

JUWANA SMART AND INTEGRATED FISH HUB

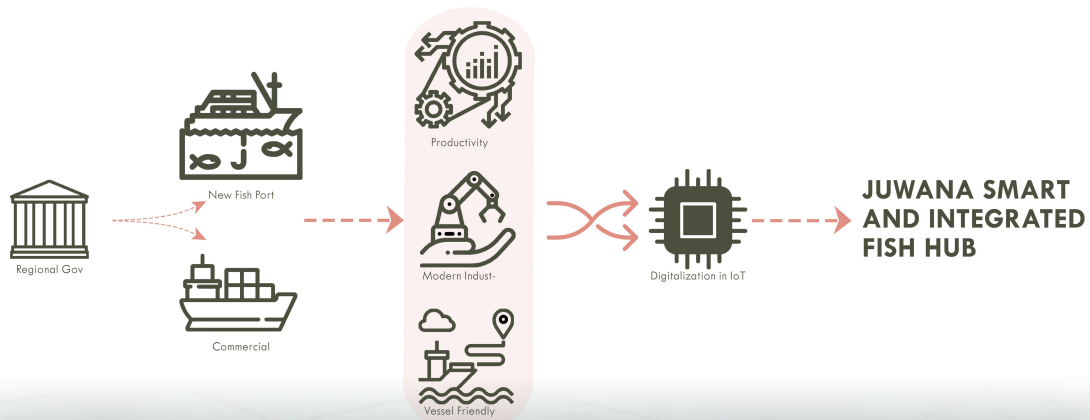


Fish Allotment Area, Growing Lor, Juwana District, Pati Regency, Central Java

6°41'27.9"S 111°09'29.1"E

The purpose of the planning for the development of the Juwana Integrated Fish Hub is based on the increasing number of seafood production occurring in the fishing industry in Juwana. The impact of TPI Juwana Units 1 and 2 which runs is not optimal due to the large supply. Coupled with the industrialization incident in the Pantura area, especially along Pati - Rembang. So that not only the marine and fisheries industry, but plans to expand the industry for staple goods, logistics and manufacturing. So that the Juwana Integrated Fish Hub is designed to anticipate the increase in supply of marine products through TPI Juwana Unit 3, as well as support infrastructure for industrial centers that have been projected through the transportation sector in the form of commercial ports. Taking advantage of the IoT concept in the fishing industry at Juwana, is a golden step to take part in the development of technology and information that is very fast. Combined with a contemporary built environment, it is hoped that it can form an ecosystem where human activities in the Juwana Integrated Fish Hub become more flexible, healthy and efficient. Where the main idea from the point of view of an industrial area is the maximum productivity that can be produced. From the point of view of the general public, visitors and buyers are what they want quickly, easily and affordable.

DIAGRAM ISSUES



BACKGROUND



JUWANA INDUSTRIAL PLAN

DIGITAL ERA INDUSTRIES

Targeted at improving infrastructure in an effort to **boost the fishery industry business** in Juwana as well as plans to build an industrial center along the Pati - Rembang pantura route.

IoT works by **expanding** the fishing industry market, **bringing** the fishing industry market closer, and **simplifying** the work system of distribution in the fishing industry.

MATRIX PROBLEM

	Formal Problem	Practical Problem	Symbolic Problem	Radical Problem
Designer The architect acted as the initiator of design solutions in the design of the TPI Juwana unit 3 area and commercial port	Integrated building function Various building functions are integrated into one port area and the TPI on the Juwana River	Design to achieve efficiencies The space configuration framework according to the contemporary built environment to achieve quantity product	Industrial Recreation Planning that persuasively attracts visitors because of the port's distinctive features and accessible	Balance output design A design that balances scale, productivity, context, user activity, safety and security under the IoT circumstances
User Fishermen, TPI administrators, port employees, traders, TPI visitors, regional officials, distributors of goods	Ship Traffic Control A design that can be a solution to the problem of ship capacity far above the extent of the river that covers it	Bold and Connect A clear design between functions but interconnected in the private and public, the role of IoT in reaching a wider and more efficient market.	Paradigm Changer An idea that can change the stigmas about ports and TPI in general with modernization industry and more public space attraction	Contemporary Built Environment Growth, healthy and efficient ecosystem in modernization as the pioneer of modern in fishery and marine industry
Client Government (Municipality and Provincial)	Public service and economic center A design that provides vice-versa between government, workers, visitors and the surrounding community	Effective Typical Work Center Optimal design for the comfort of users as workers and visitors. Connect and classified wider range of market	The Face of the City The design function as a commercial port represents industrial development in Pati Regency	Effective Maintenance and Construction Selection of materials that are easy to construct, durable and easy to maintain
Regulator The government has special powers in making policies that can influence planning	Disaster Resilient Siltting the river that occurs 1 cm per day is minimized by expanding the face of the Juwana River	Flexible in Development The distance from residential areas has flexibility in the direction of industrial development, pioneered by the presence of commercial ports	Industrialization Integration with industrial area that spread across the Juwana River	River Together A design that is friendly to river activities used by the wider community

DESIGN ENTITY



Commercial Port

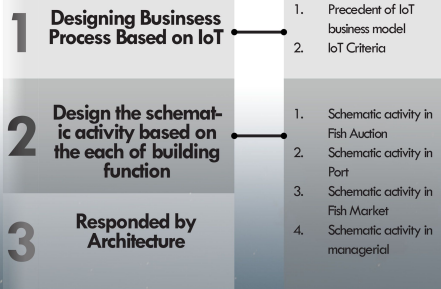


Fishing Port



Fish Market

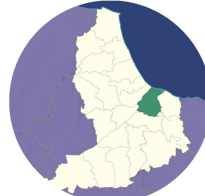
BUSINESS MODEL FRAMEWORKS DESIGN



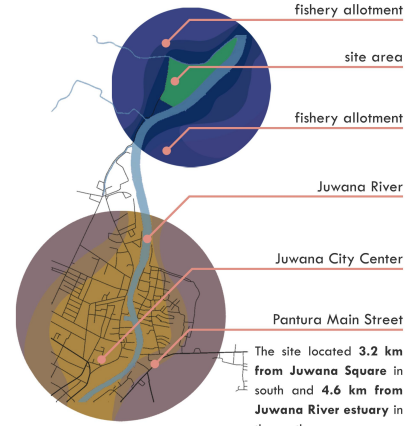
SITE LOCATION AND NEIGHBORHOOD

SITE LOCATION:
Area Tambak, Growong Lor, Kec. Juwana, Kabupaten Pati, Jawa Tengah 59185

6°41'27.9"S 111°09'29.1"E

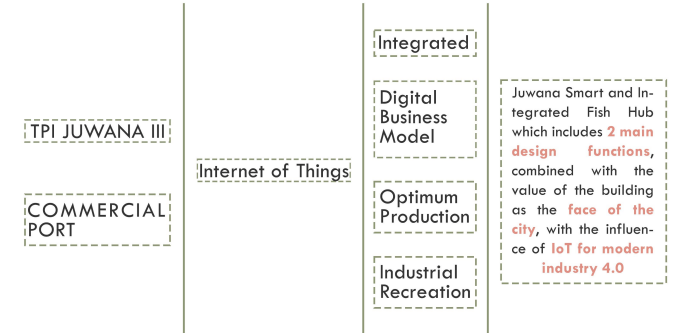


Juwana District in Pati Regency



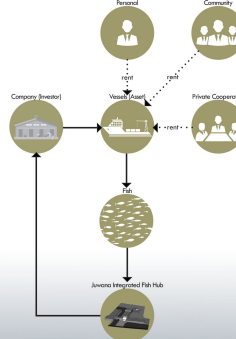
The site located 3.2 km from Juwana Square in south and 4.6 km from Juwana River estuary in the north

DESIGN CONCEPT

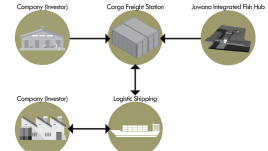


BUSINESS MODEL

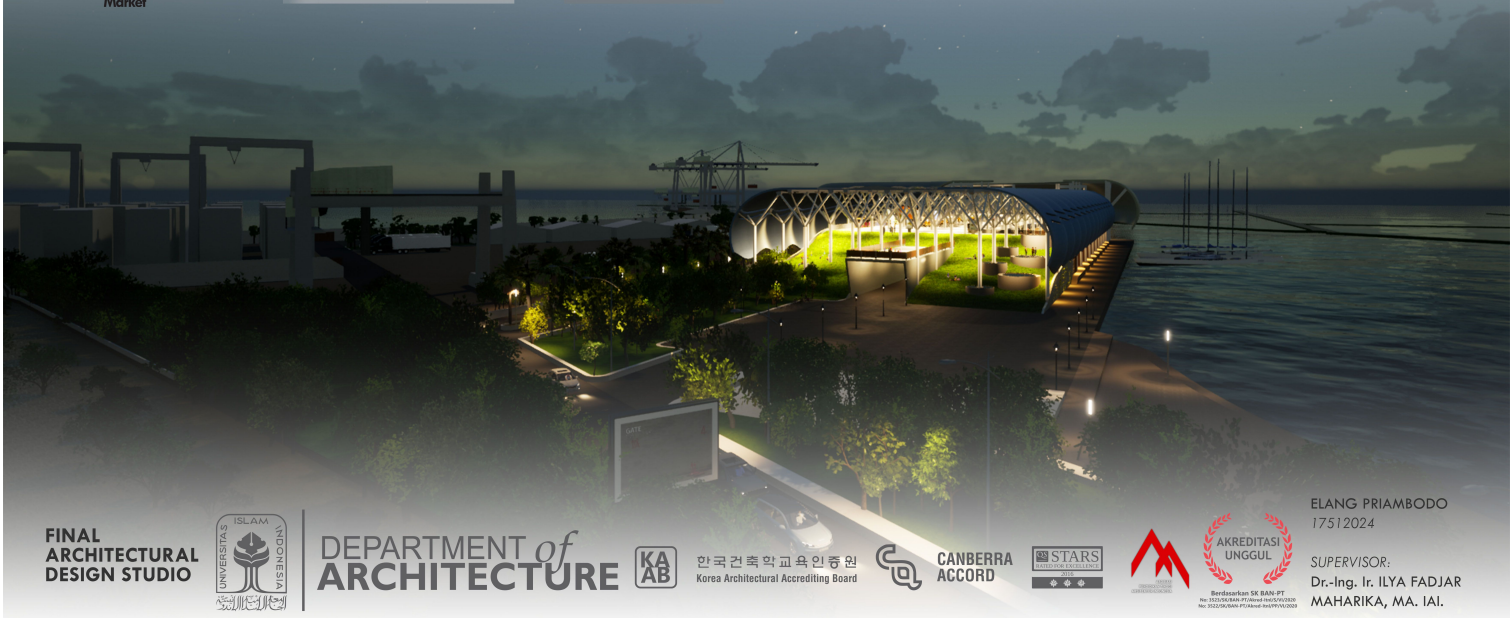
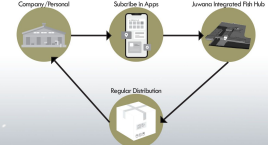
assets-sharing business model 1



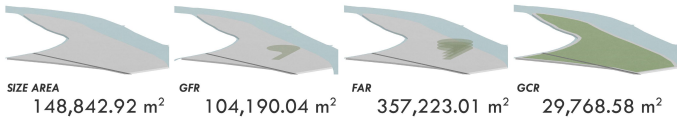
assets-sharing business model 2



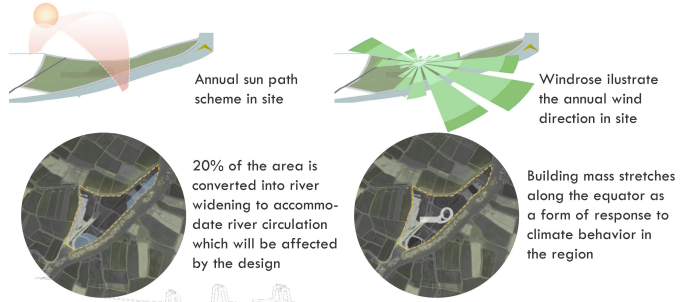
subscription business model



PROPERTY SIZE

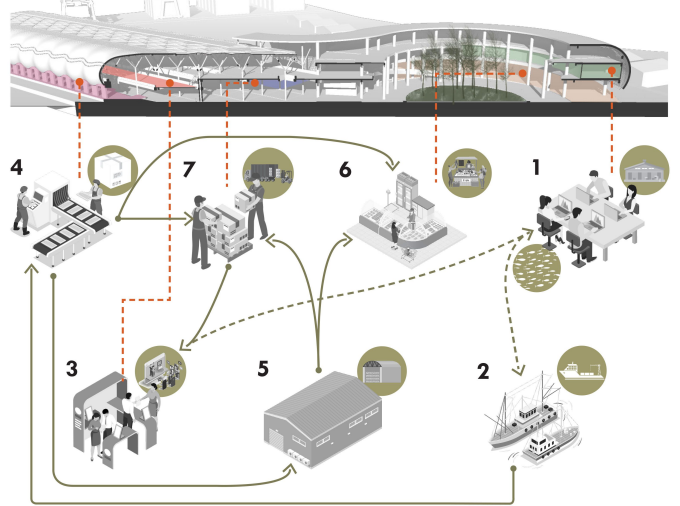
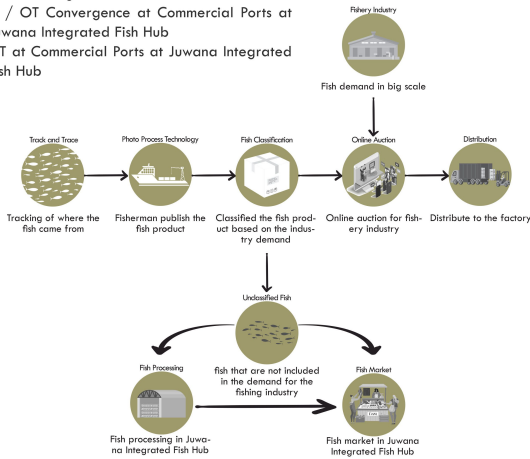


SITE RESPOND



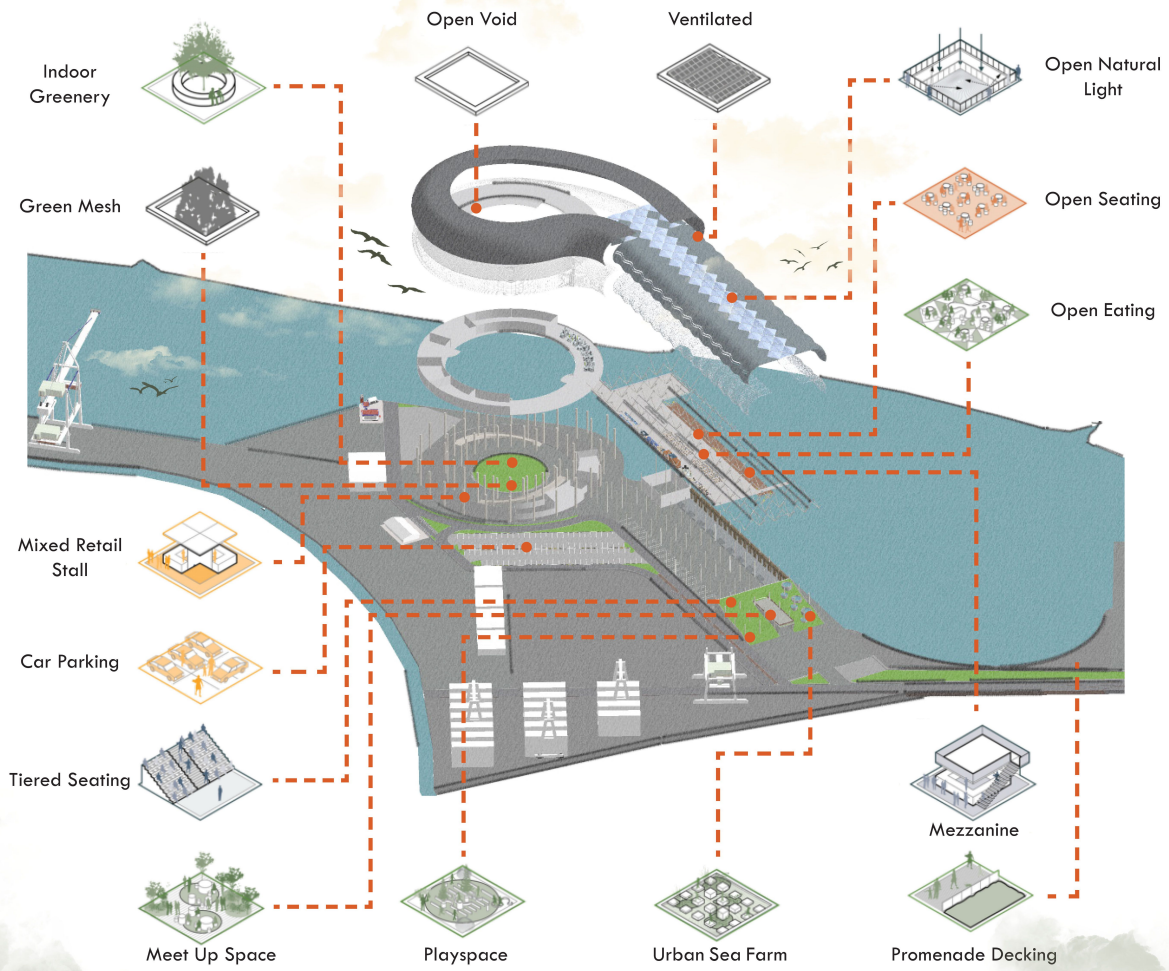
IoT CONCEPT IMPLEMENTATION

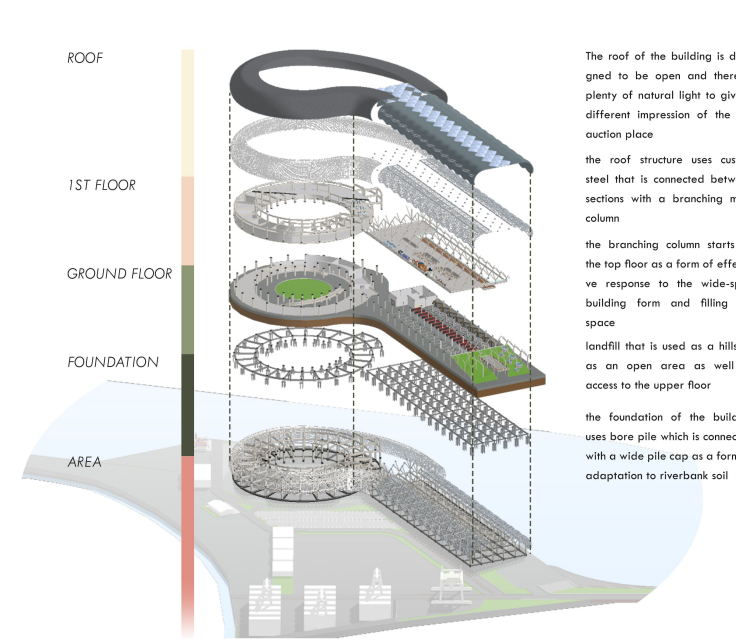
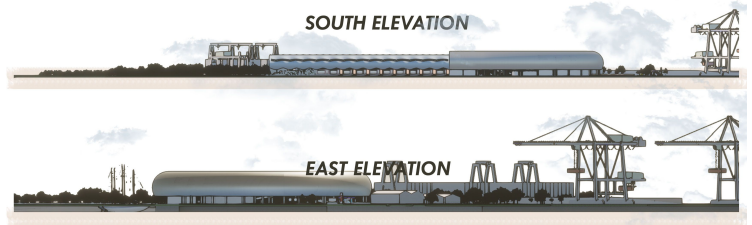
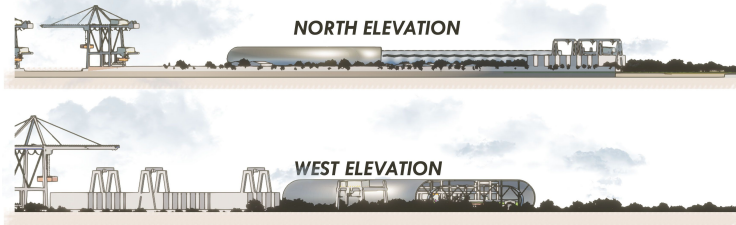
- IoT in Production Systems Fisheries at Juwana Integrated Fish Hub
- IoT in the Transaction System Trading at the Juwana Integrated Fish Hub
- IT / OT Convergence at Commercial Ports at Juwana Integrated Fish Hub
- IoT at Commercial Ports at Juwana Integrated Fish Hub



1. The Office manage the demand, order, and inform to the customer. In the same time give real-time information about fish tracking and weather information to the fisherman.
2. The Fisherman give data of sea product to customer.
3. The online andoffline customer for fish market and auction.

4. Fish selection for high demand, auction, processing and market needs.
5. Fish processing in local business shareholders.
6. Fish market.
7. Distribution of product fresh or processed to customer.





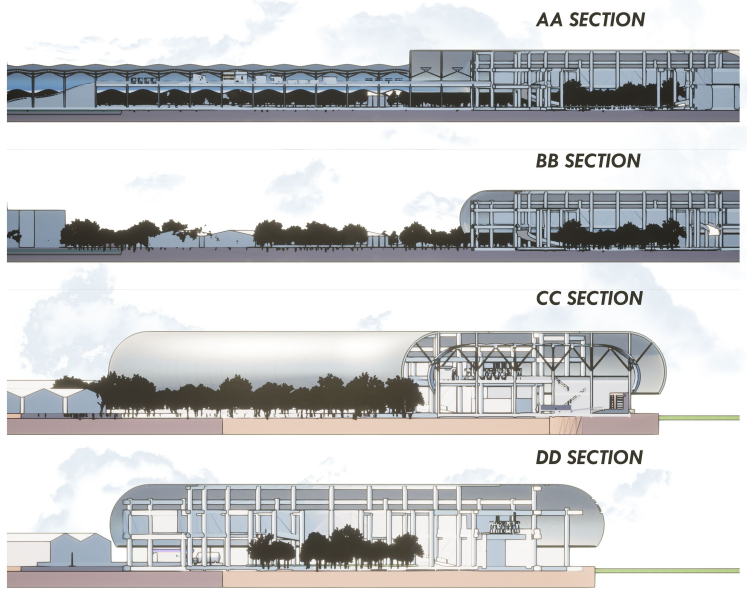
The roof of the building is designed to be open and there is plenty of natural light to give a different impression of the fish auction place

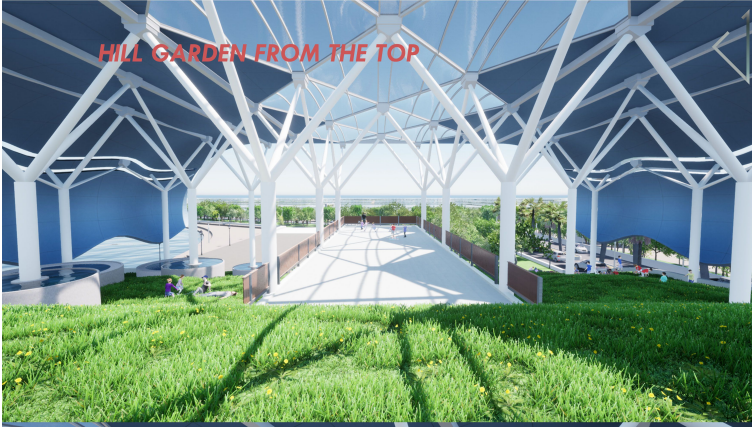
the roof structure uses custom steel that is connected between sections with a branching main column

the branching column starts on the top floor as a form of effective response to the wide-span building form and filling the space

landfill that is used as a hillside as an open area as well as access to the upper floor

the foundation of the building uses bore pile which is connected with a wide pile cap as a form of adaptation to riverbank soil





HILL GARDEN FROM THE TOP



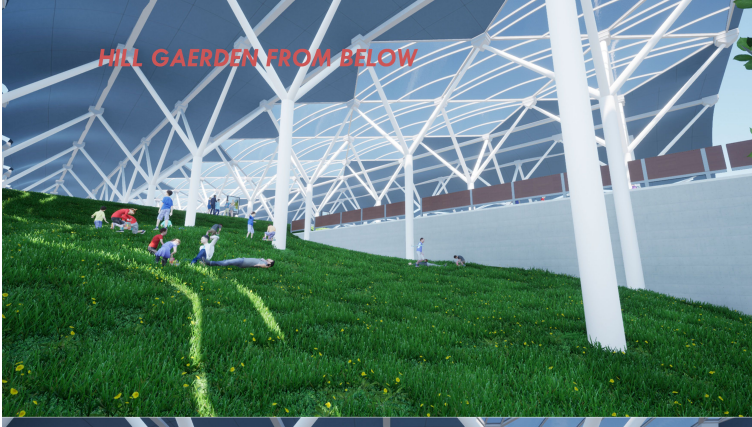
FRONT YARD



UPPER GROUND INTERIOR



MAIN ACCESS



HILL GARDEN FROM BELOW



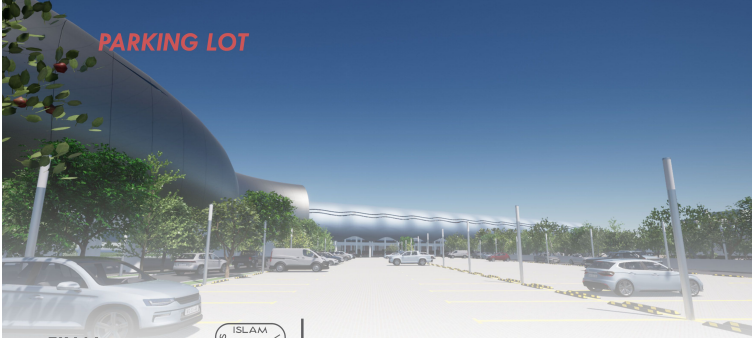
BIRD-VIEW OVER THE PORT



MEZZANINE



OVER THE URBAN AREA



PARKING LOT



SOUTH ELEVATION