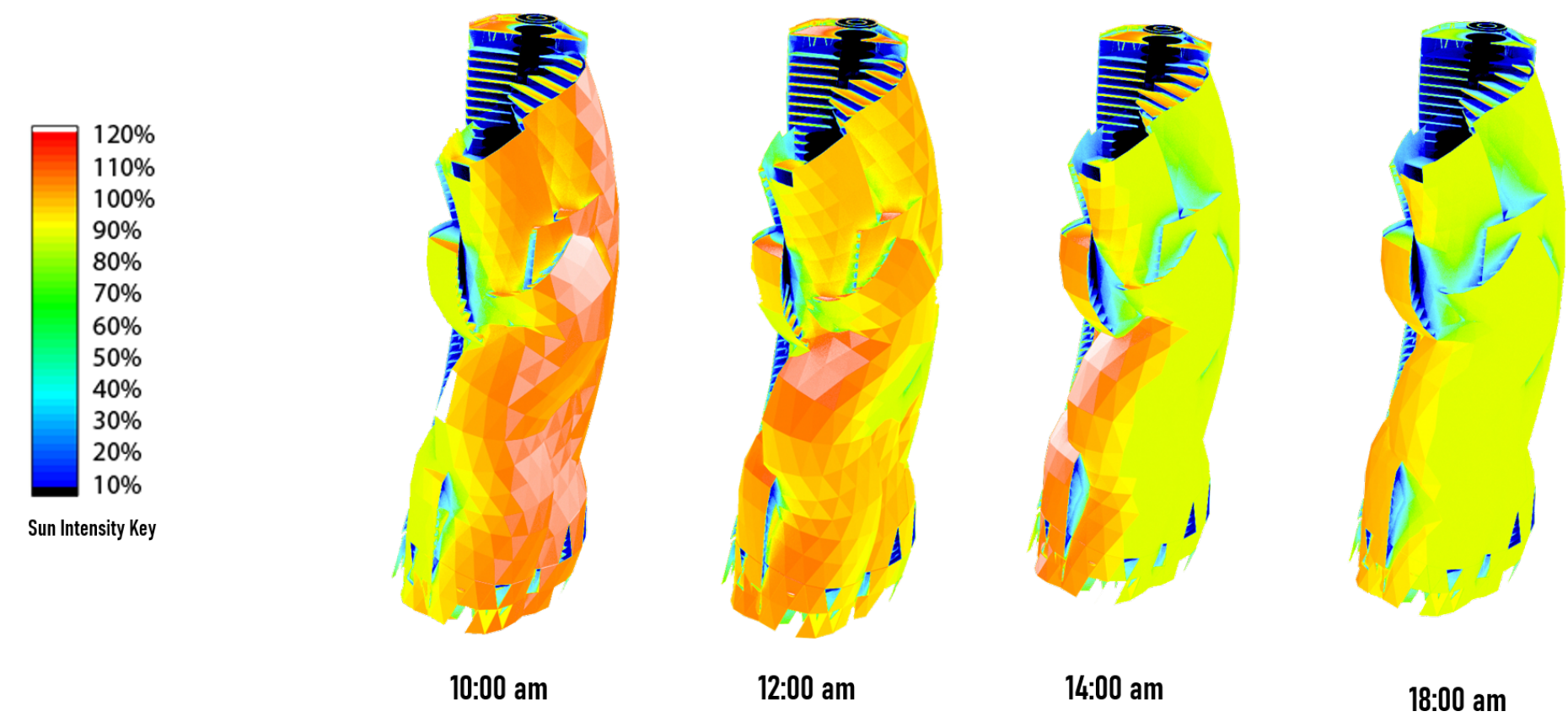


Sun Analysis



Façade

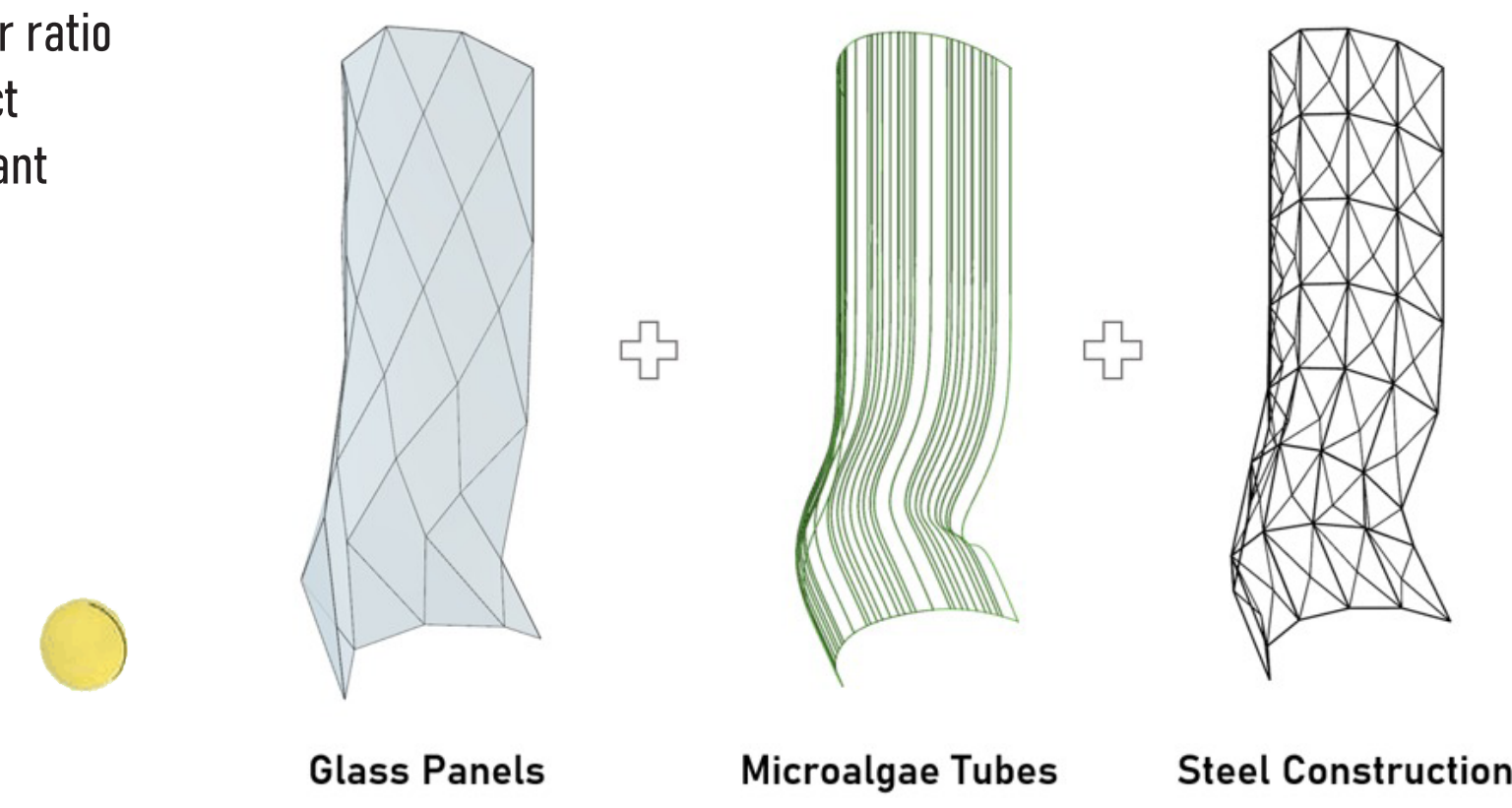
Biological Mashrabiya

The microalgae in the tubes change density according to the positioning of the sun.



Façade Construction

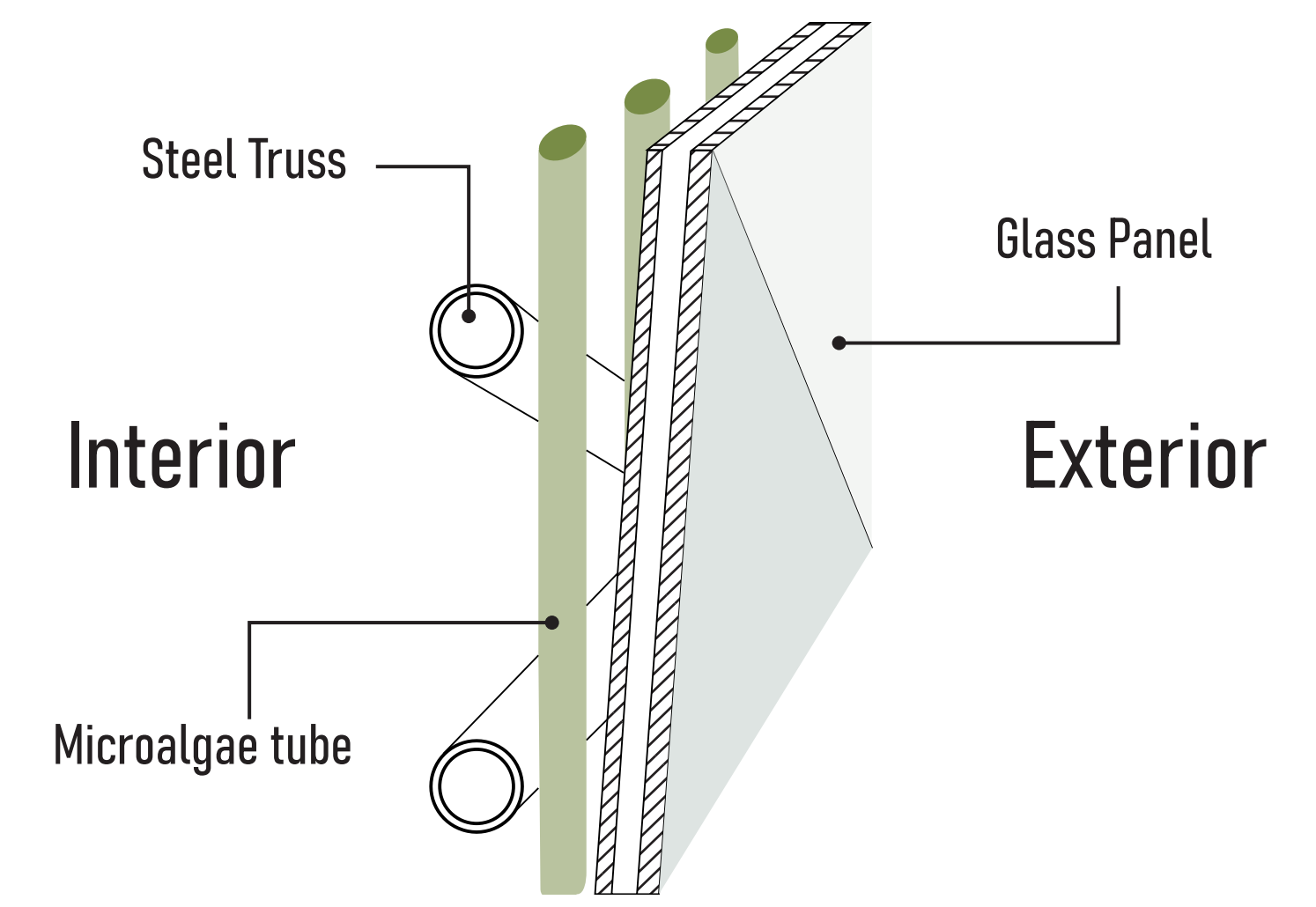
Composition



Exterior

Interior

Façade Section



MIXED USE HIGH RISE BUILDING

In our project we aspired to create a self sustaining building with various uses in which we identified as missing in our analysis of the urban area. Our project aims to be an urban beacon for sustainability in Dubai. Its facade is based on a biological Mashrabiya, made from the algae tubes that run through the building. The tubes' density is varied and is influenced from a process of sun analysis of the building, in which we analyzed the sunniest versus the most shaded spaces of the building. As well as that, the concentration of algae in the tubes is changing through the day, thus creating varying degrees of shading within the building. We decided to dedicate the building to the community of Dubai in various aspects: improving air quality and contribution to the city's effort of being sustainable, creating a culture center that celebrates the culture of the Dubai, contributing to the innovation and research efforts of Dubai by adding a research center focusing on sustainability and developing green technologies. Our top third of the building is dedicated to residence with a public top floor for the people of Dubai.

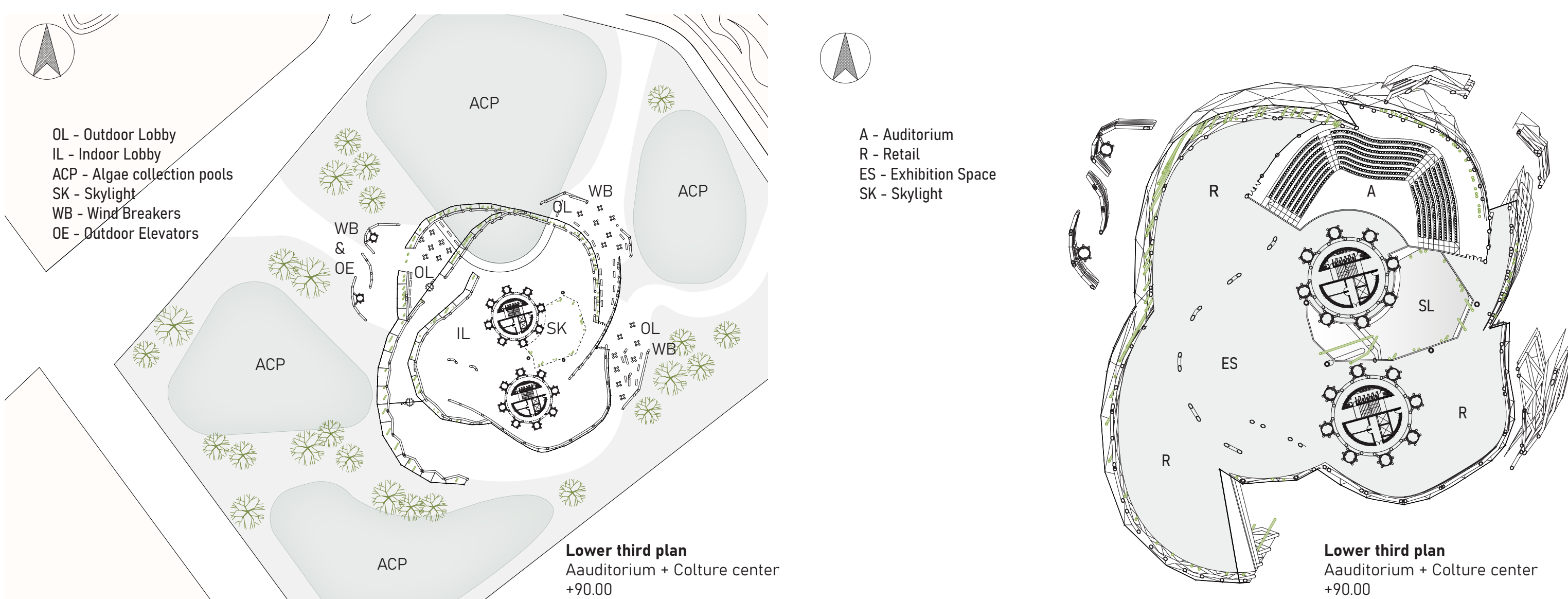
PROGRAM

GROUND FLOOR

Contains a public space protected by wind breakers and Algae tubes which create a micro-climate that enables pleasant outdoor spaces protected from the dessert wind, sand and heat. In addition, the ground floor contains four collecting pools which contain the algae's biomass.

LOWER THIRD - CULTURE CENTER

Contains an auditorium, exhibition space and retail space.

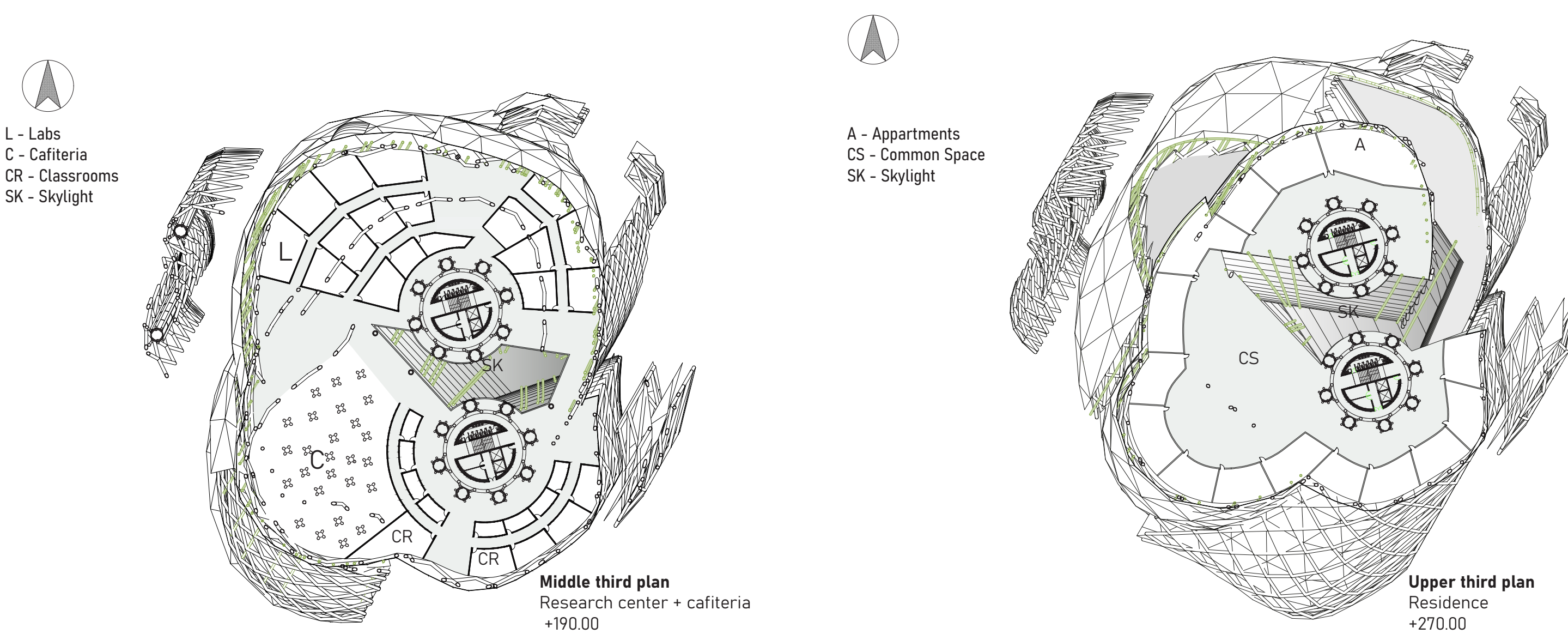


MIDDLE THIRD - RESEARCH CENTER

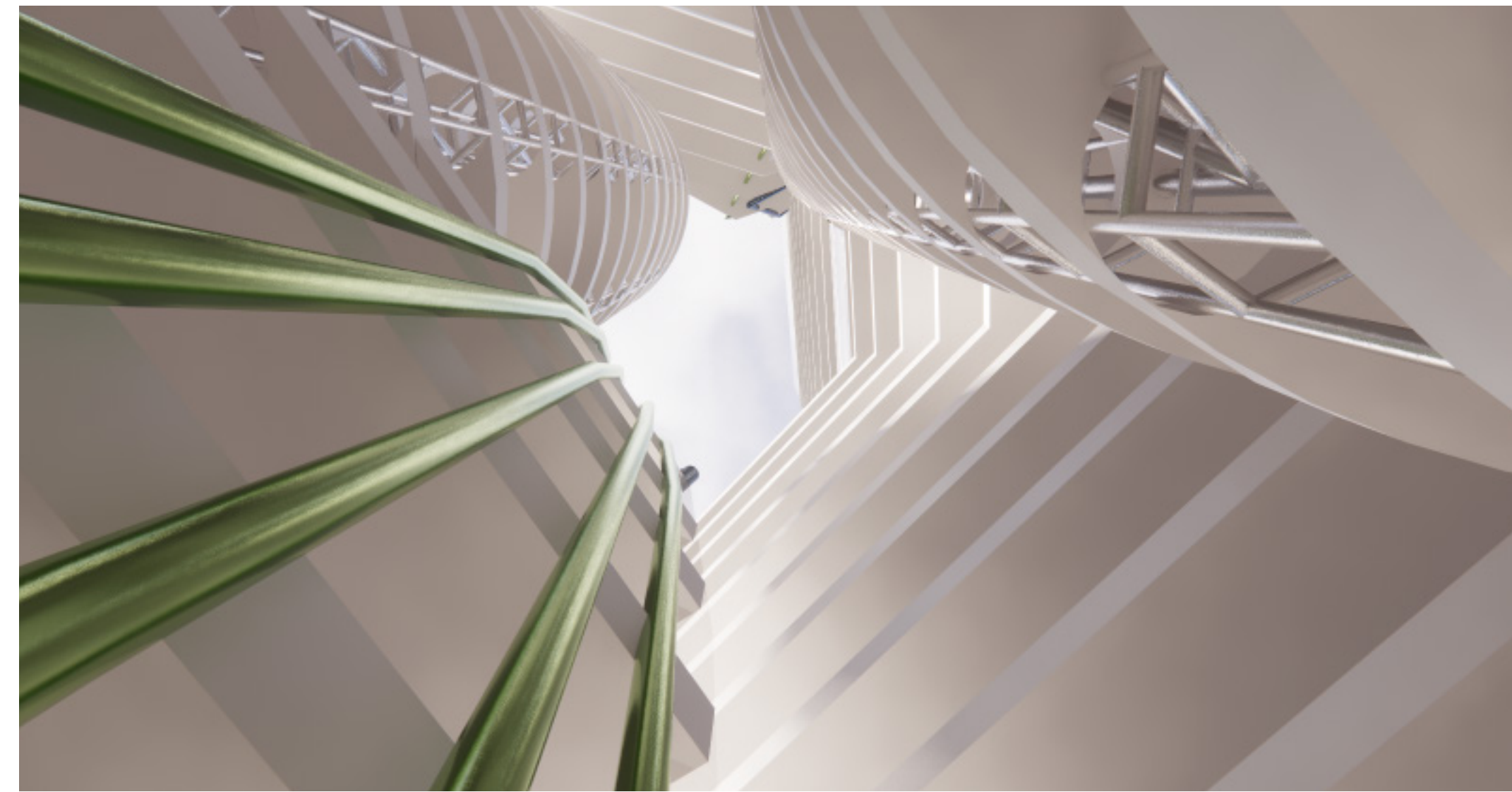
In addition to it's research component, the center is also monitoring, dealing with and studying the algae.

TOP THIRD - RESIDENCE & PUBLIC FLOOR

The top floors are intended for residence and public spaces. The public spaces contain a restaurant, a public sky lobby and a pool.



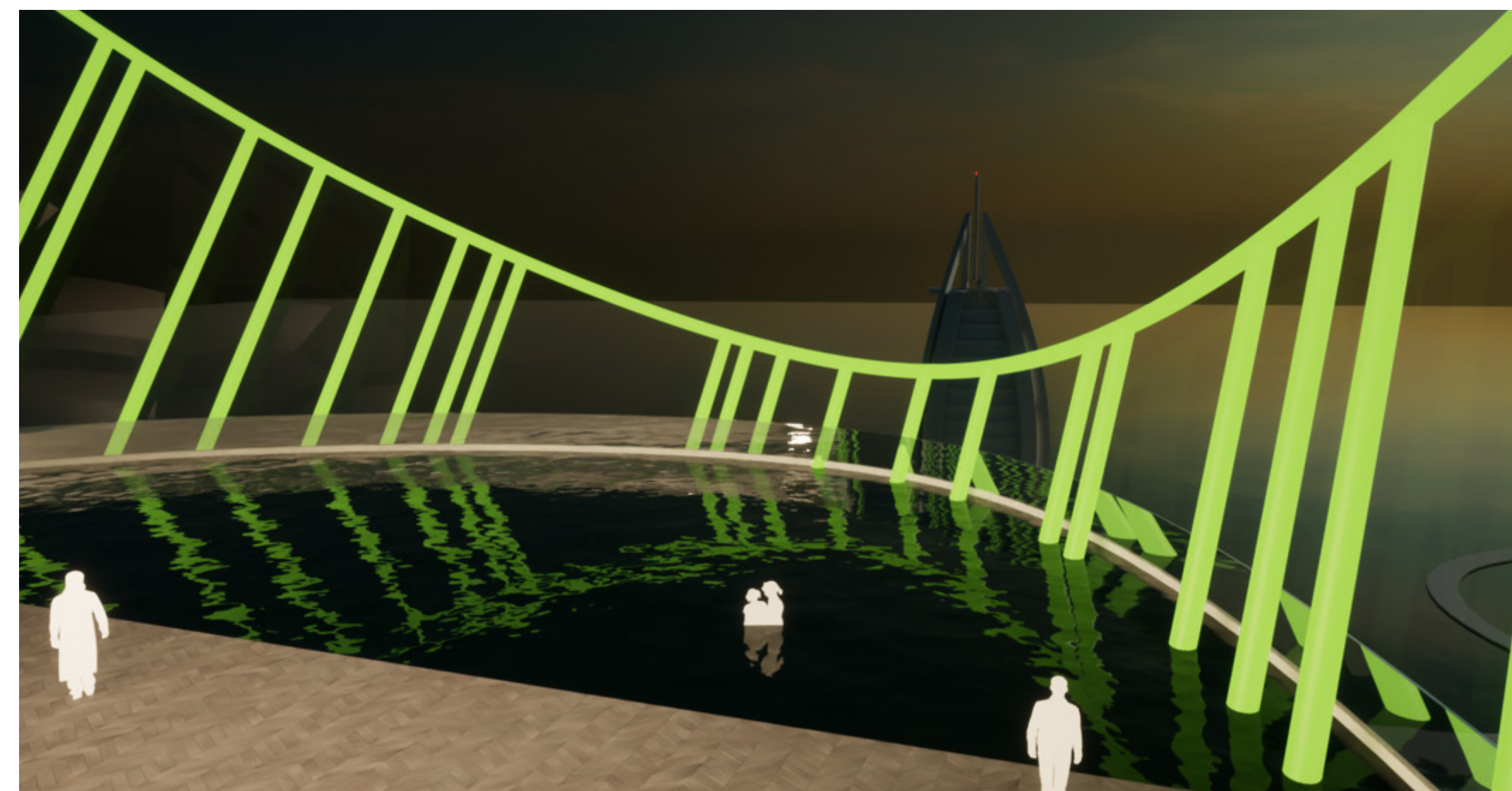
The combination of Culture Center, Research Center and residence together - and especially with the algae tubes, offer a unique experience that emphasizes the qualities of living in Dubai in the 21st century, particularly the last decade.



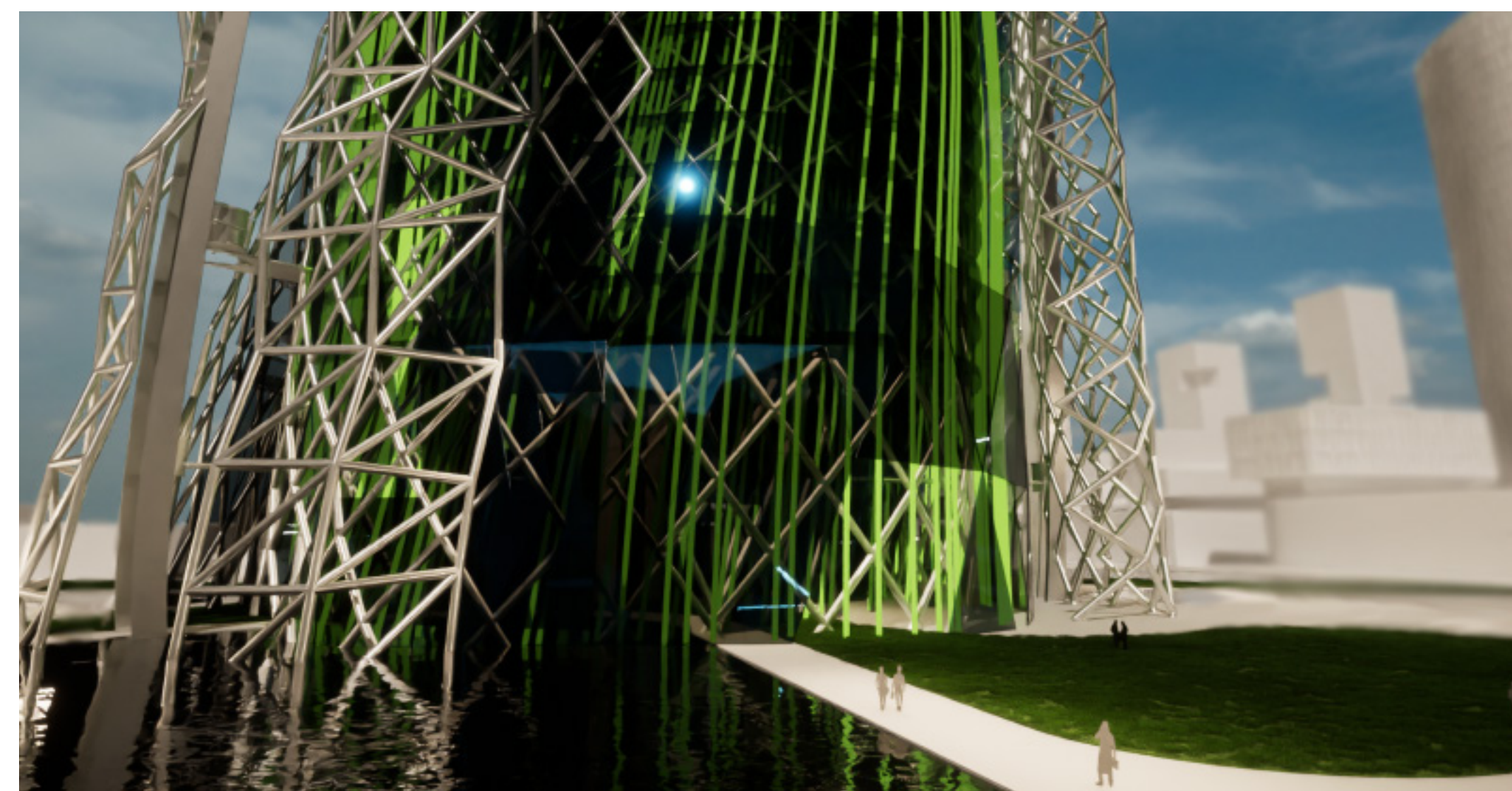
THE ATRIUM



INDOOR PUBLIC SPACE



ROOFTOP SWIMMING POOL



ALGAE POOLS

