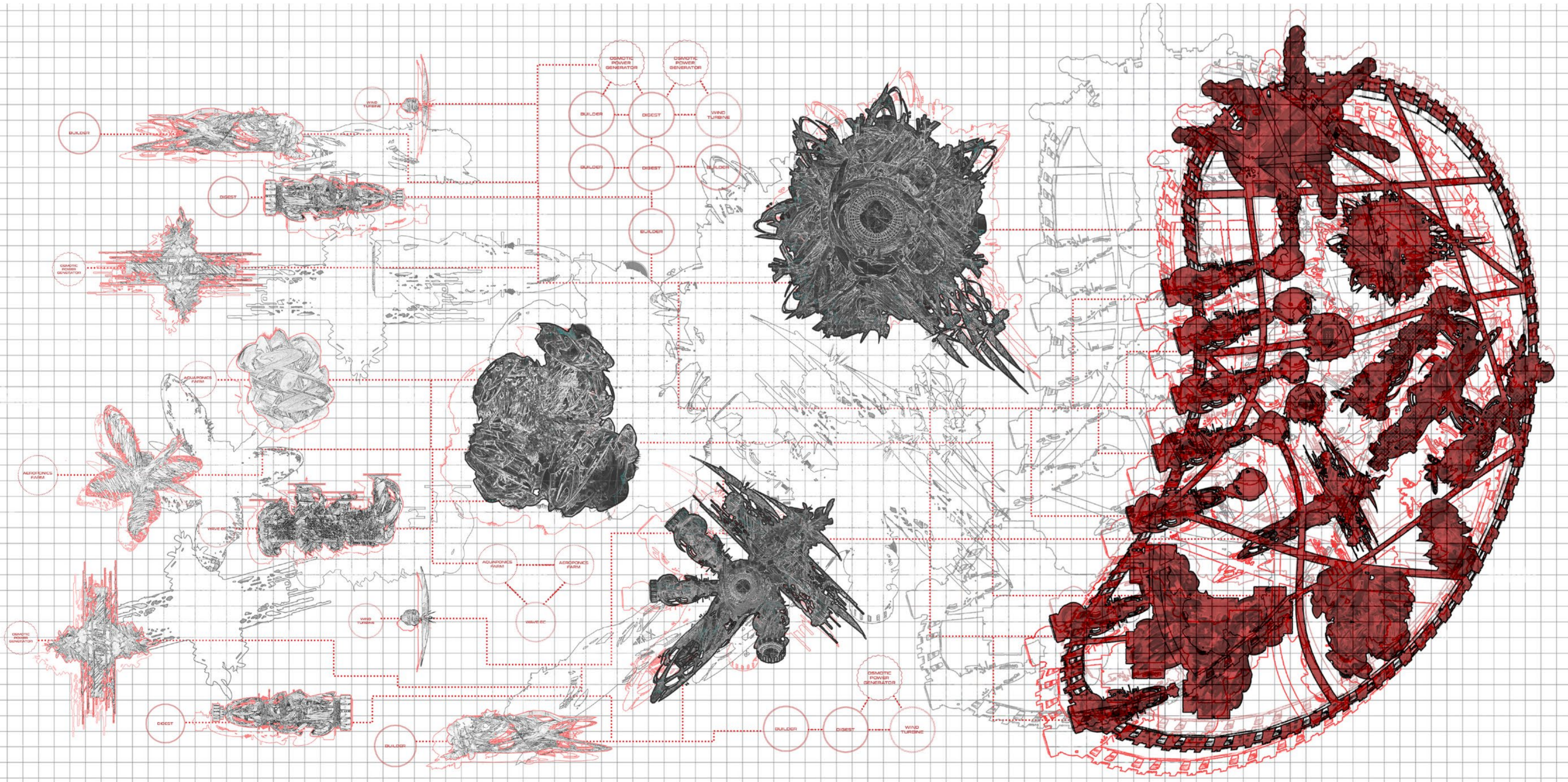
### STAGE 3 COMPOSITION

STAGE 3: BUILDER DISTRICT

- » STAGE 2 MAJOR BUILDER
- » STAGE 1 MAJOR BUILDER
- » STAGE 1 FOOD FARM
- » Follies 2. Digest
- » Follies 3. Builder

SUPPORTING STRUCTURES

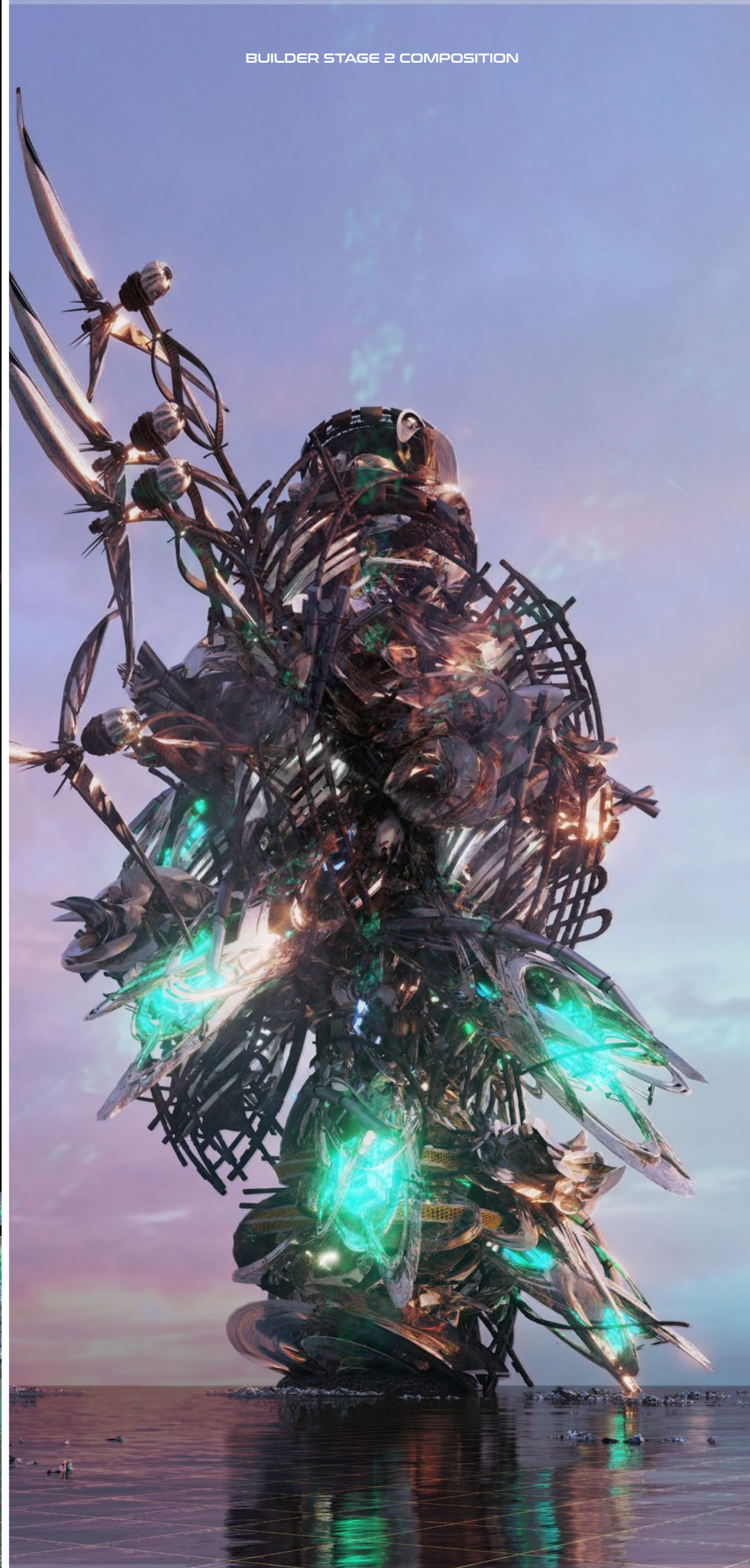
- » DIPLOMAT
- » STATION
- » STAGE 1 HUMAN PARK



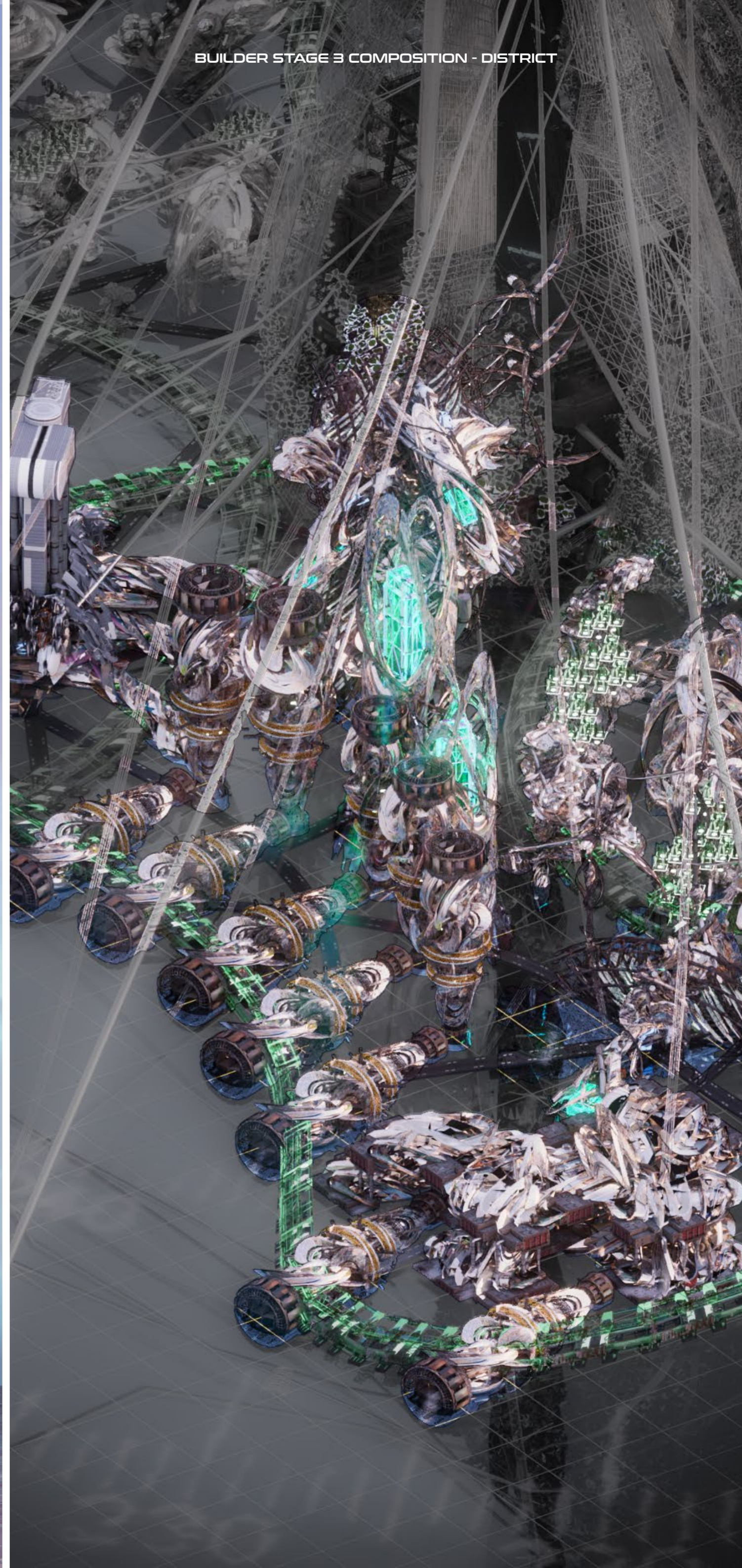
BUILDER STAGE 1 COMPOSITION



BUILDER STAGE 2 COMPOSITION



BUILDER STAGE 3 COMPOSITION - DISTRICT



**BUILDING DISTRICT -  
SOUTHWEST BOUND**

- » The southwest sector aligns with the broader circulation patterns influenced by the Agulhas system and the subtropical gyre. This area is more likely to receive drifting debris transported across the basin. Placing the Builder District here reduces transport distance between Collector systems and fabrication facilities.
- » Keeps heavy fabrication, noise, and vibration away from living and education zones while maintaining direct access to docking and logistics infrastructure.

**FOOD PRODUCTION DISTRICT -  
NORTH + NORTHEAST**

- » In the Southern Hemisphere, north-facing receives maximum solar gain year-round.
- » More stable microclimate compared to southern storm exposure.
- » Elevated aeroponics benefit from consistent sunlight.
- » Positioned upwind from waste-processing areas to avoid contamination.

**ENERGY PRODUCTION DISTRICT -  
SOUTH + SOUTH EAST**

- » Southeast captures prevailing trade winds - optimal wind turbine output.
- » South - Southwest edge receives stronger wave energy - ideal for wave energy converters.
- » Perimeter placement reduces noise and vibration impact on residential zones.
- » Acts as a protective buffer ring against storms.

