

planb museum



the highest population density of turkey in the marmara region with 24 million 465 thousand 194 people. 16 million of the population of 24 million live in istanbul. most of the waste of this dense population flow into the sea of marmara.

in addition to all these, the traffic of the bosphorus is also pepping the pollution. every day, 150 non-stopover ships, 23 ships carrying dangerous goods cross the bosphorus, and 2 thousand 500 regional sea traffic movements in which approximately 2 million people are transported. some of these vehicles leave their organic waste to the sea of marmara.



mucilage is a thick, gummy substance produced by nearly all plants and some microorganisms. uni-cellular plant microorganisms called phytoplankton increase excessively when they find a suitable environment caused by domestic waste in the sea and they release their secretions into the sea after entering into food competition. because of the secretion they leave, a gummy structure is formed on the water and at the bottom, the layer formed on the surface prevents fishermen, and the bottom formed on the bottom prevents the fish from spawning.

in our planb_lab planb_rd

collected mucilages are resolve to phytoplanktons. resolved phytoplanktons are being analyzed to produce a new material.

to make the fabric, phytoplankton, a type of single-cell green algae, are spun together with nano polymers.



hydrogenated textiles are living organisms that respire by burning carbon dioxide into oxygen.

"the living aspect of the textile will transform users' relationship to their spaces, shifting collective behaviours around our consumption-oriented habits towards forming a sustainable future."

phytoplanktonal bloom



last year, 65% (778 million 587 thousand m³) 2 of 1 billion 223 million 815 thousand m³ wastewater was discharged into the receiving environment using only physical treatment. apart from this insufficient treatment approach, 15 million 374 thousand m³ of wastewater was directly discharged to the marmara sea without any treatment.



the water treatment facilities in beykoz are marked on the map in the figure.

beykoz shoe factory

Established as a paper mill in 1804, the building was built in 1812 by Il.

With the purchase of the factory by Mahmut, the factory started to produce the shoes, boots and harnesses needed for the army.

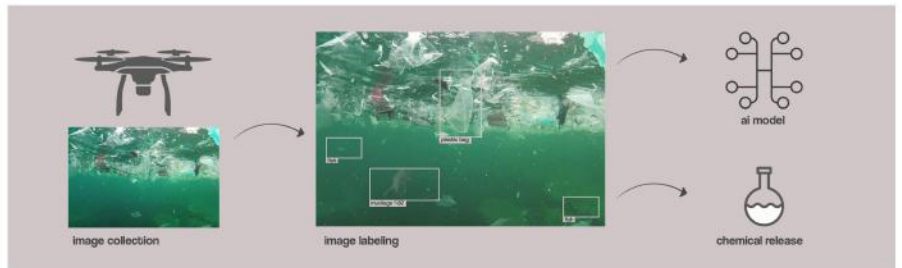
After the Republic, it continued as Sümerbank Leather and Shoe Factory. By 1986, the factory started to suffer. In 1993, due to the factory's pollution of the environment and the Bosphorus, it was decided to close the leather section with the order of the Ministry of Environment.

Turned into a plateau serving the TV series and cinema sector as of 2005, unfortunately, it could not achieve the desired tourism purpose.

underwater robot



we have a robot to stop mucilage phytoplankton problem in the sea of marmara.



our robot retrieves images from underwater of the sea of marmara then sends these images to planb_lab for image labeling process.

in planb_lab, our engineers labels these images for object detection.

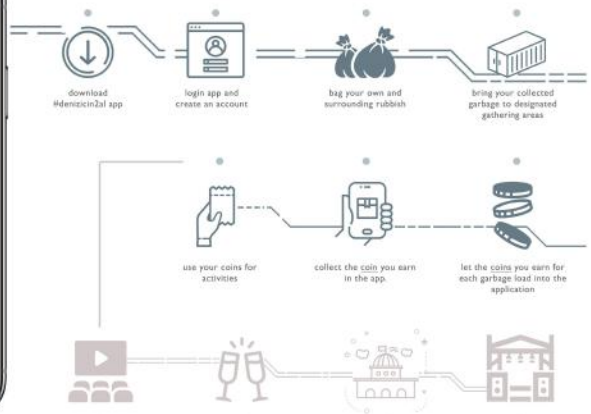
our robot can also measure mucilage density and therefore, phytoplankton density.

the robot measures whether the density is different than the optimum.

if this level is high our robot releases chemicals to restore phytoplankton density to a optimum state.



if denizcinizal is an application that can be downloaded to android and ios phones and helps them win prizes by interacting with the society on the way to gain social awareness.



download denizcinizal app

login app and create an account

bag your own and surrounding rubbish

bring your collected garbage to designated gathering areas

use your coins for activities

collect the coin you earn in the app.

let the coins you earn for each garbage load into the application.

you can use your coins to win prizes in beykoz shoe factory

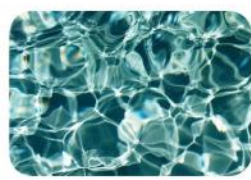
you can use your coins for prizes in the beykoz shoe factory

you can use your coins for prizes at planb

you can use your coins for restaurant tickets



#4A938A #D0C6C7 #A08F88 #6E6956 #667765 #647B83 #647B83



gill sans mt

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

coolvetica

ABCDEFGHIJKLMNOPQRSTUVWXYZ
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Sea shells were added to the epoxies used on the floor.



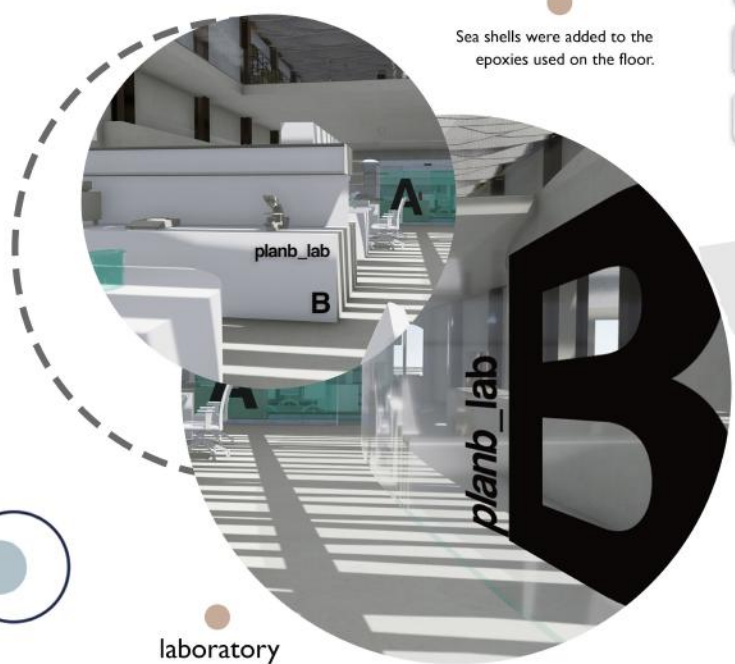
ticket debate area



ticket beykoz area



ticket museum



laboratory



signs

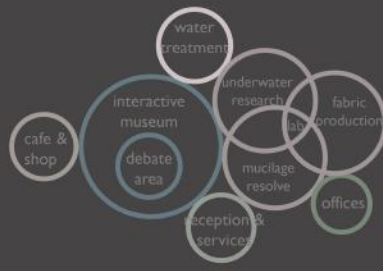


laboratory equipments



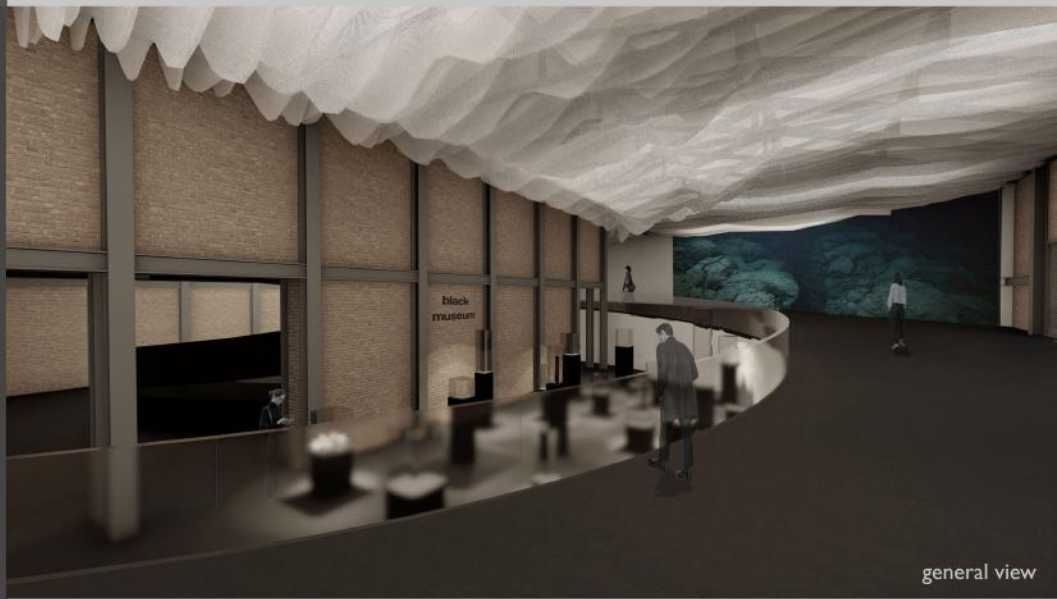
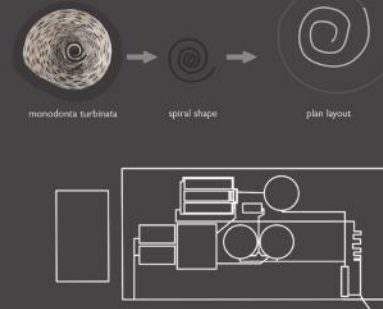
outside

plan_layout



- museum cafe and shop
- interaction between people and underwater
- seawater treatment and underwater species development & recovery
- debate area
- exhibition areas
- machines [sand arresters, preliminary sedimentation tank, final sedimentation tank, sludge settling pond]
- threatened underwater species research & development
- mucilage resolving and phytoplankton analysis
- phytoplankton fabric production
- museum offices

[sea creatures of the marmara sea are important for us, so we wanted to take them and keep their spirit inside the museum]



general view

what visitors say

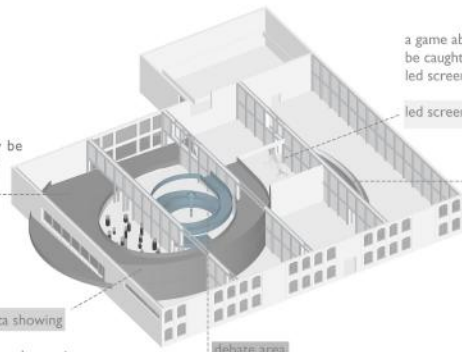
"seeing and interacting with the exhibits and the space made us feel like kids; learning and exploring and laughing with wonder"

museum conceptual stages

- 1st problem identification
- 2nd empathize with
- 3rd solution seeking

area set up as an installation with our textile product. the sensation of passing through this area may be stifling or a feeling of being stuck

Installation



a game about which fish can be caught or not through led screens

fish tank

where threatened underwater species are cured

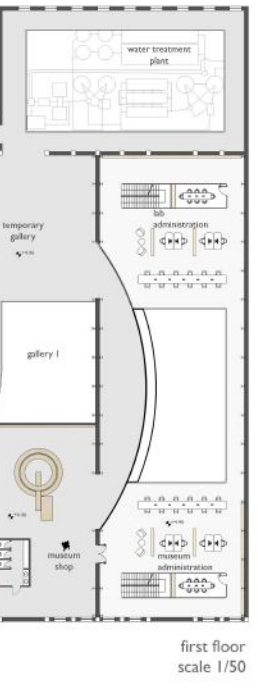
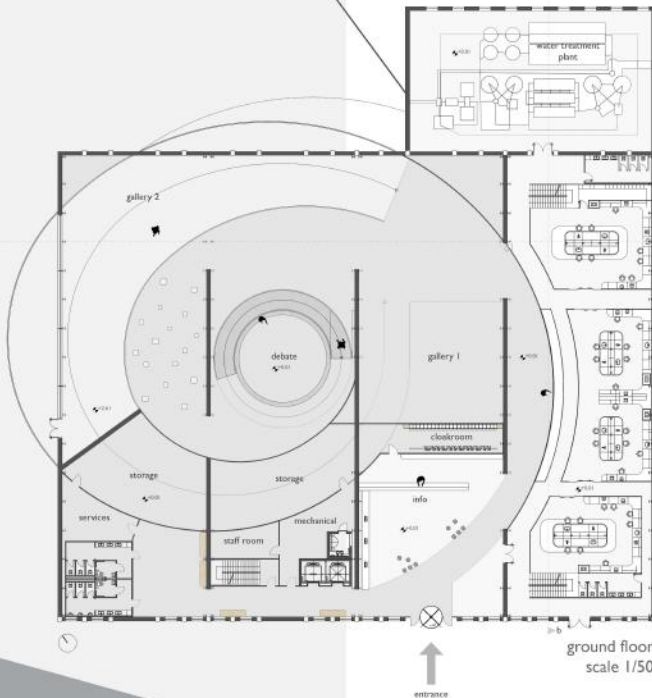
robot data showing

light & sound experience within the space

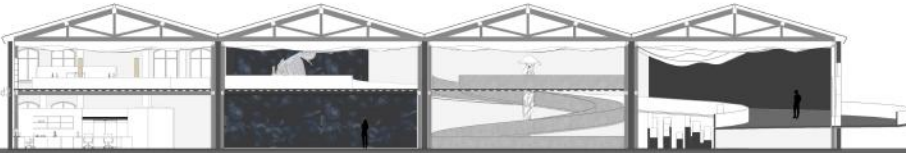
debate area

an area where every visitor can take place, discussing what you've learned and what can we do about identified problems

3-b



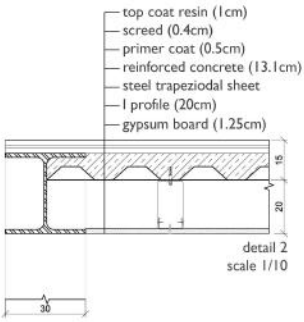
sections_details



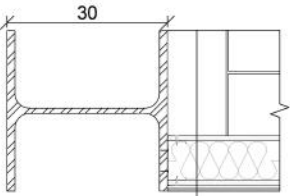
section aa
scale 1/50



section bb
scale 1/50

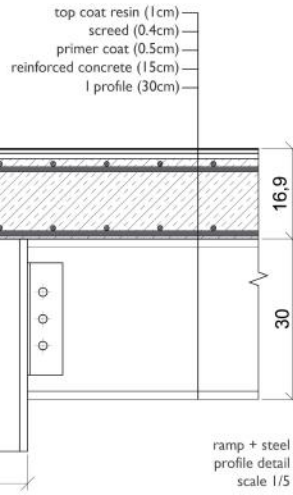


detail 2
scale 1/10



detail 1
scale 1/5

- brick
- gypsum board (1.25cm)
- xps (7cm)
- gypsum board (1.25cm)
- plaster (0.5cm)
- paint (0.5cm)



ramp + steel
profile detail
scale 1/5

atmosphere

The digital environment of the planb_museum was designed in accordance with lower floors as a darker environment and a clearer and brighter space as we climb the upper floors of the building, in order to indicate the awareness experienced by learning and progressing in the museum. The atmosphere of the space is in the form of clarification of the color as it reaches the information with the help of planb_lab fabricated textile on the ceiling.

The existing structural bricks have been painted and in some areas recycled plastic bricks and wood have contributed to the atmosphere of the space.



gallery 1

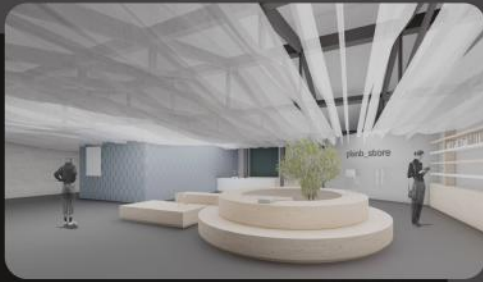
public_areas_outcomes



museum cafe



fish tank

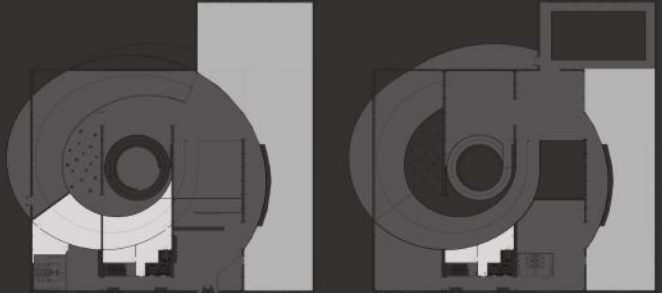


museum store

debate area

an area where every visitor can take place. discussing what you've learned and what can we do about identified problems

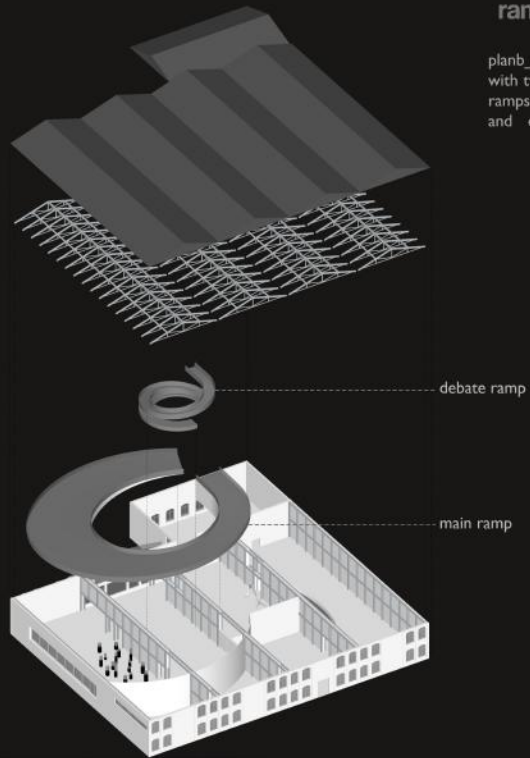
access diagram



private access
public access

ramps diagram

planb_museum is formed with two ramps and these ramps enables circulation and experience in the museum



debate ramp

main ramp





entrance
one day at planb museum



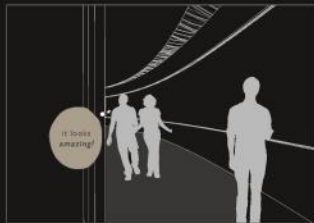
it was a good day to go to the planb museum.



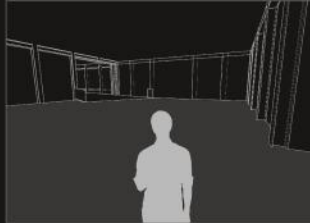
it didn't take long to walk to the entrance.



there were ticket buying areas and cloakroom at the entrance of the museum, the employees were very interested.



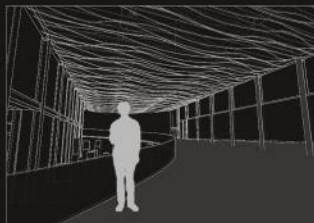
a large aquarium greeted us inside and it was dark all around, we could see the laboratory behind the aquarium.



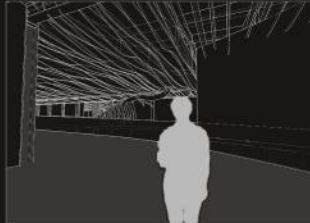
passing through the aquarium hall, we reached the area with line and areas images projected onto the floor, walls and ceilings with digital screens.



from there we reached a large ramp where the debate area on the small ramp in the middle was visible, and to our right was a balcony.



we continued our way on the ramp with the balcony and digital screen on our right and the black museum in the middle.



when we reached the end of the ramp, we saw an old fish skeleton hanging from the ceiling.



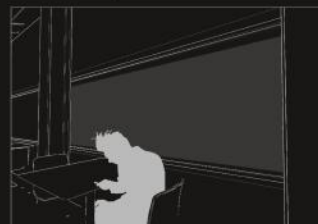
we reached the museum's shopping area from the area at the end of the ramp to remember this beautiful day.



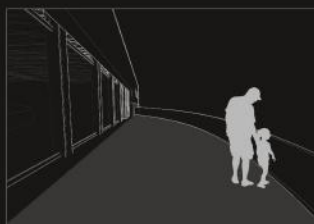
we wanted to rest in the cafeteria because we were a little tired.



the view of the sea in the cafeteria drew us towards itself.



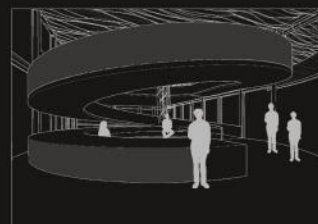
that's why we continued to stay at the cafe for a while.



we had the opportunity to see the sea again by passing one of the balconies we saw on our way back.



it was quite impressive to see the physics coming out of the sea as murder weapons in the black museum we visited on the way back.



at our last stop, without leaving the museum, there was a debate area where we could reinforce what we learned and share with people.

