

The oceans today are not just eerie and forbidden regions, but areas that, despite the fact that they may never have seen human being, feel the effects of human activities around the globe. Just marine plastic pollution has impacted at least 267 species worldwide, including 86% of all sea turtle species, 44% of all seabird species and 43% of all marine mammal species. Globally, millions of tons of trash enter the ocean each year. Due to ocean currents, this plastic waste collects in particular areas, one of them is the Great Pacific Garbage Patch (8th Continent).

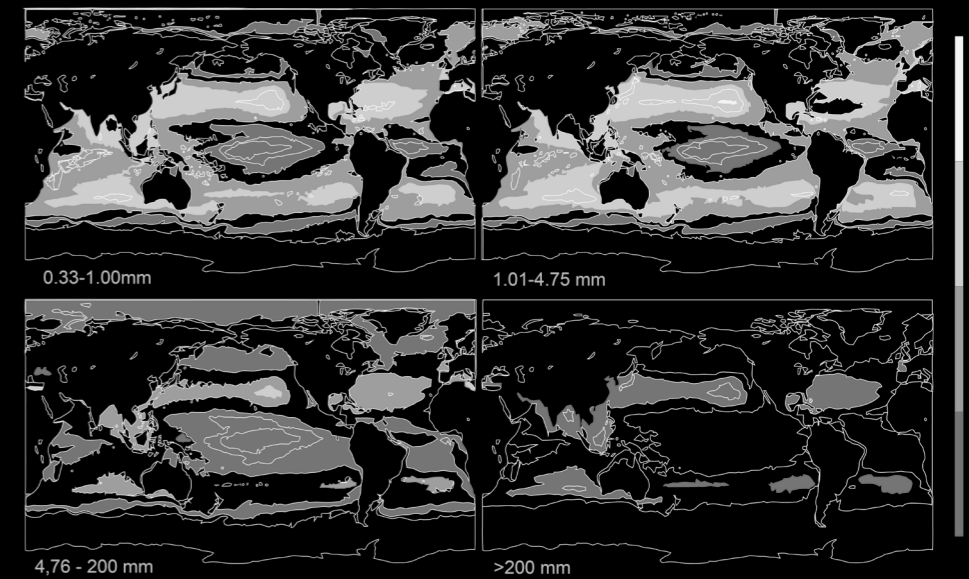
8th Continent is starting location for proposed floating station which is collecting plastic debris from the surface of the water and break it down to recyclable material.

The floating Station is with different processes answering the environmental changes on site. Object connects research and education facility with ocean plastic recycle centre. Considering this target of the project is to use marine science and knowledge to showcase the increasingly troubling side of aquatic environments, not as a new phenomenon, but as the result of centuries of human – ocean interactions. This unique meeting platform should bring people to this distant environment and fight against the dilution that we cannot hurt the ocean by our action onshore.

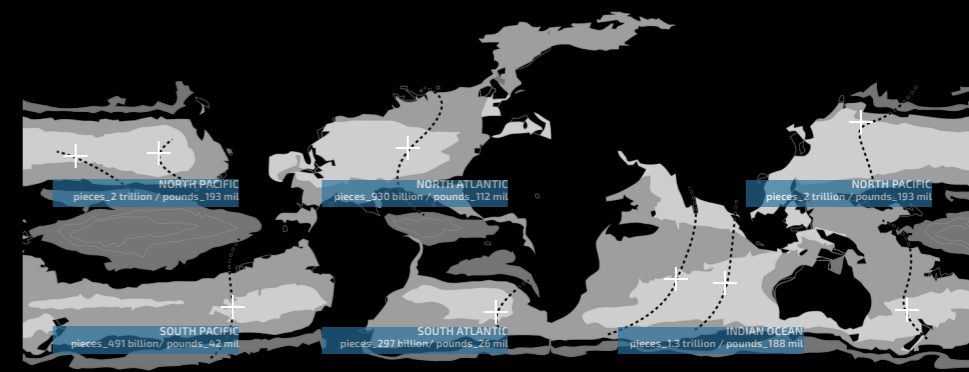




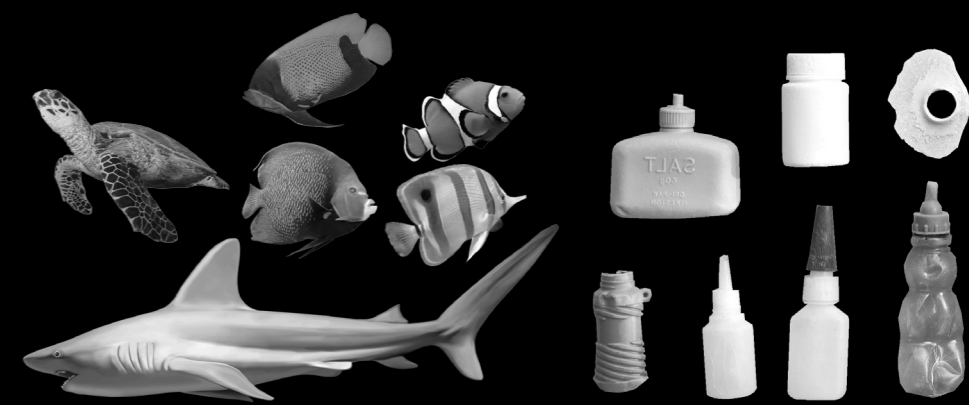
Approaching the station from the water



Plastic particles floating in ocean



Plastic Particles in The World Ocean



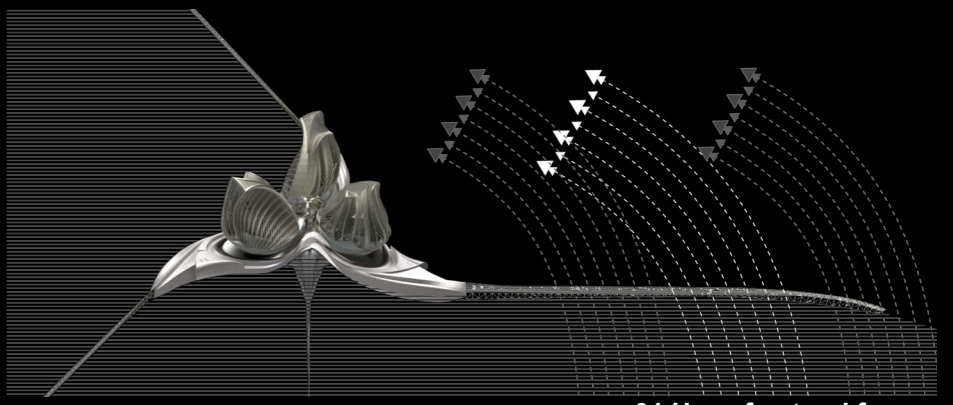
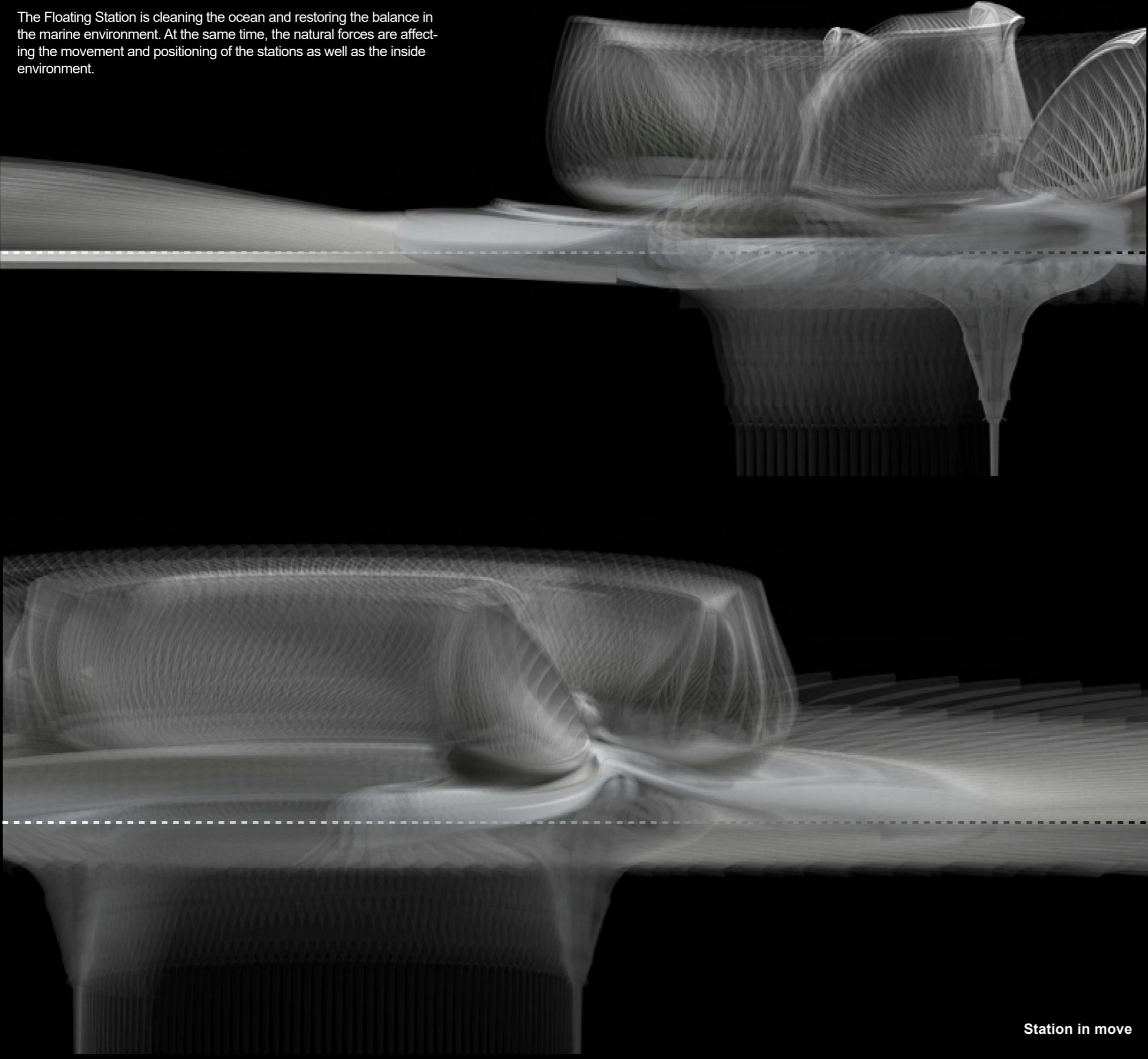
How we imagine Life in the Ocean

What really is in the Ocean

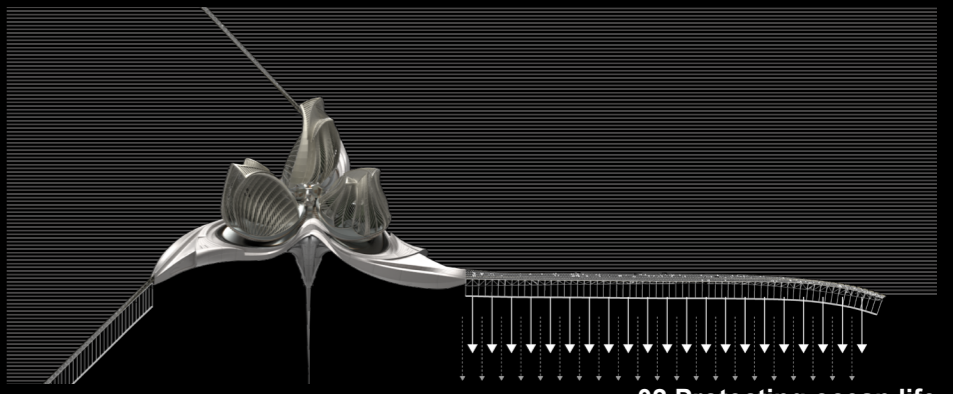
The oceans are so vast and deep that until fairly recently, it was widely assumed that no matter how much trash and chemicals humans dumped into them, the effects would be negligible.

Proponents of dumping in the oceans even had a catchphrase: "The solution to pollution is dilution." Today we know it was just Illusion and over the time we replaced the vivid ocean life with plastic pollution and poisoned our food chain.

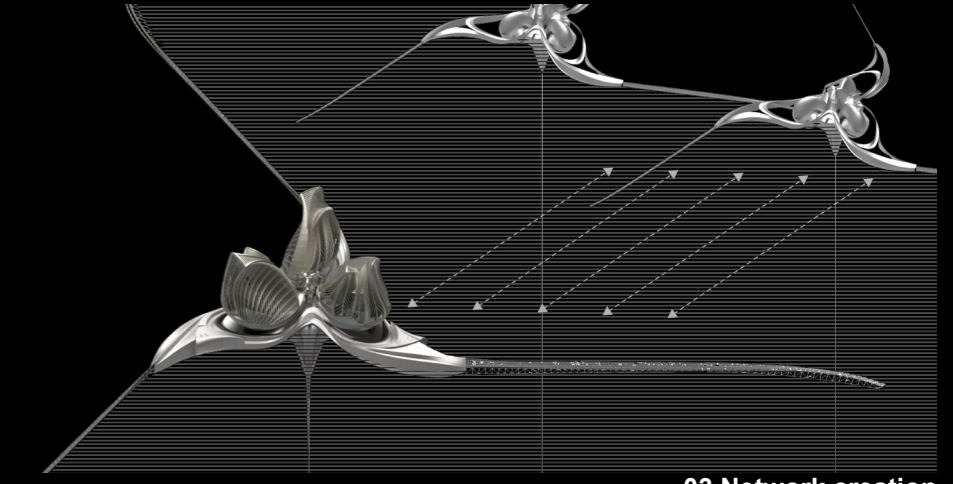
The Floating Station is cleaning the ocean and restoring the balance in the marine environment. At the same time, the natural forces are affecting the movement and positioning of the stations as well as the inside environment.



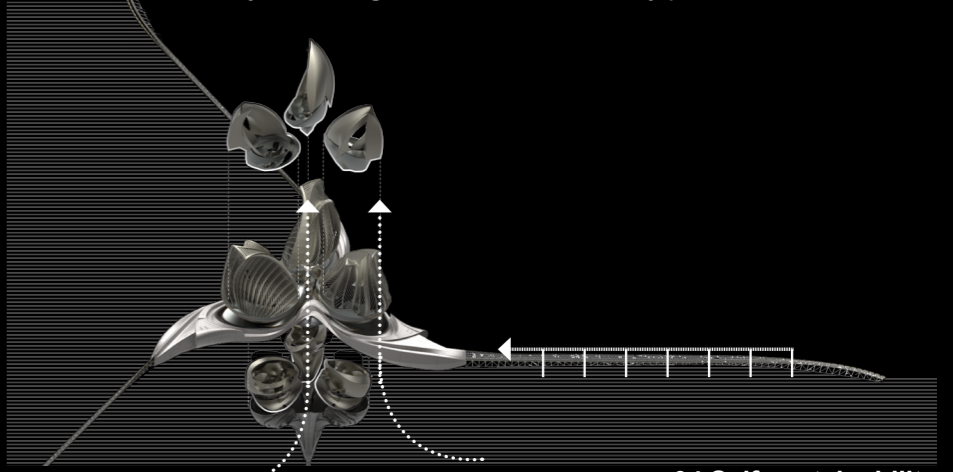
01 Use of natural forces
Ocean floating barrier is using the natural movement of the ocean current



02 Protecting ocean life
Skimming the ocean surface prevent catching of the sea animals



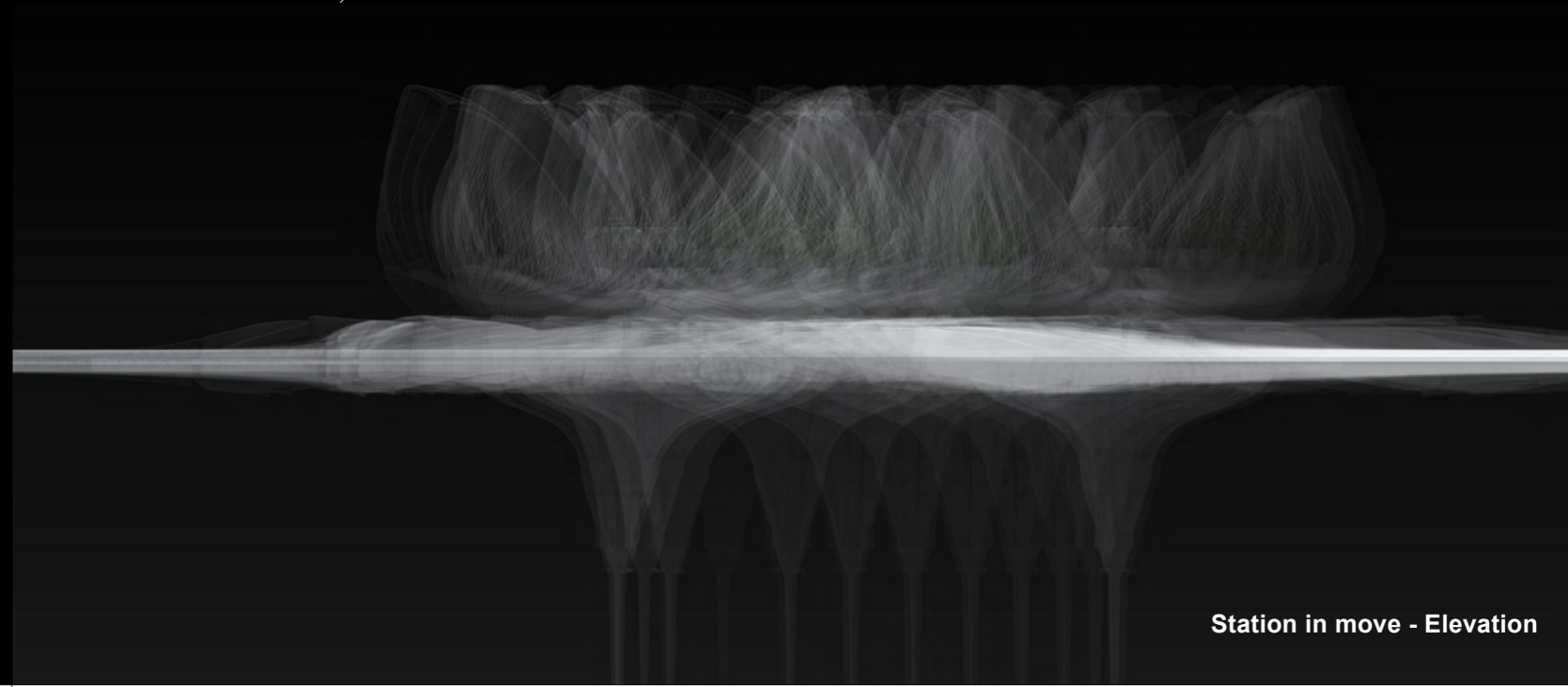
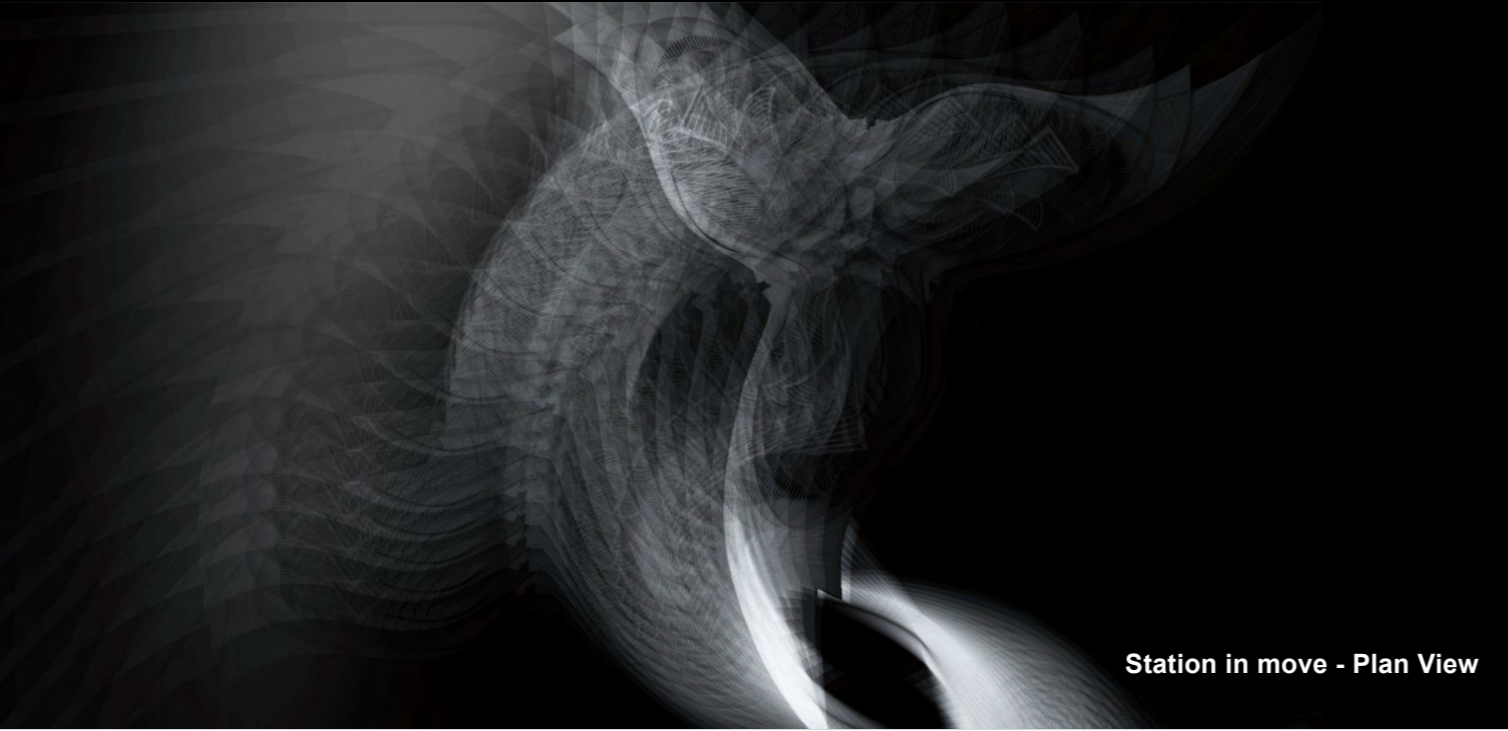
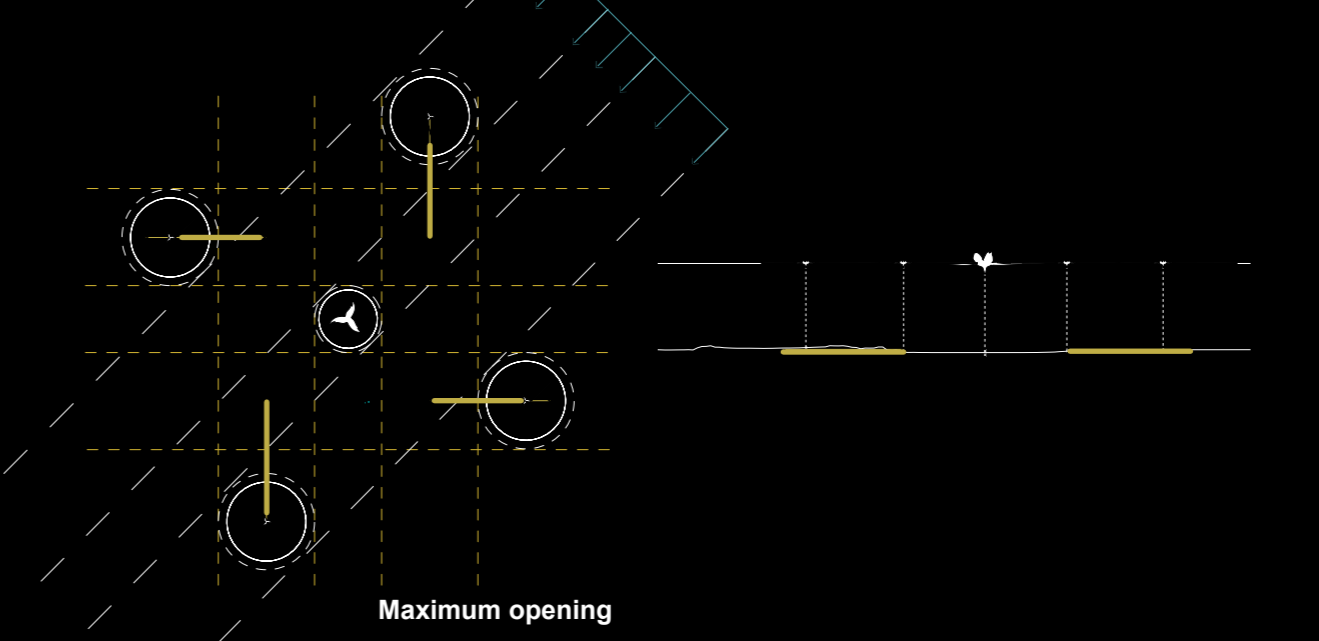
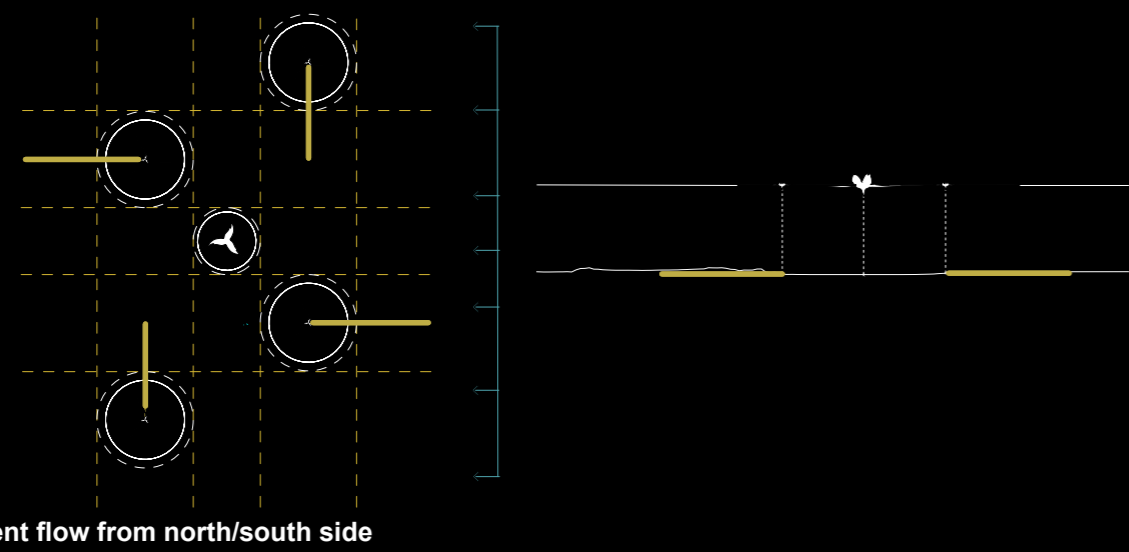
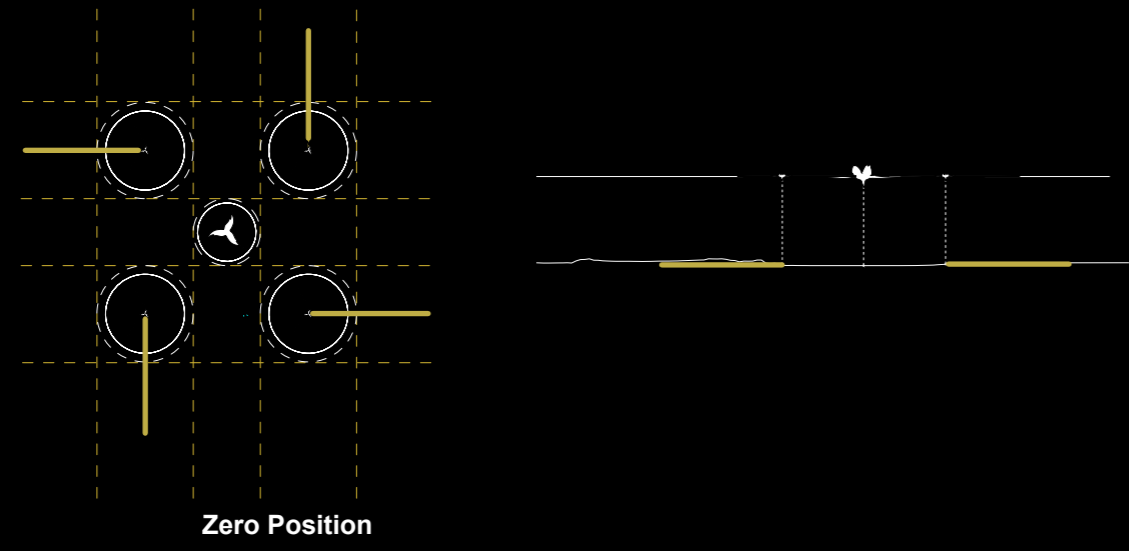
03 Network creation
Array of floating barriers to achieve any possible ocean current



04 Self sustainability
Use of filtered water to support the research community. Tidal power generating.

Station in move

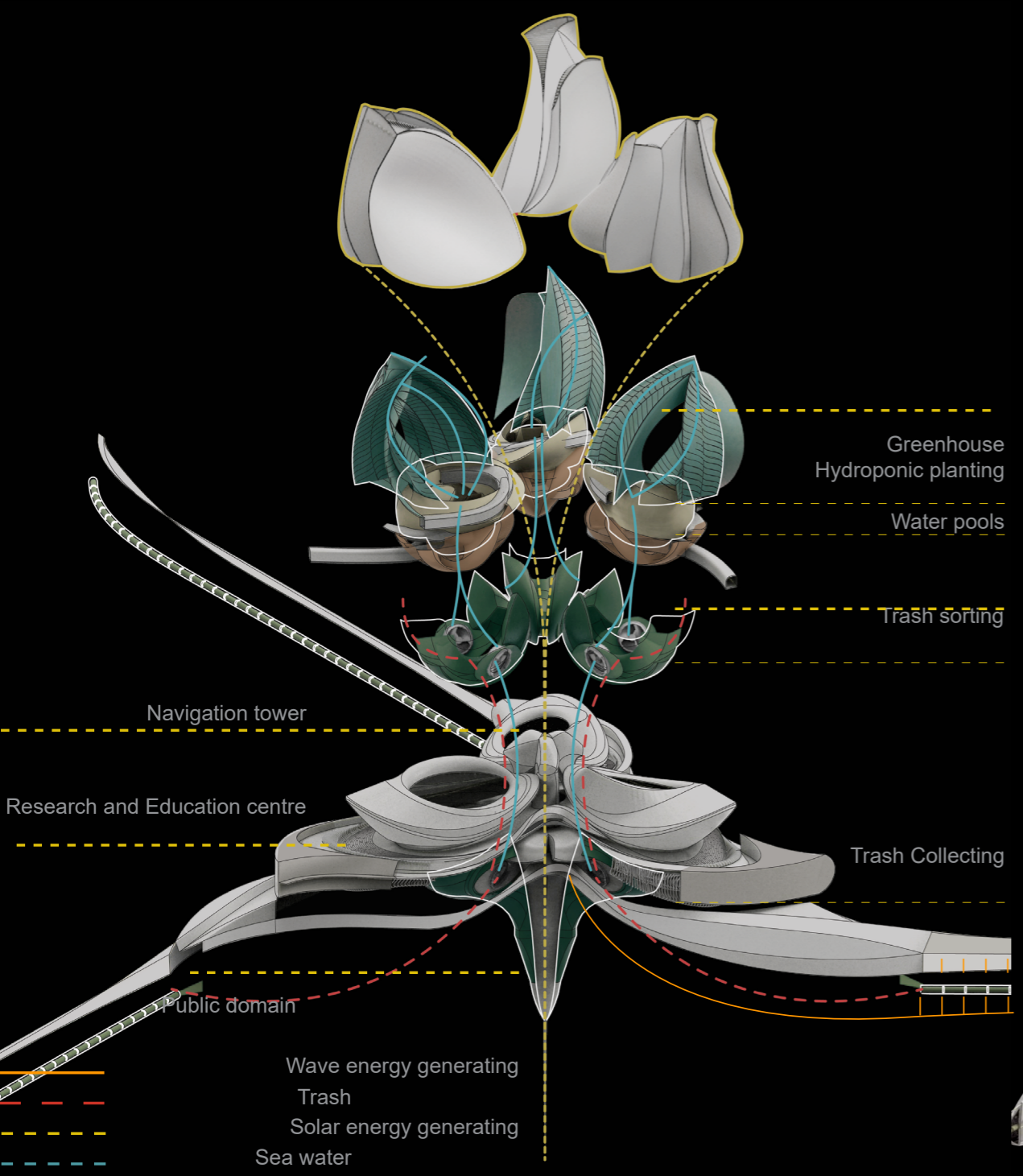
Network creation
 Array of floating barriers to achieve any possible ocean current



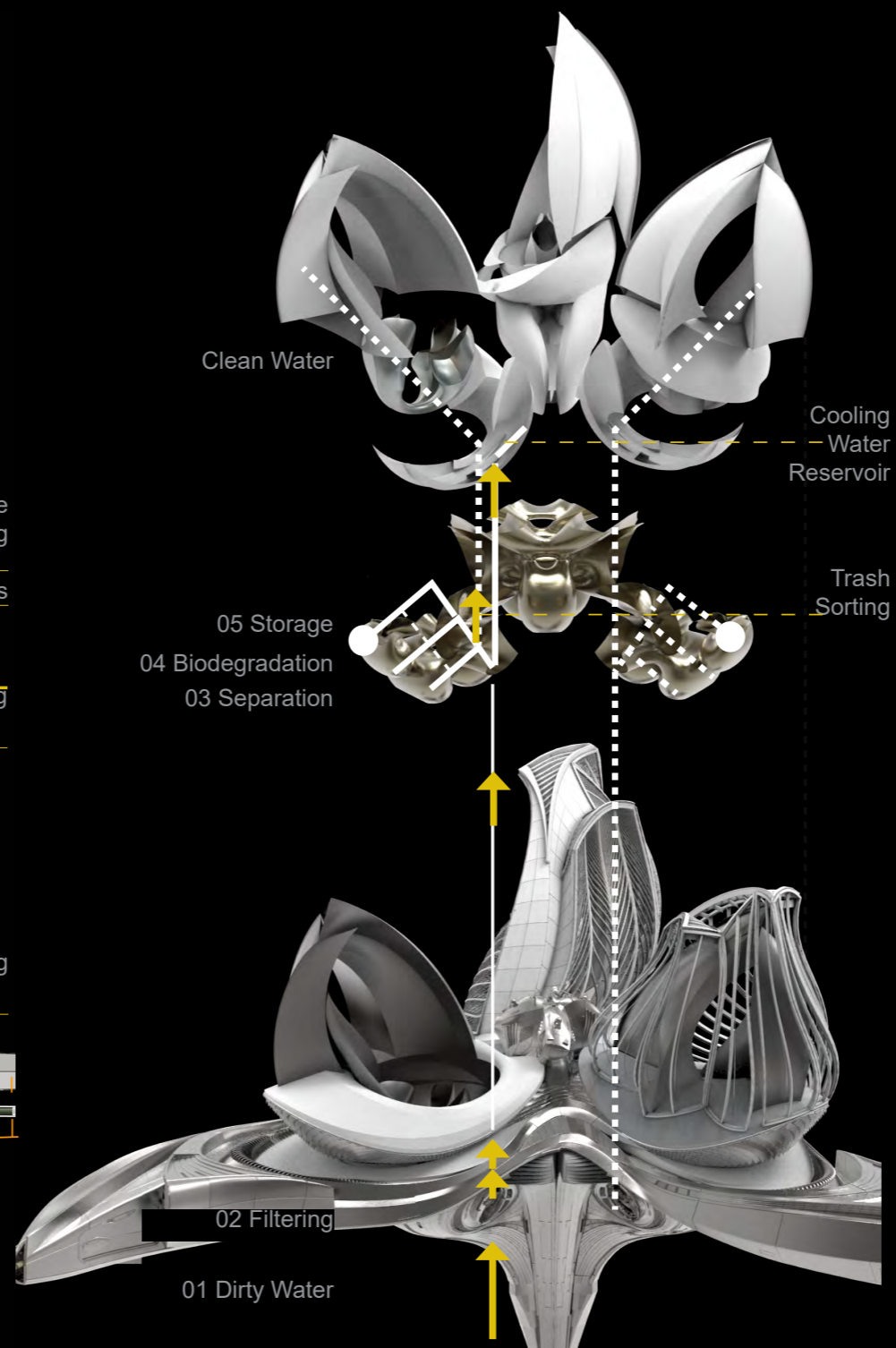
Floating Station is following three main ecological principles. The principles of fluctuations - the building, is designed and perceived as a place where different cultural and natural processes interact. Firstly, it is a destination for Human – Ocean interaction. Secondly, its form and function are created based on the natural processes which the Station is engaging – navigation with the wind force, tidal power generating, water desalination through condensation.

The principle of stratification - building's organization, emerges out of the interactions between its different properties and levels. This kind of organization allows complexity to be managed coherently.

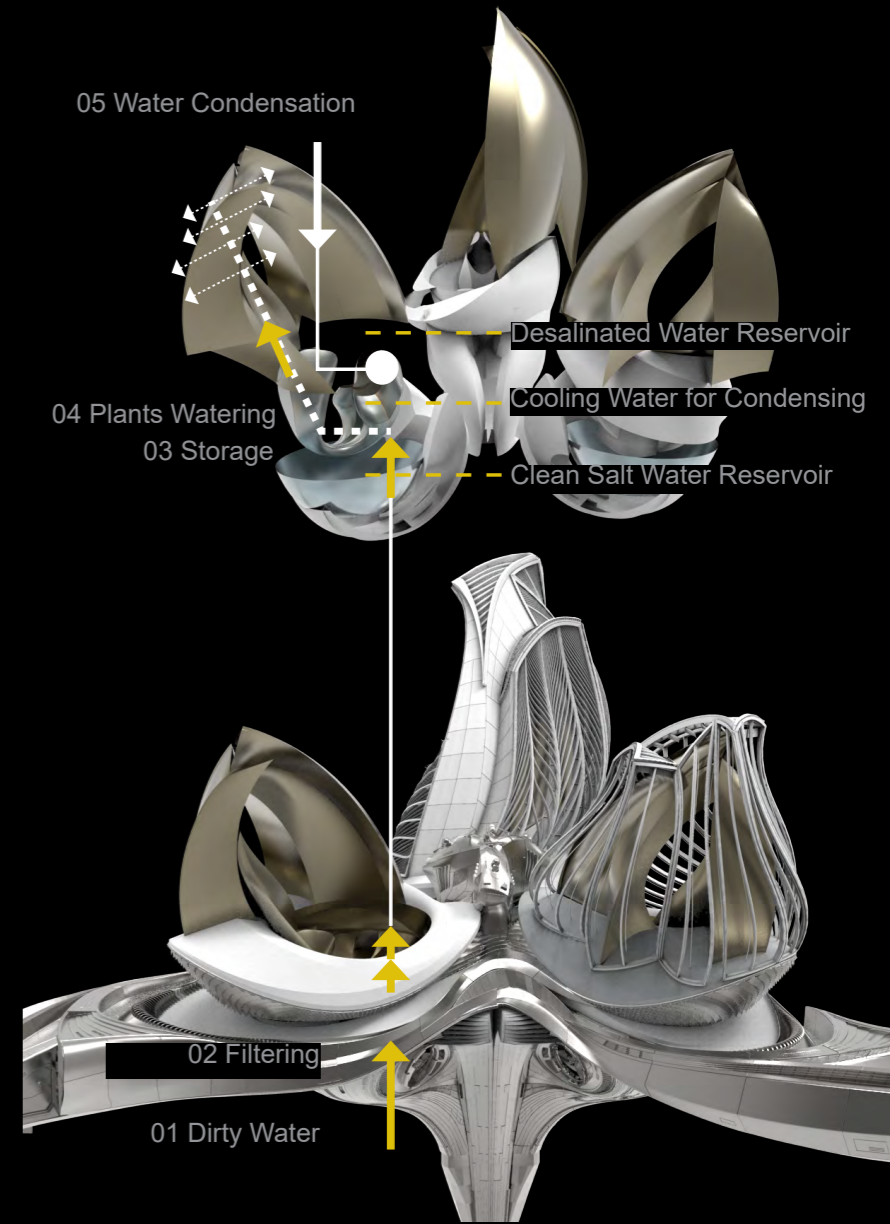
The principle of interdependence - relations between buildings properties and environment are reciprocal. The Floating Station is responding to the external stimuli and developing based on them.



Program Diagram

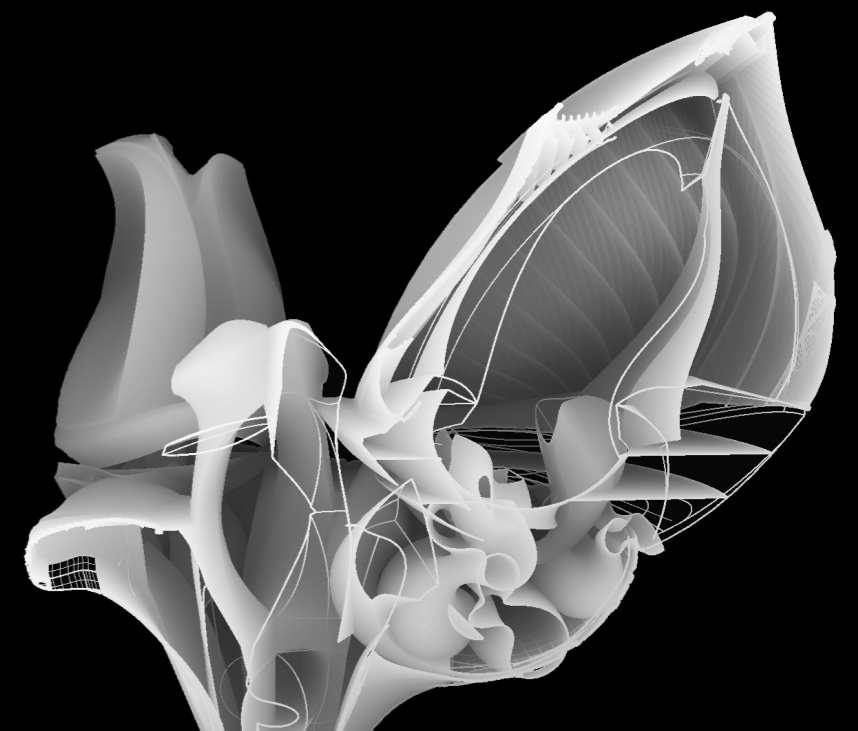
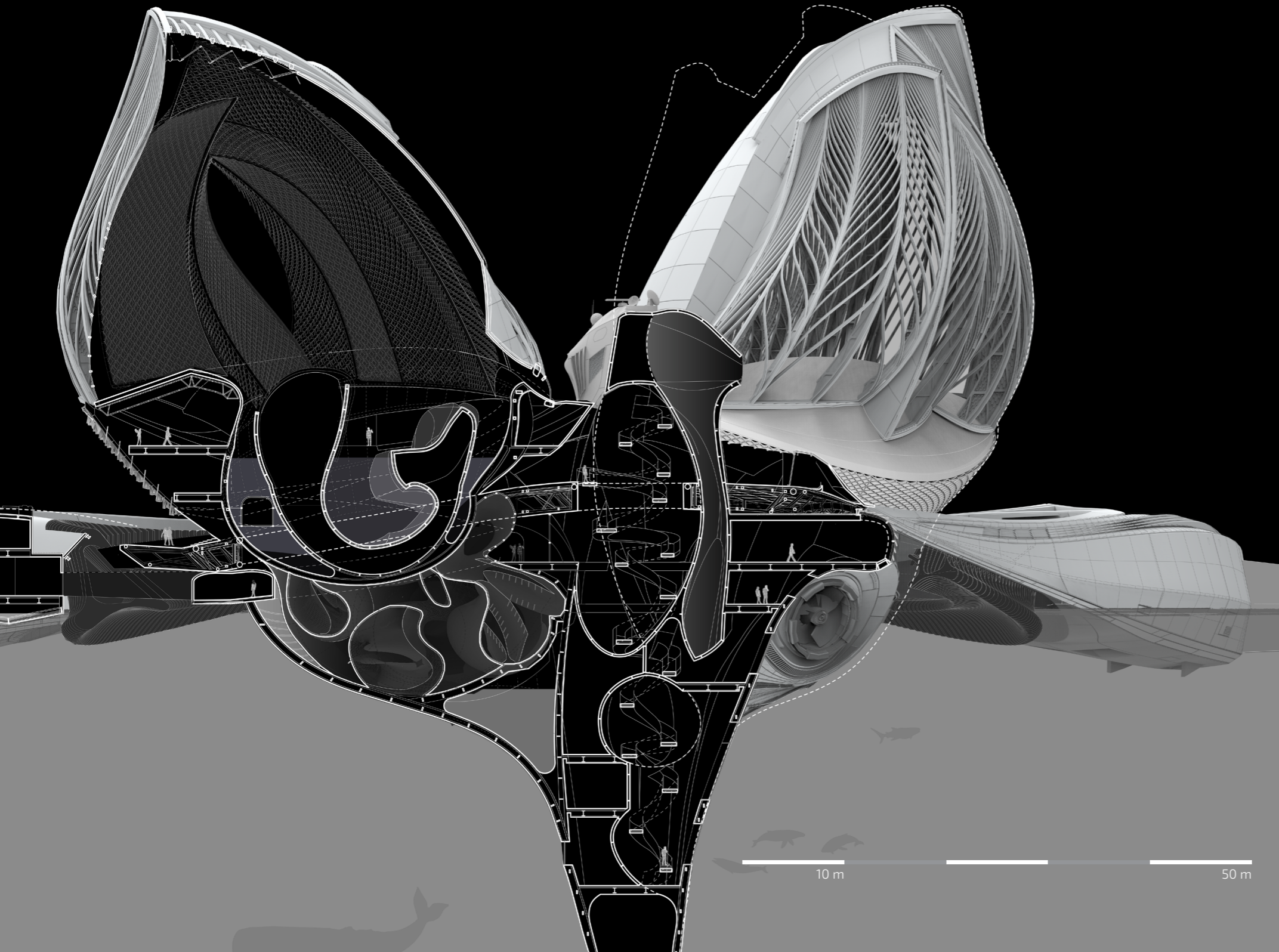


Trash Separation Cyclus

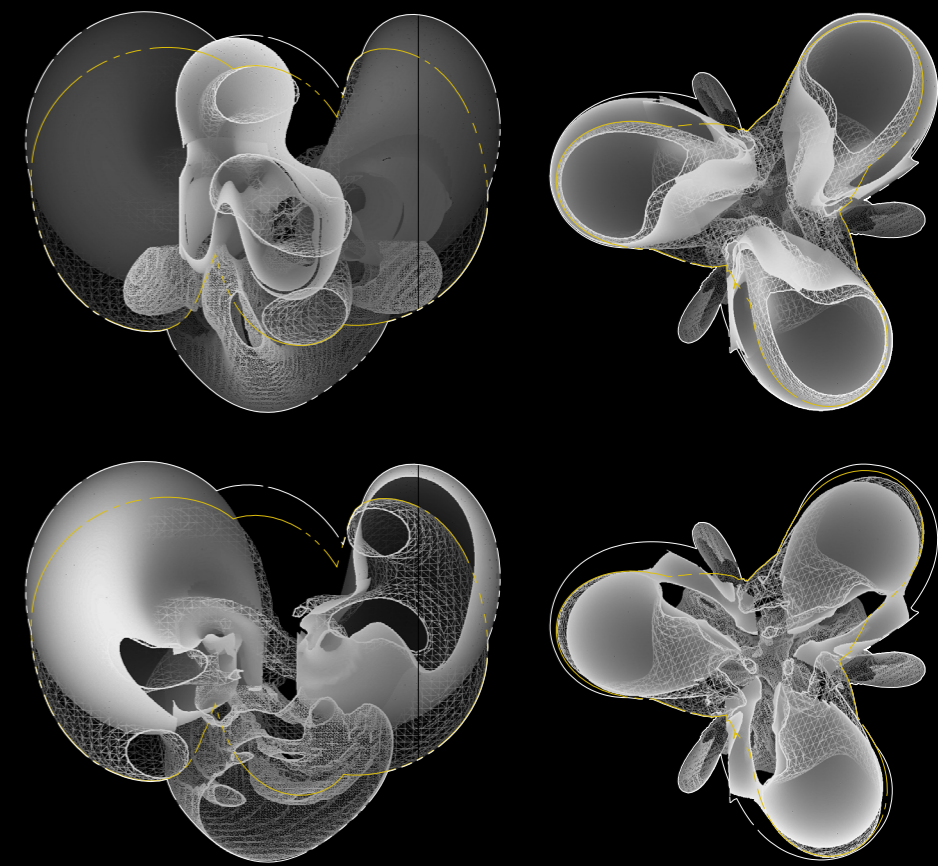


Water Cyclus

As one of the most crucial aspects is to design space considering its relationship with the environment and its surrounding, this ocean intervention cannot be reached through the refinement of the static object alone but must address complex interactions. The floating Station is, therefore, not just dealing with environmental issues considering cleaning the ocean. However, the Station is reflecting processes that occur on water and learn from the biological functions of marine organisms. It is essential that the system can maintain its stability while still allow change and adaptation to occur. This dynamic architecture is first influenced, transformed and organized by ecology systems which consequently will allow then architecture to recreate ecology reciprocally.



Abstract section



Geometry studies based on Fluid dynamic
Dynamic change of the Environment
as the Base for Geometry Language

2020 JACQUES ROUGERIE FOUNDATION AWARDS - Jules Verne Year

Award's category : Innovation and Architecture for the Sea

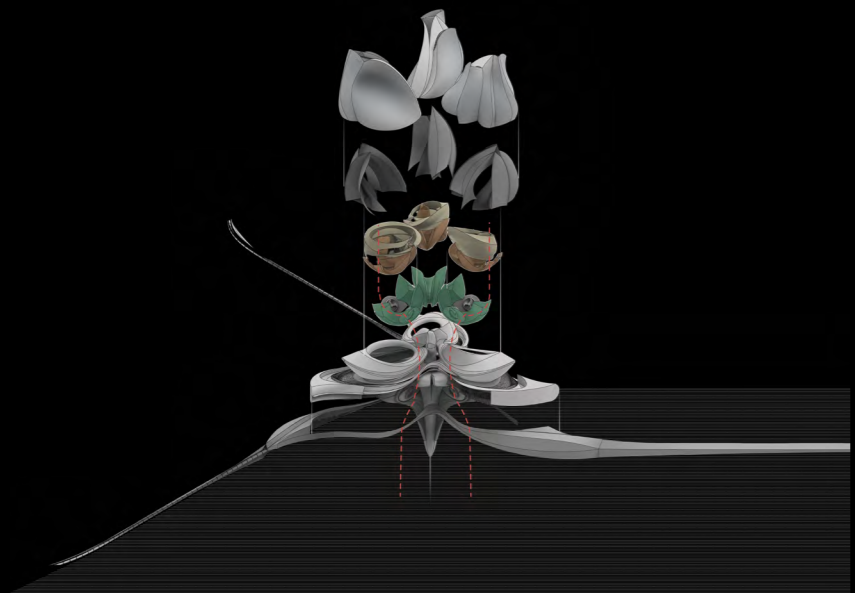
Project's Name

The 8th Continent

Description

Dynamic architecture

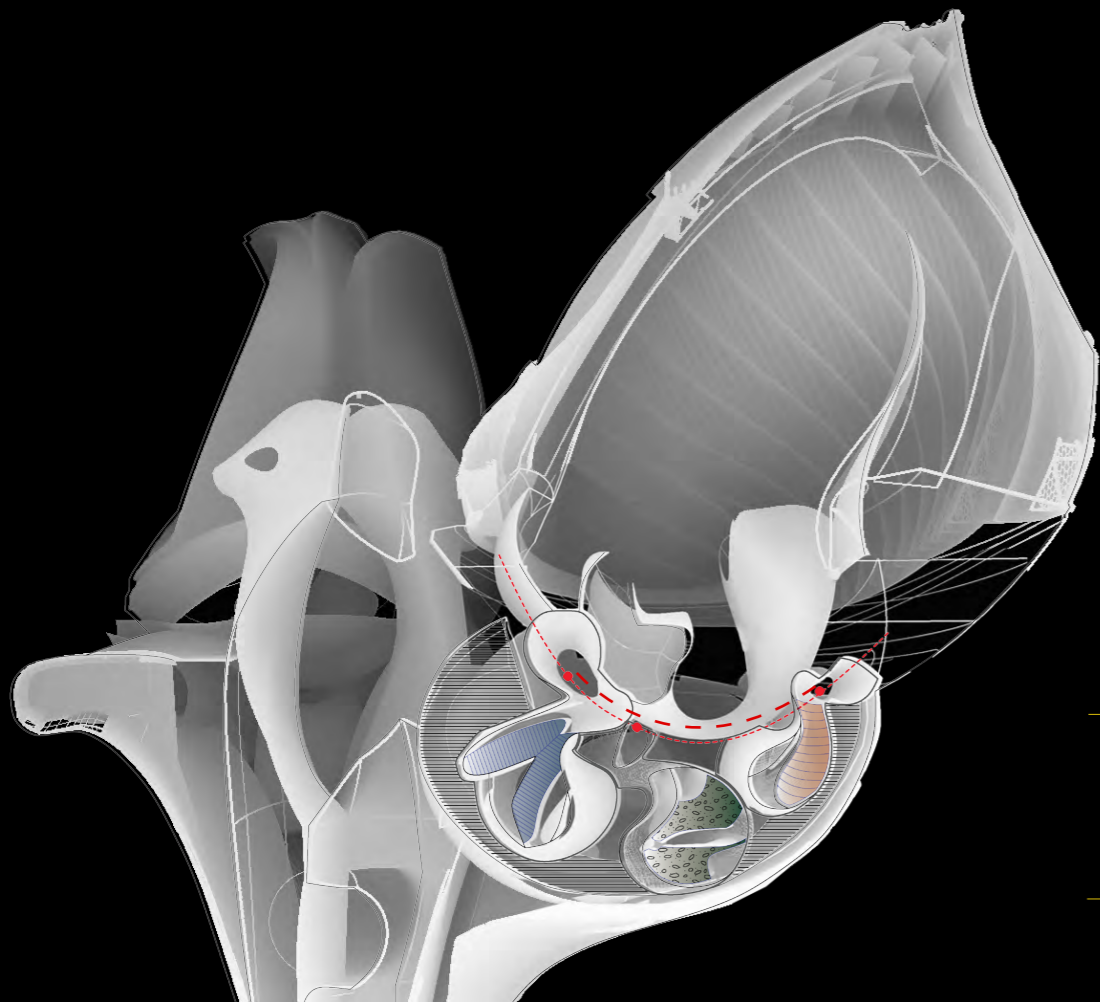




Plastic collector



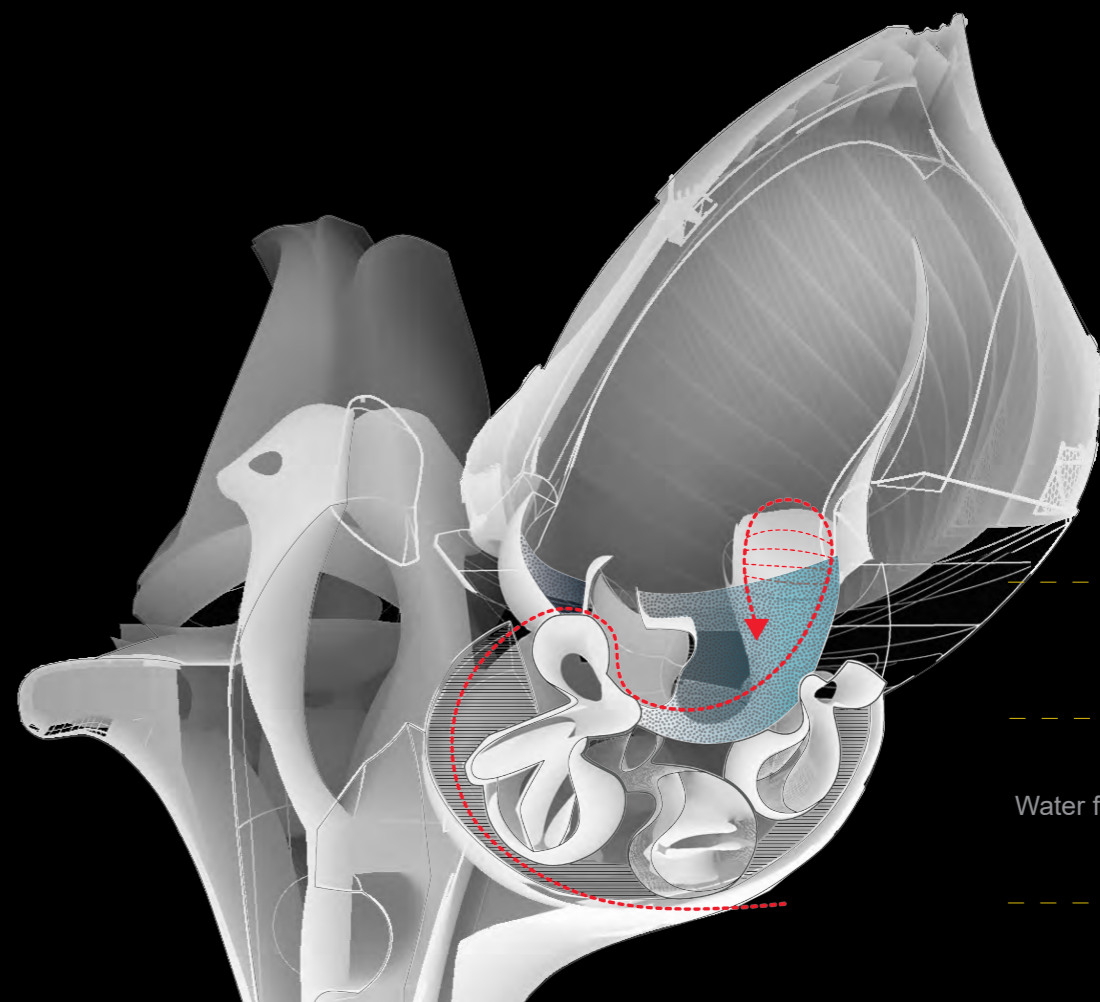
Greenhouse



- Separation
- Biodegradation
- Storage

Trash collector

Plastic collector
Plastic separation

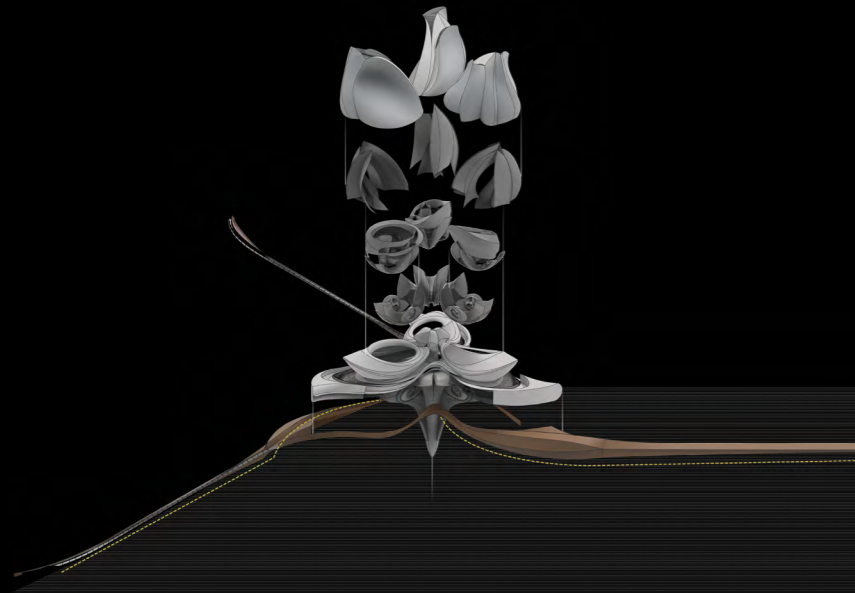


Green House
Hydroponic planting

Water pools

Water filtering from collector

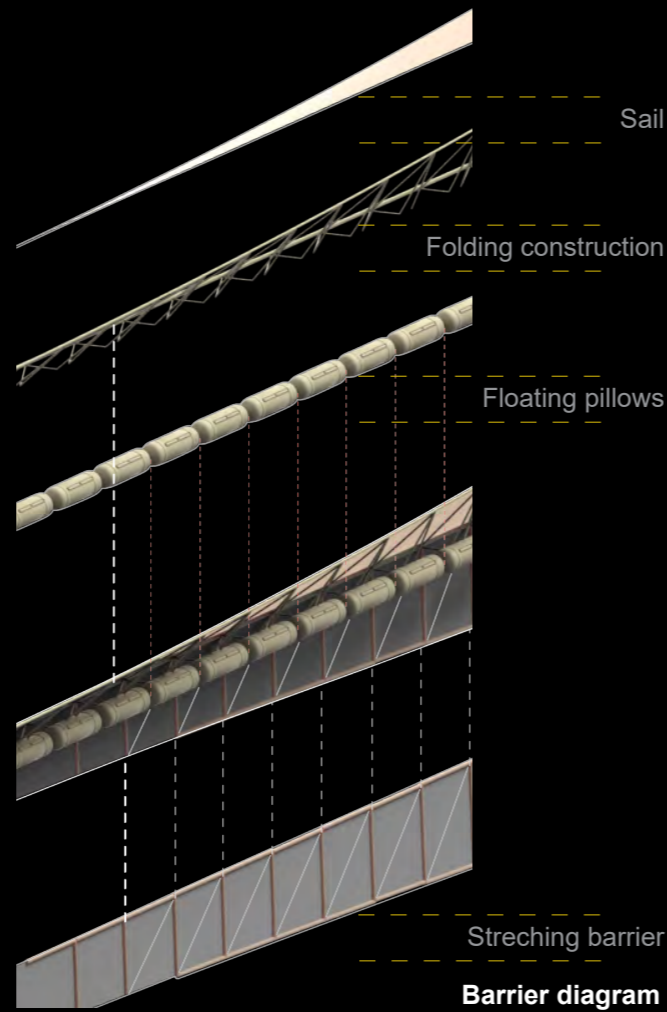
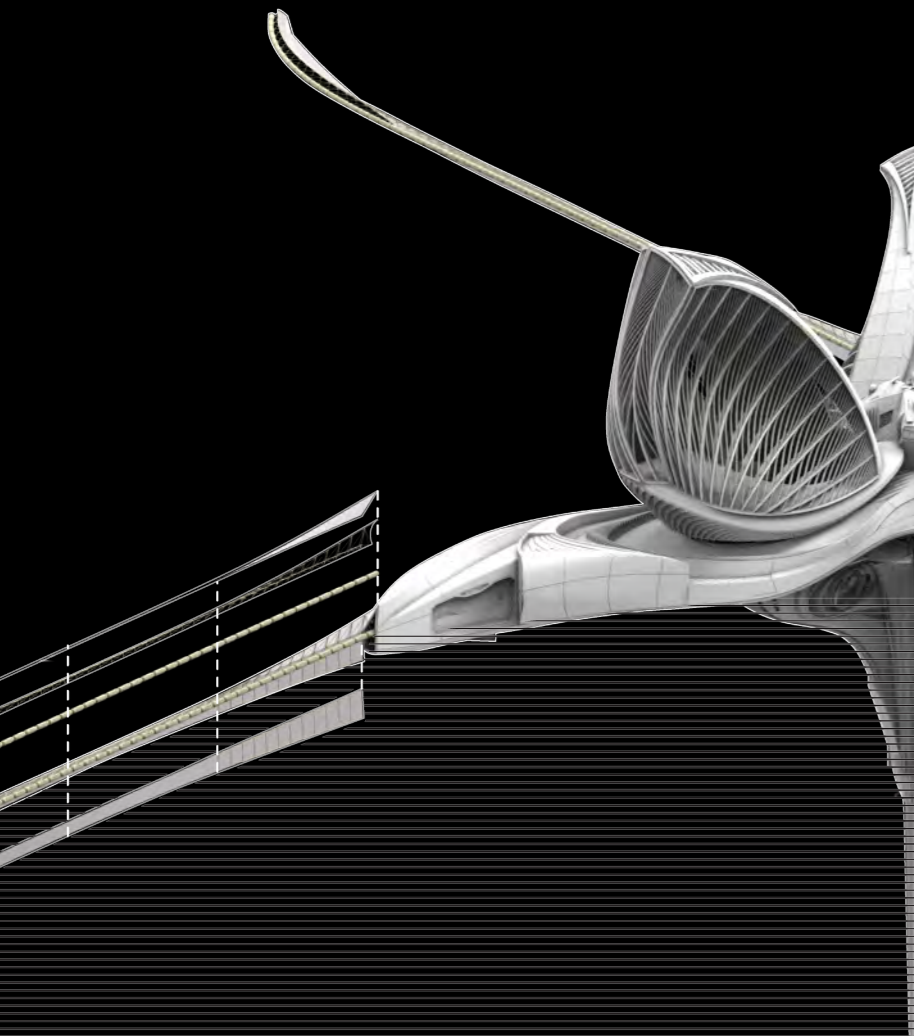
Plastic collector
Filtered water



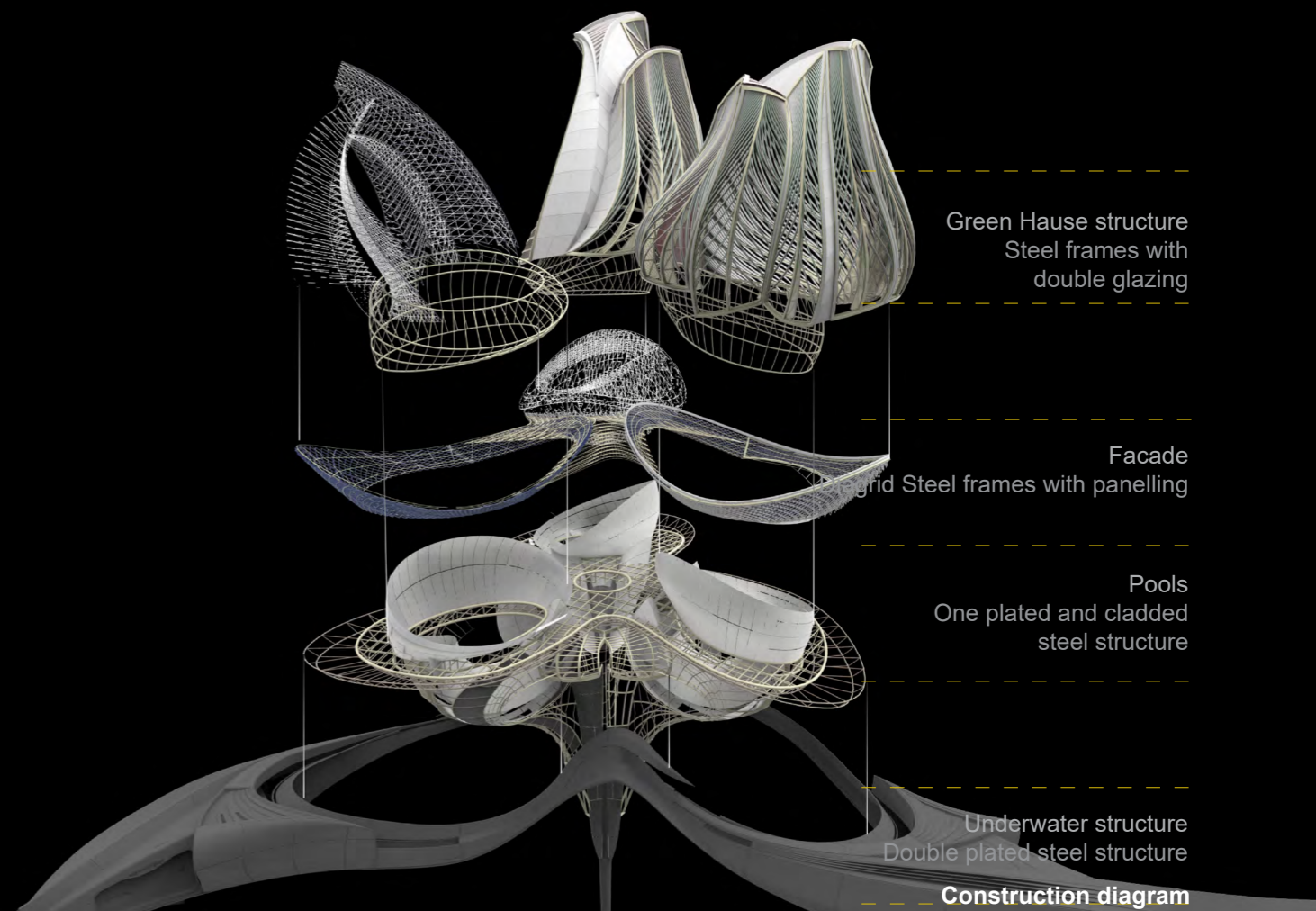
Movable barrier



Entrance hall

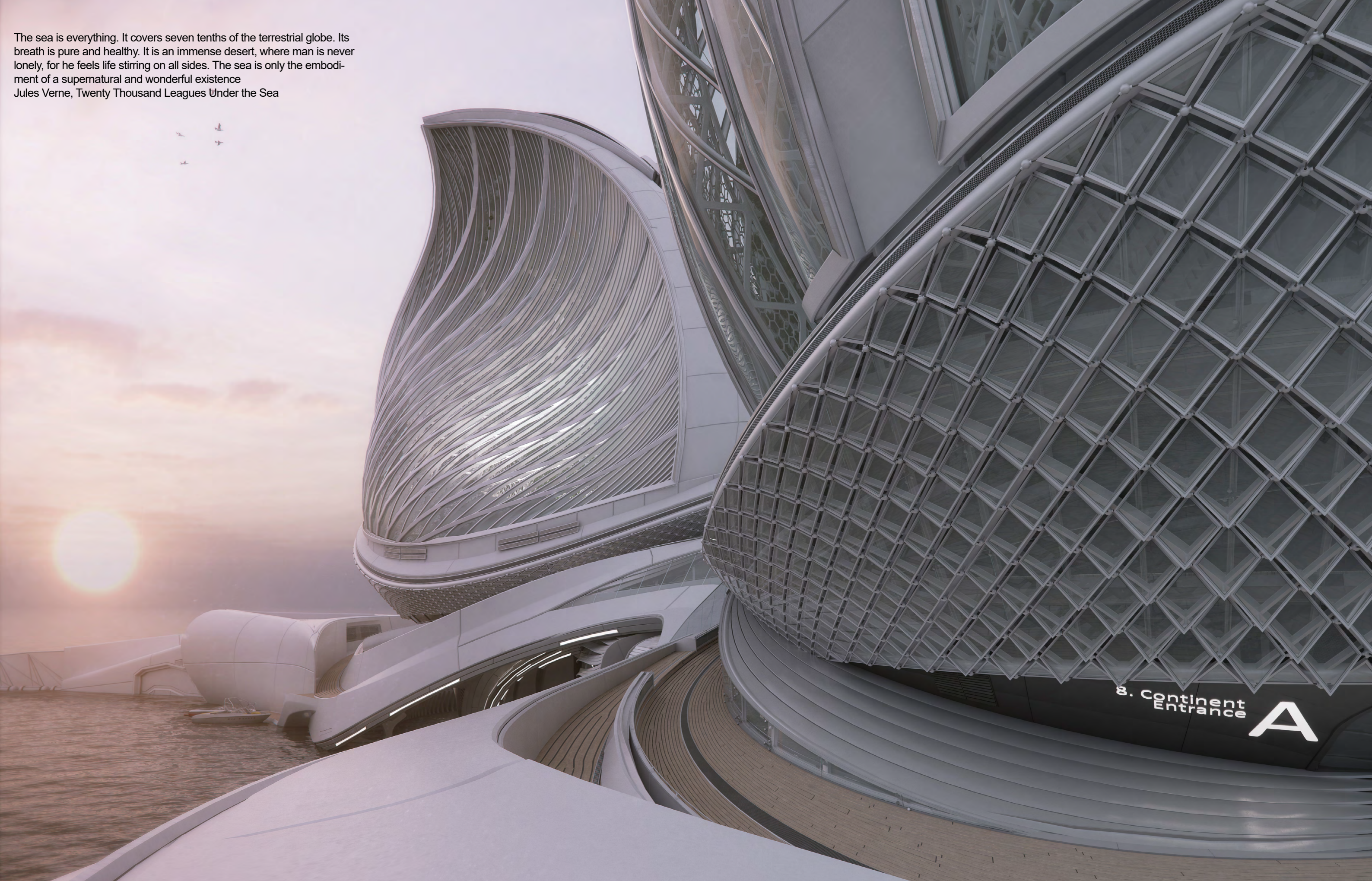


Barrier diagram



Construction diagram

The sea is everything. It covers seven tenths of the terrestrial globe. Its breath is pure and healthy. It is an immense desert, where man is never lonely, for he feels life stirring on all sides. The sea is only the embodiment of a supernatural and wonderful existence
Jules Verne, Twenty Thousand Leagues Under the Sea



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Areal view

