

The background of the entire page is a grayscale aerial photograph. The top half shows a wide, calm body of water with some small, dark, circular features that could be islands or rocks. The bottom half shows a coastal urban area with a river or inlet winding through it. The river has a dark, winding path, and the surrounding land is filled with a grid of streets and some larger buildings or industrial structures. The overall tone is muted and professional.

# I.T.U LANDSCAPE ARCHITECTURE DEPARTMENT

STUDIO REPORTS

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TES 211E



# TES 211E

## PROJECT III

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# Mars/Haliç landscape design

## COURSE DESCRIPTION AND PURPOSE

The Project III studio introduces students to the fundamental elements of landscape design at the scale of public space. The studio investigates landscape design methods and approaches, based on morphological, experiential, and visual, to develop spatial landscape setting with diverse programs and functions. The studio helps students to develop spatial literacy, the ability to represent the landscape, and critical design thinking. The objective of this studio is to gain an understanding of the design process and hybrid solutions to common conceptual design problems.

The 14-week studio program is accompanied by three common workshops and seminars that are organized within an interdisciplinary perspective by the active involvement of instructors and students from urban and regional planning and architecture departments to create an interactive studio environment.

Students can develop design alternatives in relation to the natural, cultural, and conceptual context and by taking into consideration the structural, material, construction parameters related to the scale of design through this course.

The PEM content of Project III is structured around two main modules. The main goal of the modules are as follows;

- To gain the ability to perceive, investigate, interpret, and analyze the dynamic structure of the landscape by utilizing different methods and tools.
- To gain insight into the concept of scale in the context of landscape design by experiencing different design methods
- To gain the ability to develop a conceptual approach to the design problems
- To gain ability in designing small scale urban spaces with different themes in urban contexts
- To gain the ability to use hybrid drafting techniques to represent the characteristics of the landscape.

Put your belts on! Going to the future.

Landscape is a continuous spectrum of things around us. Understanding the surroundings is the key feature and fundamental approach for developing better design. Therefore, this year we are starting with the futuristic idea of inhabiting Mars. You will be dealing with the unfamiliarity of the environment but still need to collect information and understand the landscape to develop elements that suit the surroundings and yet provide all the needs of human beings going to Mars. In the second part of the semester you will be developing future landscapes in the historical peninsula. With this perspective, the main goal of the second module is to develop small scale design interventions which are going to be attached to the existing spatial setting of the historical peninsula.

## MODULES

### MODULE 1 - REALIZING THE FUTURE ON MARS

In the context of the first module, students will be dealing with the complexities of the site to develop design ideas based on the local context of the planet Mars. Mars is the most earth-like alien planet in our solar system and facing space exploration in near future. This class will let students study and analyze the environment of this alien planet and will let them select the perfect landing spot for the first expedition team.

The class will give students conditions such as the payload of the rocket, the number of members in the expedition team, the period of the expedition and necessary supplies, etc. Students will be able to use Google Mars-like online service to investigate.

With this module work, students will be able to train how to study and analyze a large-scale site with the perspective of designers. Additionally, there will be no field trip.





The main purpose, and context of design,  
The correlation of the design idea with human and nature,  
The unseen historical walls of the city and their relation with public spaces,  
The coastal landscape and public usage,  
The landmarks in the urban context,  
The silhouette of the urban fabric.  
Finally, what is your contribution to this valuable landscape with your design?  
Common activities contain workshops and a jury. Two interdisciplinary workshops in small interdisciplinary groups will take place throughout the studio. Interdisciplinary workshops will consist of two main ideas: Common Module 1: A Virtual approach to Urban Stories ,Common Module 2: Hang-Out Space Designing Urban Furniture. And the third common module is designed to create a new way of jury to understand the significance of representation; Common Module 3: Praxis Telling The Experience.

COMMON MODULE

Common Module 1: A Virtual approach to Urban Stories

The workshop includes direct involvement of instructors and students of Landscape Architecture and Urban and Regional Planning Departments and Interior Architecture departments. . The workshop will explore the built environment from territorial to local scale. The students of Landscape Architecture, Urban and Regional Planning, and Interior Architecture will collaboratively research the ways through Google maps for 1 KM in any city- in which City's built environment is structured and produce collective with maps and collages.

Common Module 2: Hang-Out Space Designing Urban Furniture.

The main objective of the workshop is to design a Hang-out space in backyard of Taşkışla. Students will be asked to design a urban furniture for this content. The urban furniture and the space that it created is the key point of this workshop .

Common Module 3: Praxis Telling The Experience

The main objective of the panel is to introduce students to the significance of representation.. After two workshops, this study aims to create a new understanding of a jury. Students will be asked to explain each other's projects over their drawings and representations. It will create a new way of understanding.

MODULE 2. HALIÇ

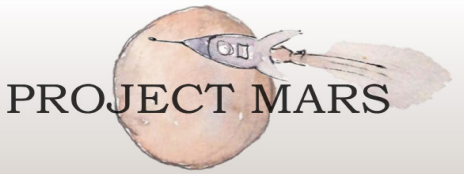
FUTURE OF LANDSCAPE IN HISTORICAL REALITY

The second module of the studio includes the development of design ideas with respect to the preliminary investigation of the site. With this perspective, the main goal of the second module is to develop small scale design interventions which are going to be attached to the existing spatial setting of the Haliç. The rich historical background of this unique estuary and ecological structure of the landscape will be scrutinized in this module. The site-specific design regarding these cultural settings, geographical context, and topography will be expected from students.

The design proposals will be developed for the sites which will be chosen by students in the light of their individual assessments. The potentials of the land, topographical advantages, vista points, natural setting, usage behavior, existing spatial layout, historic and cultural characteristics will be leading parameters for site selections.

The decisions on landscape design, location, spatiality, materiality, structural composition, and its relation to topography will be precisely defined by the student.

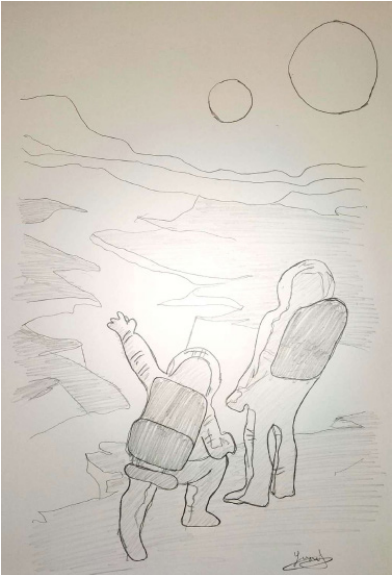
The following issues should be answered with landscape representation techniques (plans, sections, drawings, axons, isometrics, photo collages, models).



## MODULE 1 - REALIZING THE FUTURE ON MARS

### Project Mars

Yusuf Önder  
İrem Kaba  
Bilge Nur Tunçay  
Öykü Kayaloğlu



### MARS CONDITIONS

Factors affecting life on Mars also change the design criteria.

- Gravity
- Mars Surface
- Temperature
- Atmosphere
- Radiation
- Water

### GRAVITY

The gravity of Mars is weaker than Earth's gravity due to the planet's smaller mass. Mass is the just not the one factor that effects gravity we can count some others as well; density, and radius. Even though Mars has almost the same land surface area as Earth, it has only half the diameter and less density than Earth – possessing roughly 15% of Earth's volume and 11% of its mass. Also radius of mars is smaller than radius of earth .

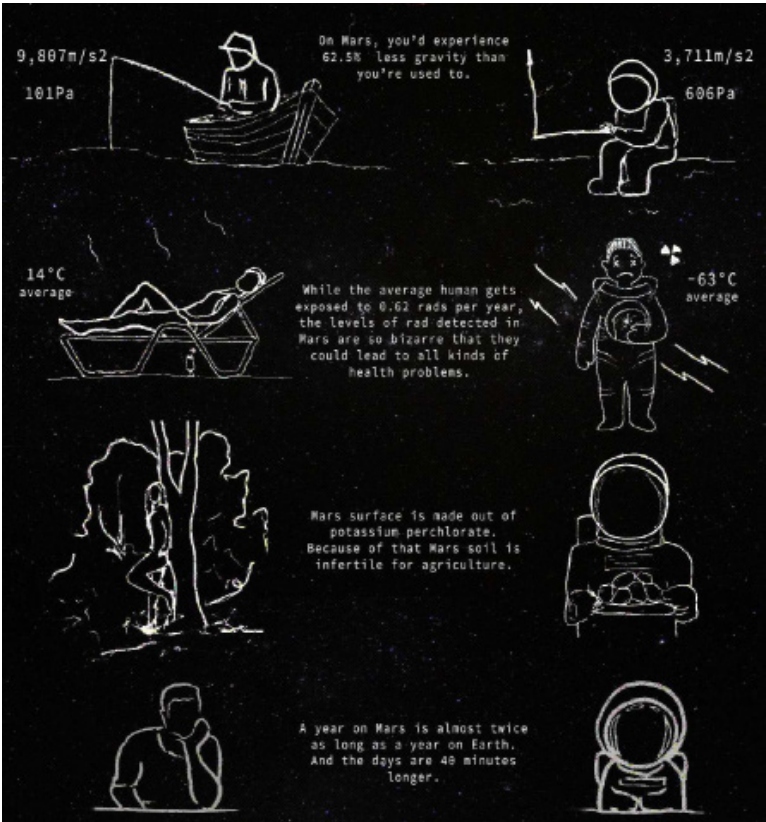
### ATMOSPHERE

The wide range in temperatures is a cause of thin atmosphere which cannot store much solar heat, the low atmospheric pressure, and the low thermal inertia of Martian soil. Water is an important ingredient of the Earth's surface. Water makes temperature move slowly. However Mars has not got liquid water because Liquid water cannot exist on the surface of Mars due to low atmospheric pressure, which is less than 1% that of Earth's.

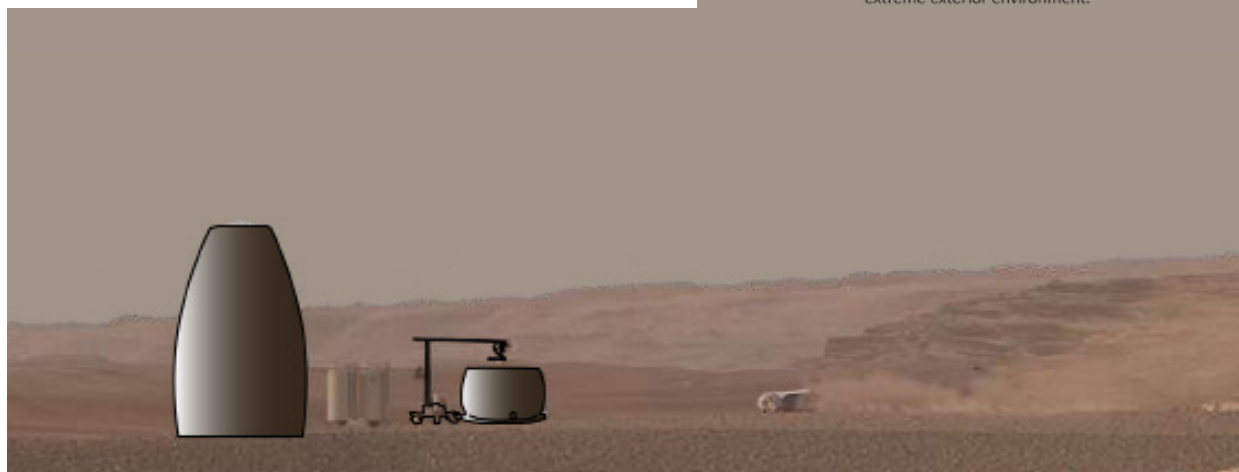
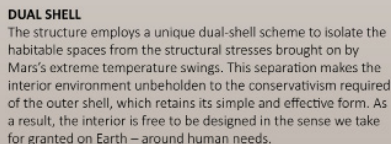
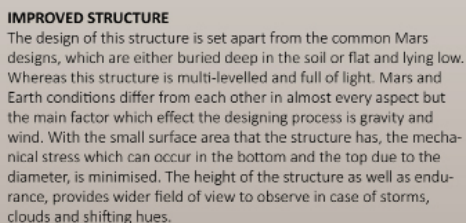
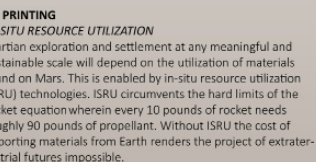
The atmosphere of Mars is also rich in carbon dioxide (above 96%), but it is extremely thin, very dry and located further away from the Sun. This combination makes the planet an incredibly cold place. The absence of water makes the temperature on Mars change a lot.

### CLIMATE AND RADIATION

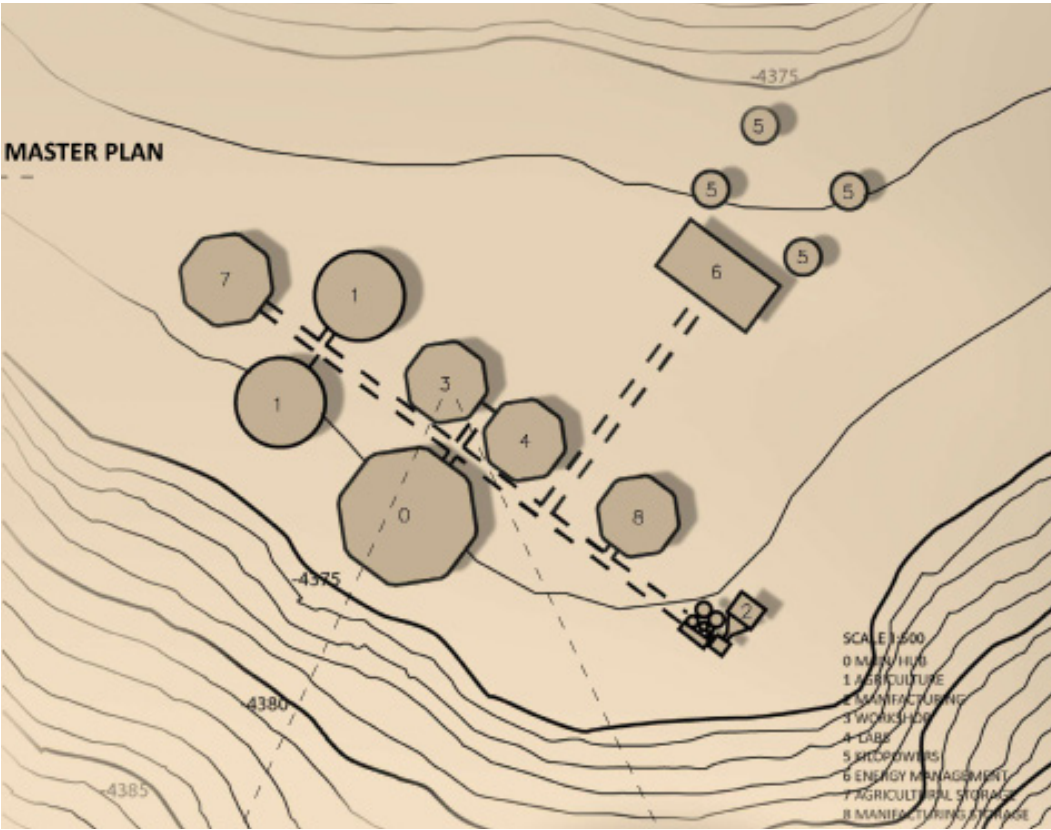
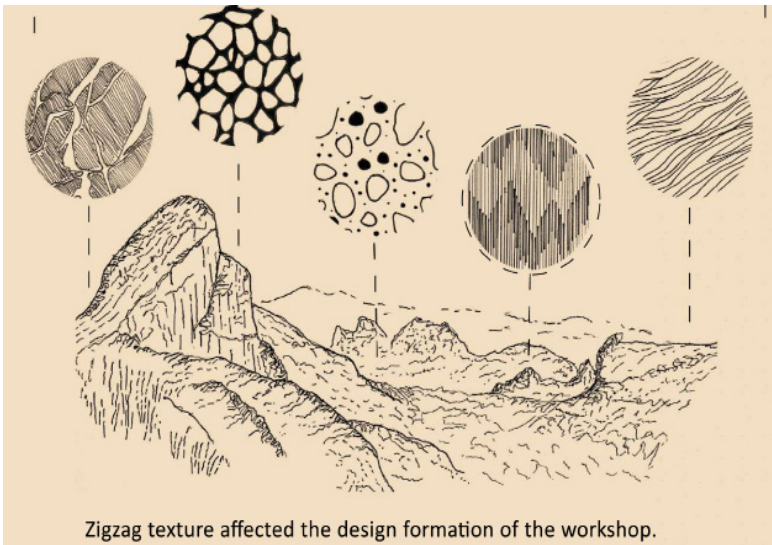
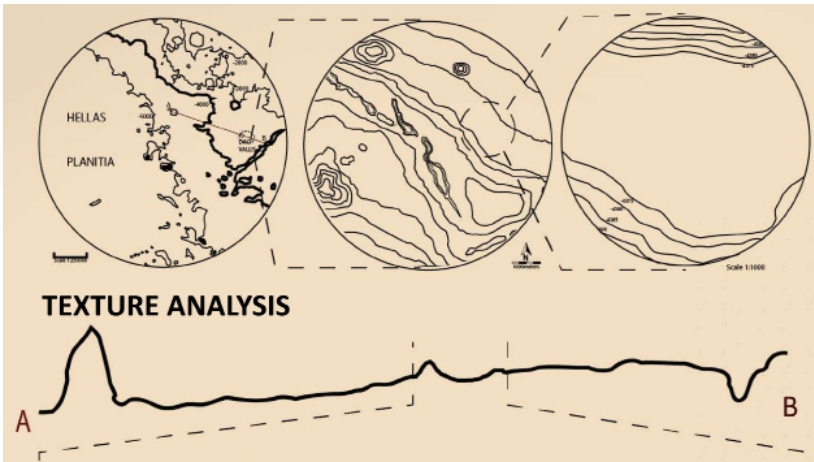
Mars has the largest dust storms in the Solar System, reaching speeds of over 160km/h (100mph). Natural radiation on Mars is much higher compared with Earth. The thin atmosphere provides only a small shielding effect against harmful solar radiation and cosmic radiation. Mars also lacks the magnetosphere that protects Earth. The average natural radiation level on Mars is 24-30 rads or 240-300 mSv per year (needs checking and reference). This is about 40-50 times the average on Earth.



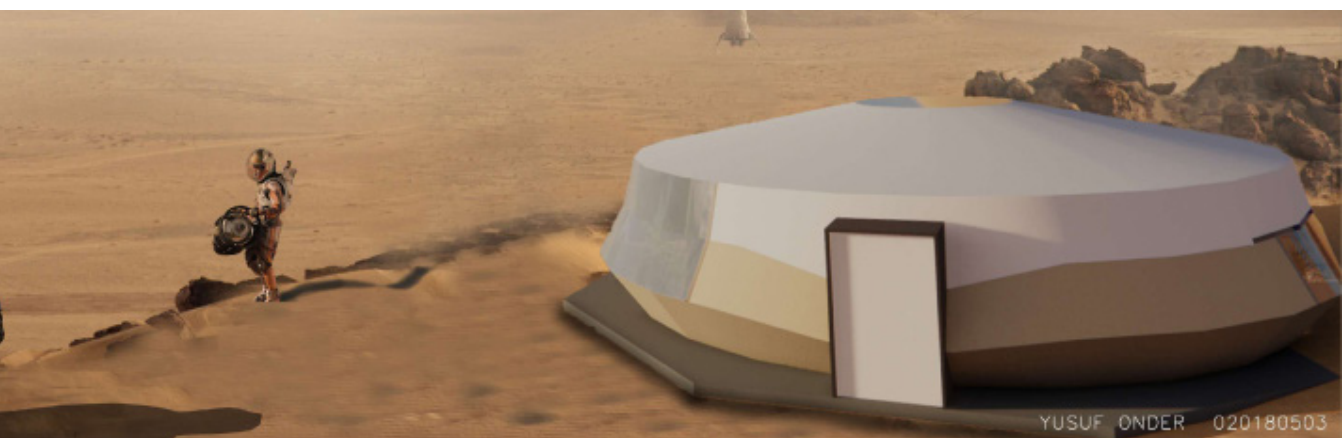
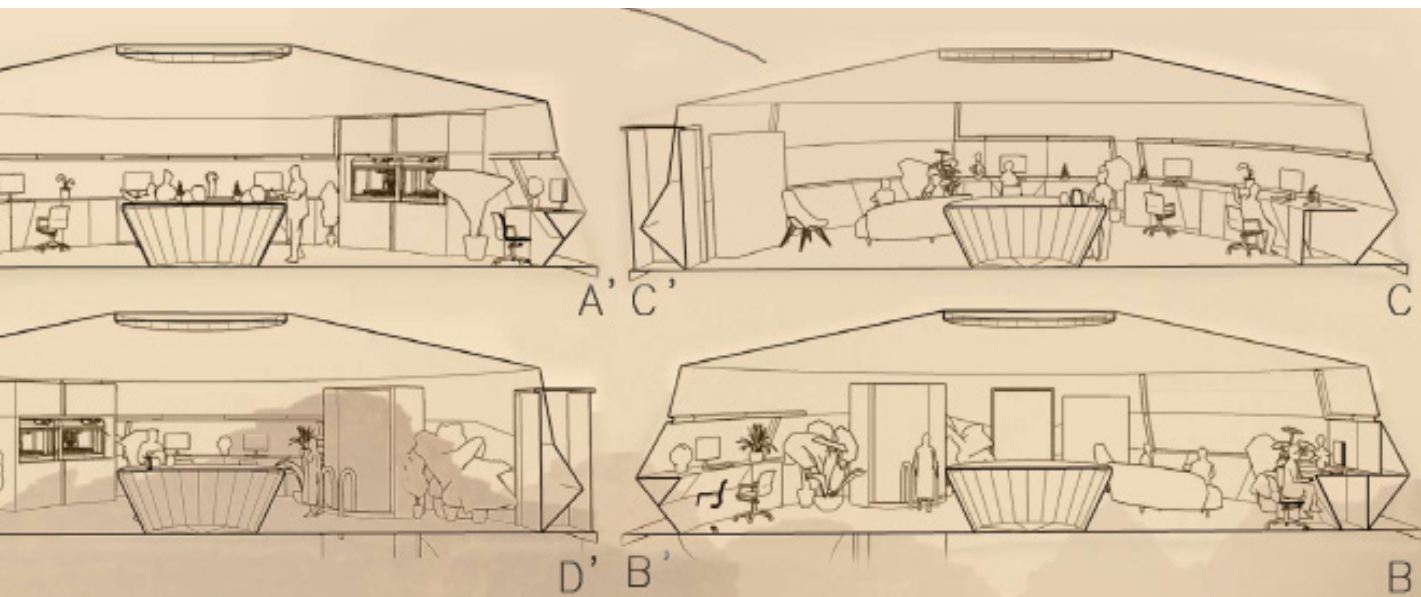
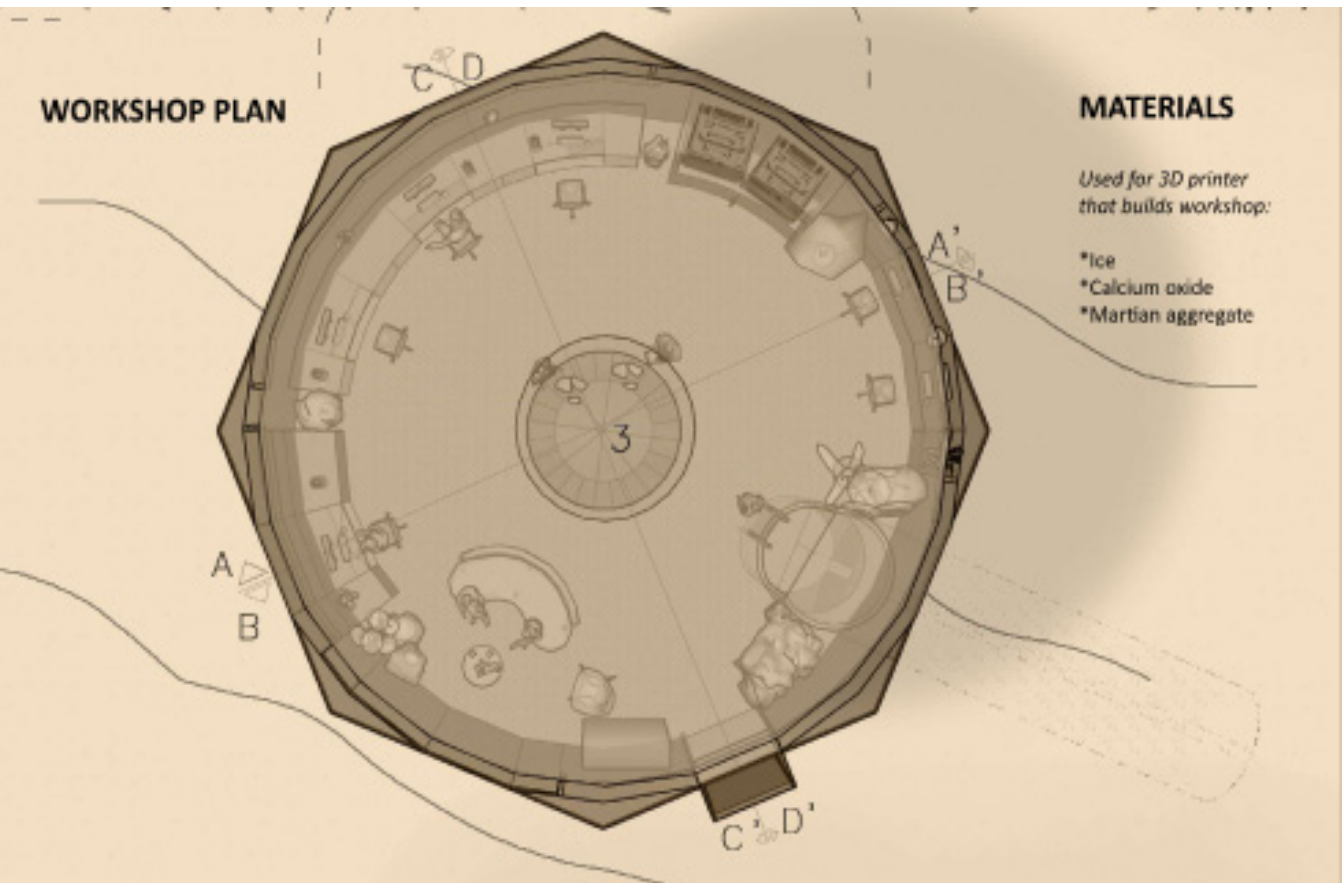




T. A. M. P. P.  
The Anti Mars Pioneer  
Project  
Yusuf Önder



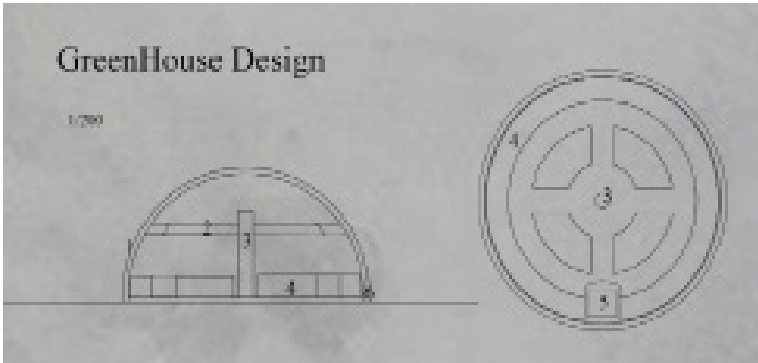
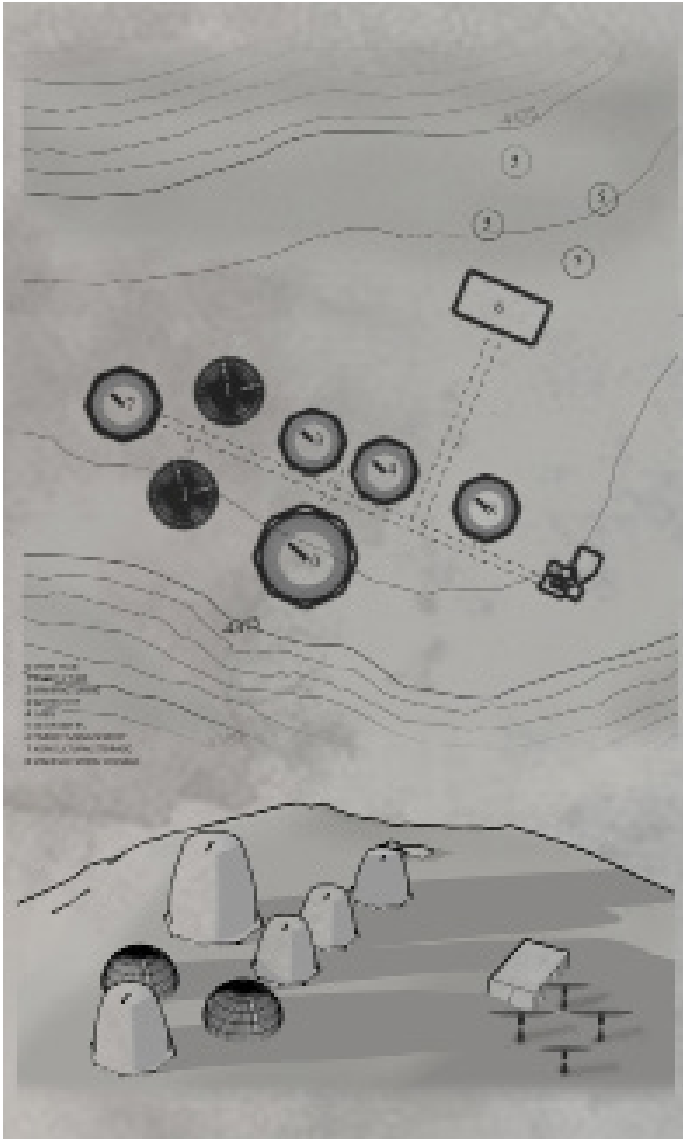




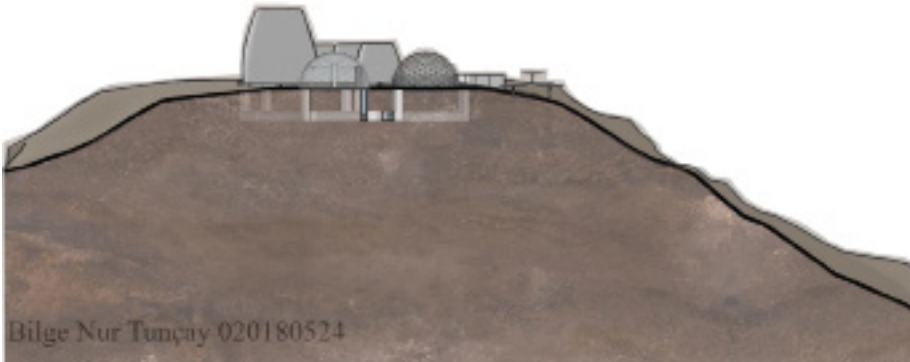
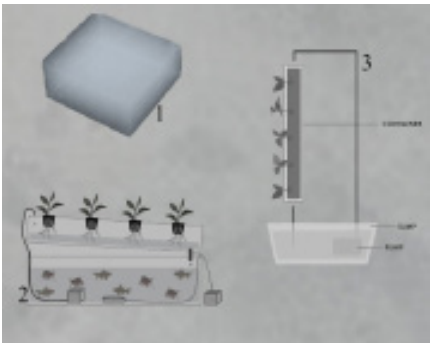
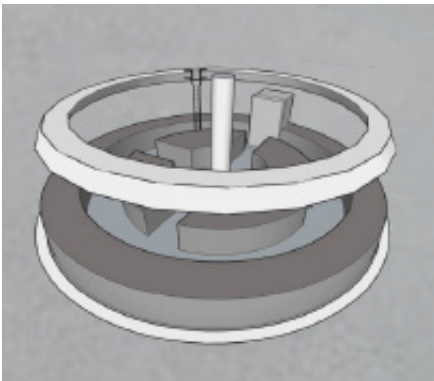
Based on topographic, morphologic and stratigraphic evidence, scientist propose that ancient water-laid sediment is the dominant component of deposits within Hellas Planitia, Mars. Multiple-layered sedimentis manifested by alternating benches and scarps visible in the Mars orbiting camera narrow-angle (MOCNA) images. Mars orbiting laser altimeter (MOLA) data reveal that the contacts of these sedimentary units, as well as a number of scarps or other abruptchanges in landscape texture, trace contours of constant elevation for thousands of km, an in one case all around the basin. Channels, consensually interpreted to be cut by water, lead into the basin. MOLA results indicate that thearea encompassed by greater Hellas' highest closed contour is nearly one-fifth that of the entire northernplains, making the Hellas' 'drainage'area much larger than previously reported. If lakes formed under climatic conditions similar to the modern Martian climate, they would develop thick ice carapaces, then the lakes would eventually sublimate away.

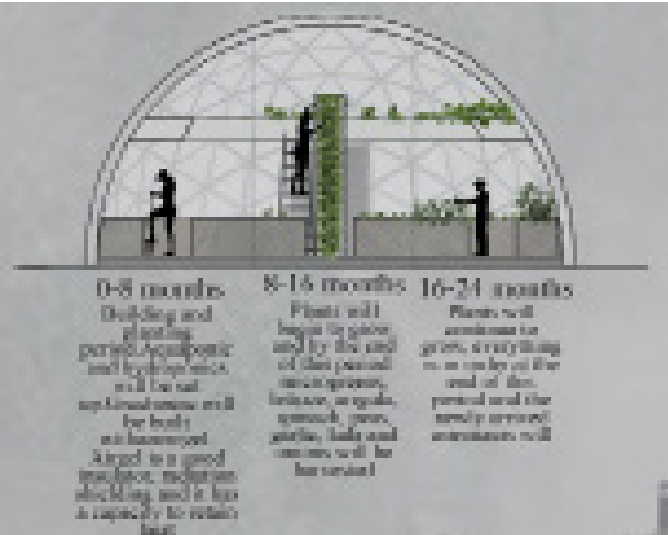
Project Mars

Bilge Nur Tunçay

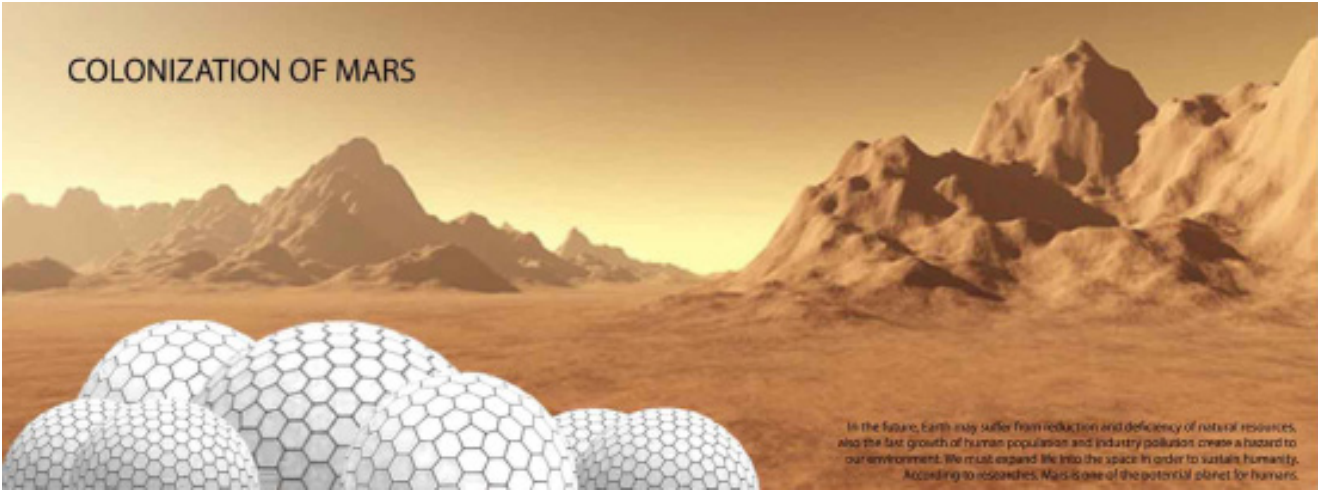


1. Aerogel outer layer and carcass 2. Aquaponics 3. Vertical hydroponics 4. Planting/ experimenting area 5. Elevator 6. Airlocks





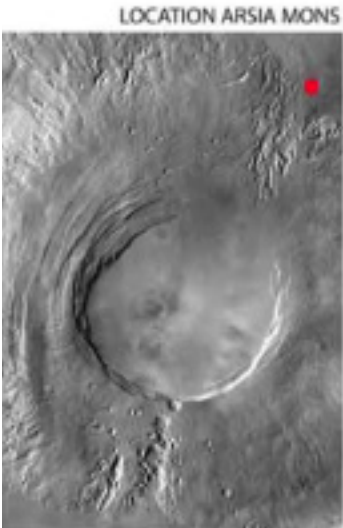
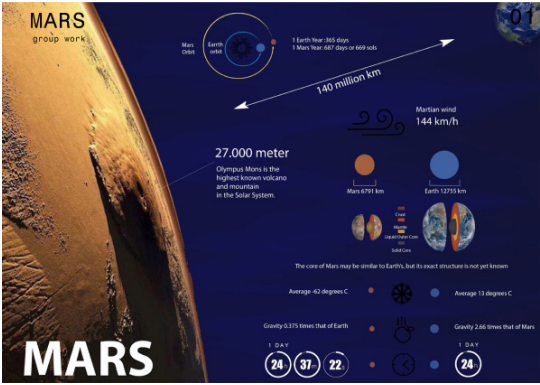




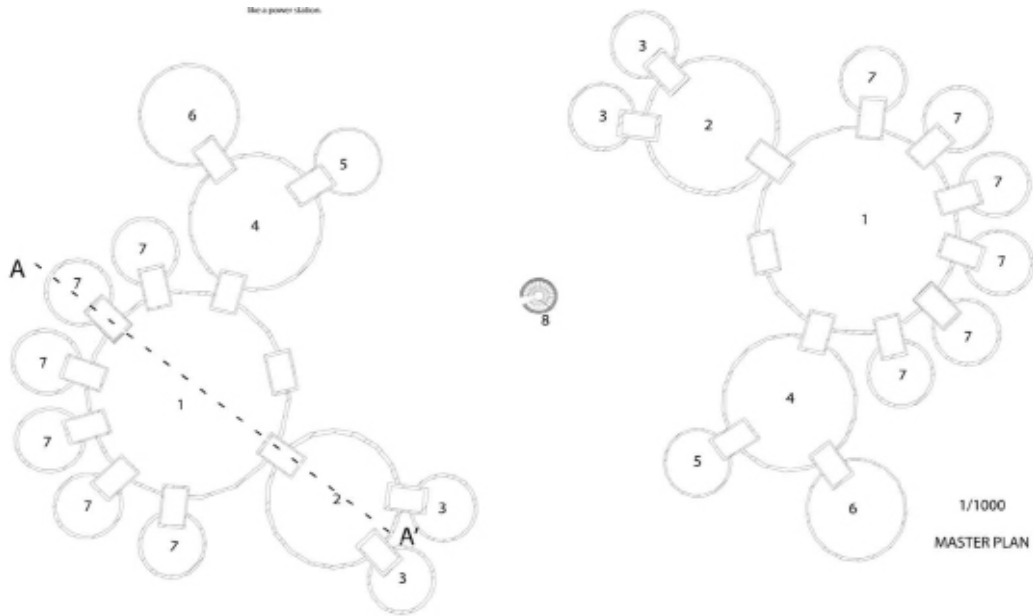
MODULE 1 - REALIZING THE FUTURE ON MARS

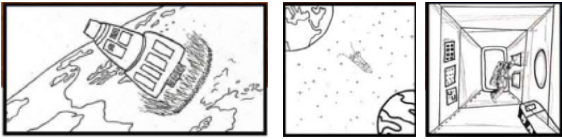
Colonizing of Mars

Ece Nur Doğan  
Meliscan Aşan  
İlayda Amina Ekil  
Fatma Pnar Altun

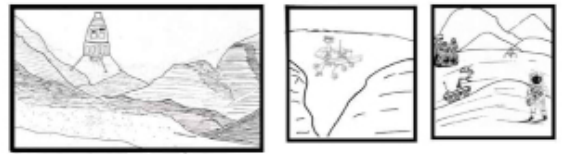


Legend: 1. Interaction Ares /Kitchen /Eating room 2. Hospital 3. Lab 4. Farming 5. Wastewater Purifying 6. Storage 7. Private Rooms 8. Stairs between Surface Subsurface

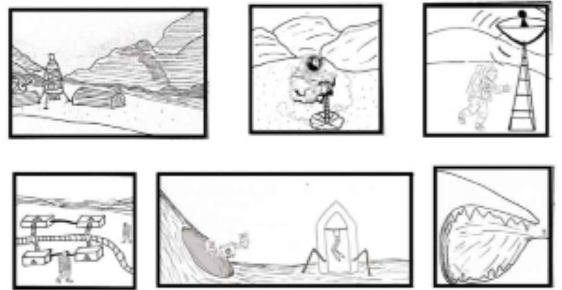




**EXTRACTING WATER FROM UNDERGROUND**  
 In addition to surface glaciers at the poles and high latitudes on Mars, there may also be glaciers at the equator and just below the ground. We can defrost and purify the soil by heating it with a microwave oven.

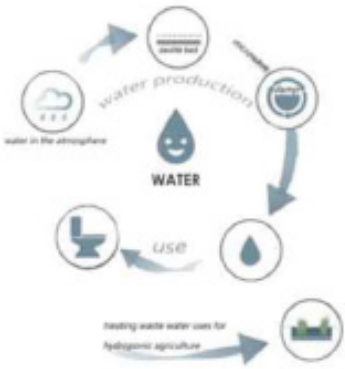


**PRODUCING MARSH GAS**  
 By electroplating, we can break down Martian water and produce oxygen and hydrogen to breathe. With the Sabatier reactor, we can combine carbon dioxide with hydrogen and produce methane. Methane can be used as heating energy and rocket fuel.

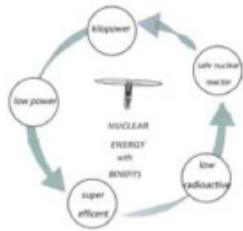


**REMOVE WATER FROM THE ATMOSPHERE**  
 We can take trace amounts of water from the atmosphere and condense it. Creates a water supply for an emergency. Deposits of the Zeolite mineral on Mars act as natural sieves and sponges to attract and purify water underground. Drones will explore Mars before humans do. The first settlements will be underground to protect against micrometeors, cold and radiation.

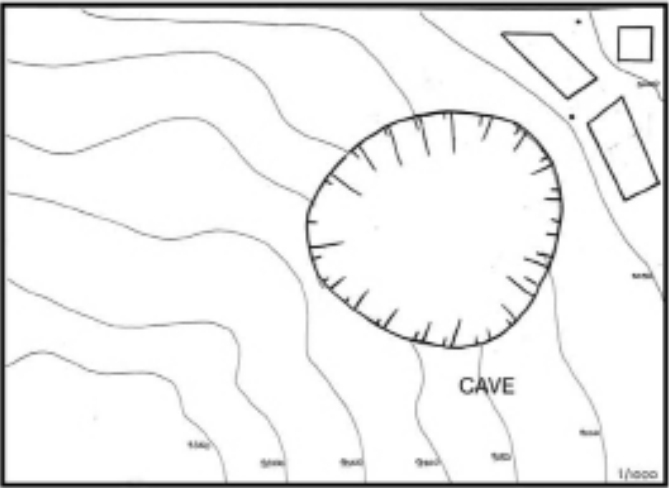
**PRODUCING AIR TO BREATHE**  
 It could be a good way to absorb carbon dioxide from the Mars atmosphere and produce oxygen to be inhaled by electrolysis. So we can't use limited water resources other than to produce hydrogen.



**NUCLEAR ENERGY**



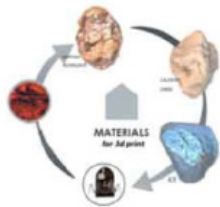
**NUCLEAR ENERGY**  
**Nuclear Battery**  
 Although Mars vehicles are electrically powered, the best way to overcome the charge restriction is to use a nuclear battery (Radioisotope thermoelectric power manufacturer (RTP)).



**MARTIAN EARLY GROWN GREENHOUSES**  
 Environmentalists have found nitrogen, potassium, phosphorus and iron in Martian soil, in other words Martian soil is suitable for producing 14 vegetables and grains, but it needs to be enriched with fertilizer, light and nitrogen. Plants that live on Martian soil for more than 50 days: Tomato, Rye, Cress

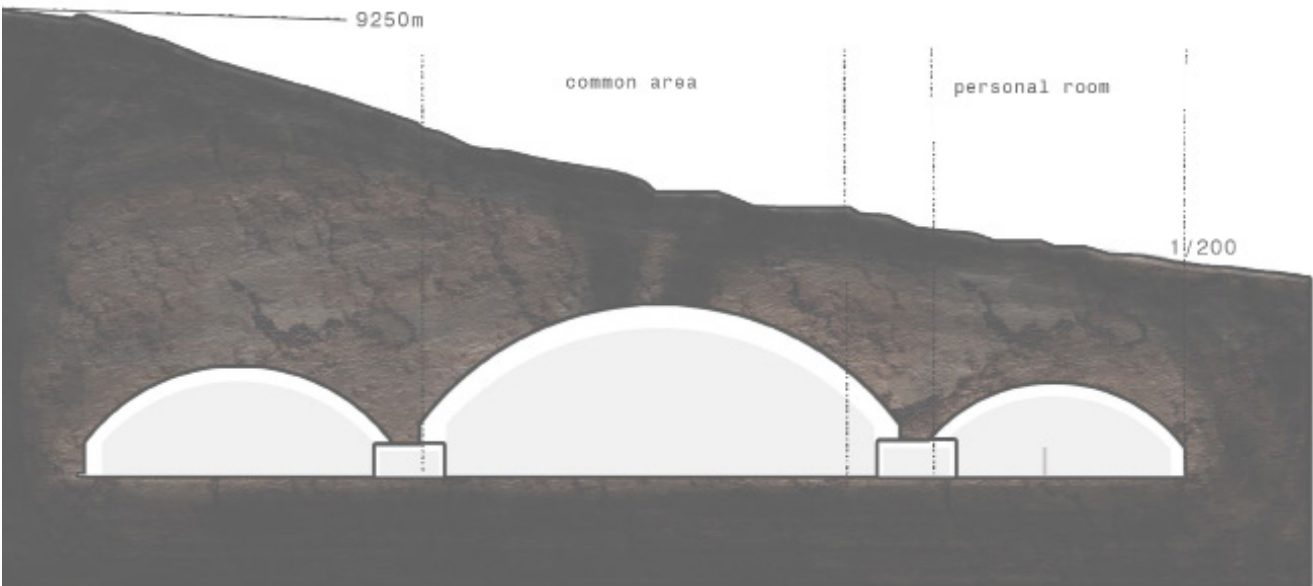


**TO SURVIVE**  
 The more resources we find on Mars, the less supplies we need. Because transporting fuel and cargo to Mars is a time-consuming and costly business. What is needed? Water, methane, hydrogen, oxygen and carbon dioxide to heat Mars with global warming. Also nitrogen for breathable atmosphere. Then the soil with humus.



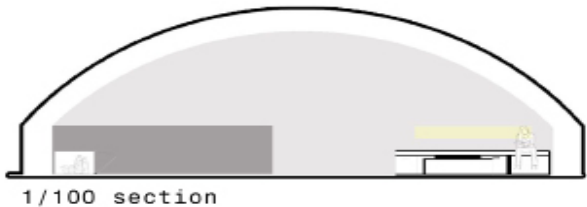
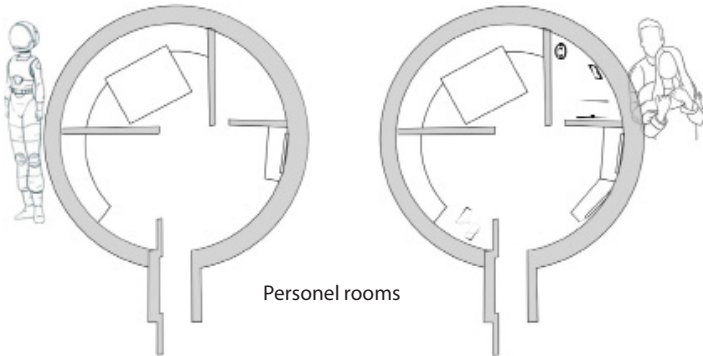
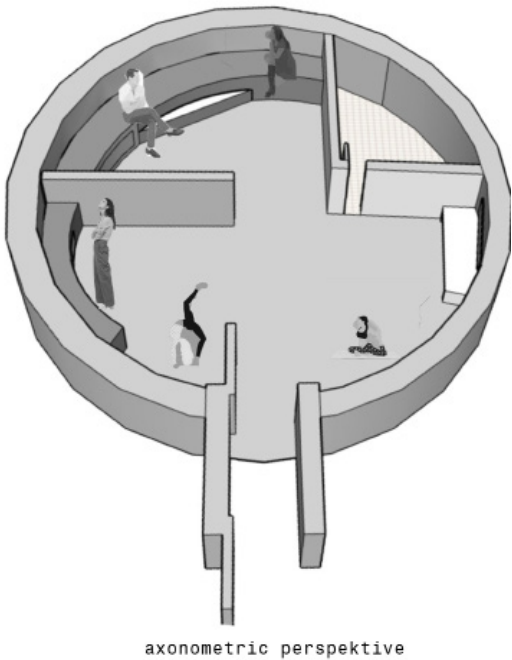
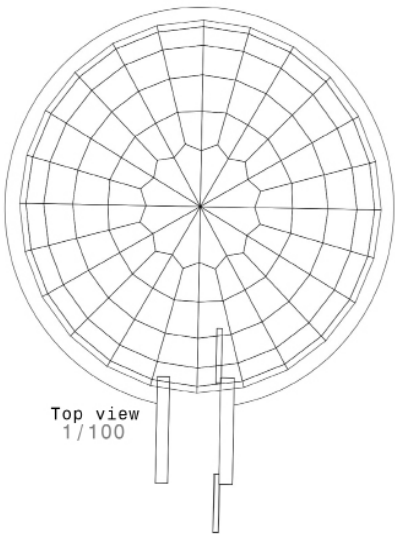
# Colonizing of Mars

Fatma Pinar Altun

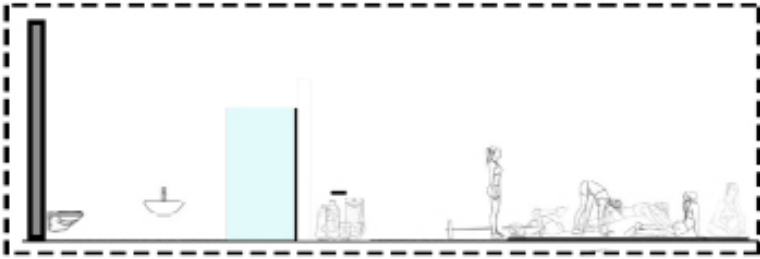


The rooms are designed according to the use of 6 astronauts who are sent first, and then the use of pairs who will be sent if the Project is successful.

Astronauts who are already far from home have to deal with the physical conditions of Mars at the same time. Living in a cave has physical and psychological effects. For these reasons, especially personal areas are designed with great care to relax and keep their psychology stable.

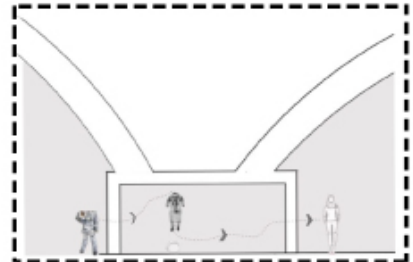






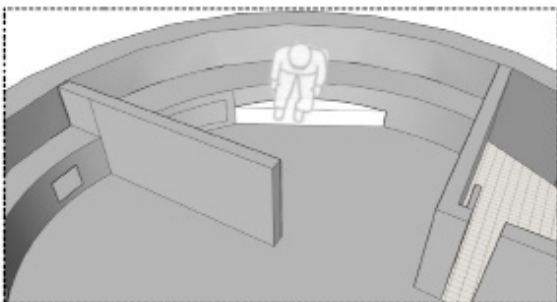
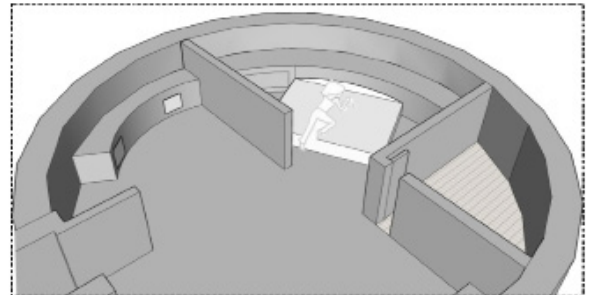
When designing wet volumes, sustainability and reusability are considered. It was intended to save water by using air-spraying fixtures along with water in the shower and sink. In the toilet, compressed air is used instead of a siphon system.

Astronauts can remove their headgear after entering the common area through the door, but they must clean and remove the astronaut suit before entering their room. For this reason, cleaning sections were placed on the doors and cleaning and dressing sections were placed on the doors of their rooms. In this way, especially the Martin sand that sticks to them does not enter the rooms.

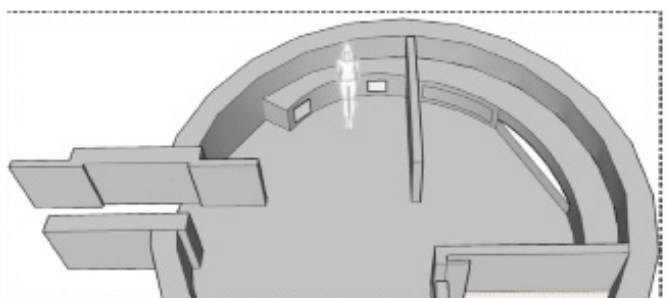


Because the settlement is inside the cave, room lighting is of great importance for the regulation of psychology and biological clock. Room lighting changes according to 24.5 hours.

Space saving is achieved with the bed that can be



And a new sitting group has been created in the bedroom

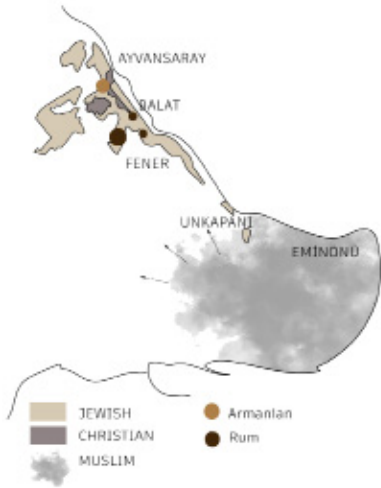
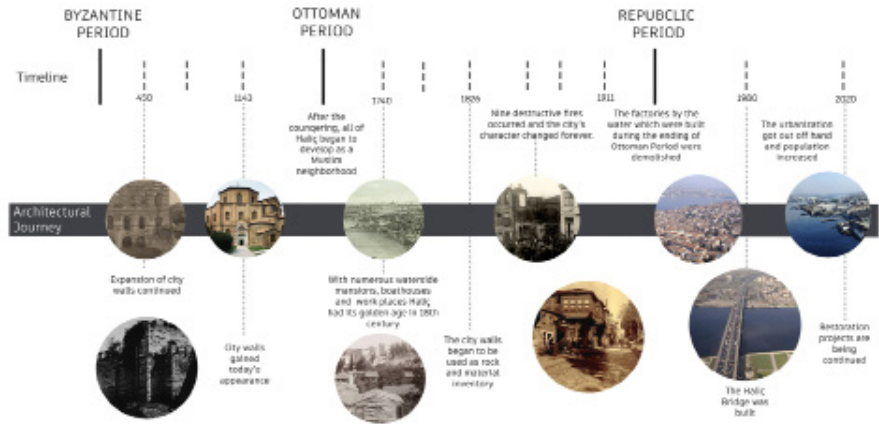


Small kitchen area where personal materials can be stored.



# MODULE 2 - HALIC

Bİlge Nur Tunçay  
 Yusuf Önder  
 İrem Kaba  
 Öykü Kayalıoğlu

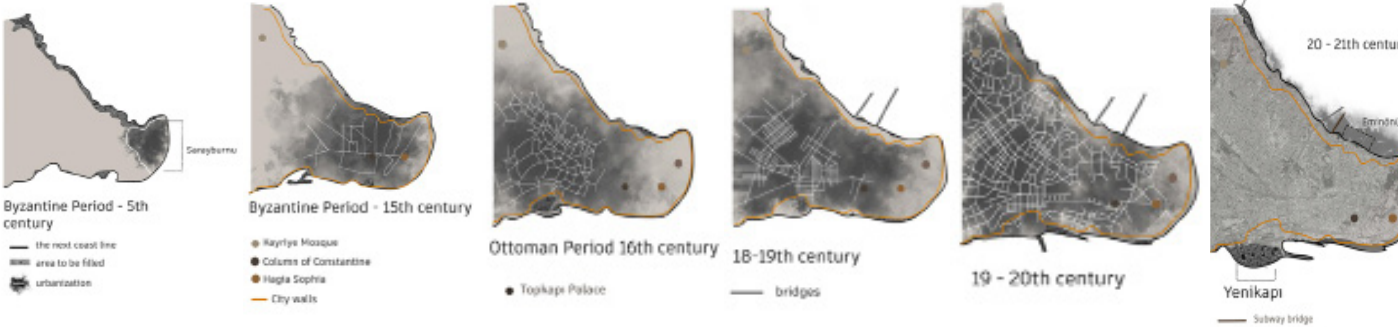


## ETHNICITY ANALYSIS

The ethnic background of the peninsula has been evolving since the conquest of İstanbul. Before 1453, the city was populated with non-muslim residents but after the conquest the dynamic of the population began to be more complex.

Up until the architecture of the walled city began to resemble a Muslim neighborhood with mosques and shrines, Rum, Armenian and Jewish people were the majority as a community. But after the building of numerous mosques, the non-muslim calass were forced to move to the northern part of the peninsula.

As shown in the graphics, the settlement process in the peninsula began at the seaside Sarayburnu and made its way up to the northern part. Due to people moving as communities, despite of being a Jewish neighborhood for centuries, after the architecture began to evolve Eminönü suddenly became a Muslim neighborhood and kept spreading through.

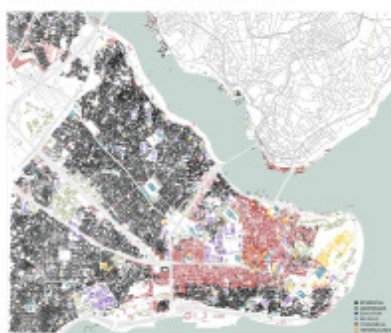




VOID ANALYSIS



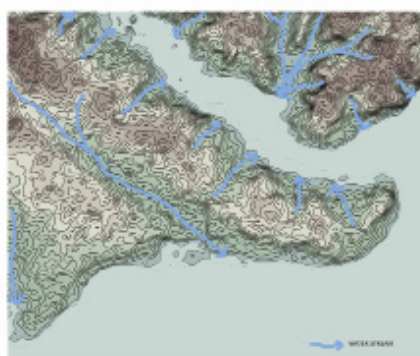
AREA UTILIZATION ANALYSIS



FUNCTIONAL ANALYSIS BY ZONES



WATER STREAM & TOPOGRAPHY RELATION



ASPECT ANALYSIS



CITY ELEMENTS ANALYSIS



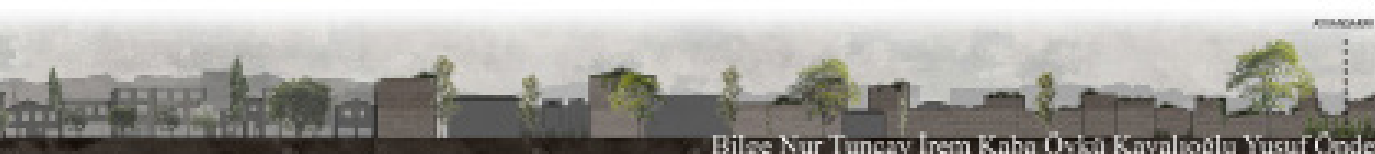
GREEN ZONE ANALYSIS



ROAD ANALYSIS

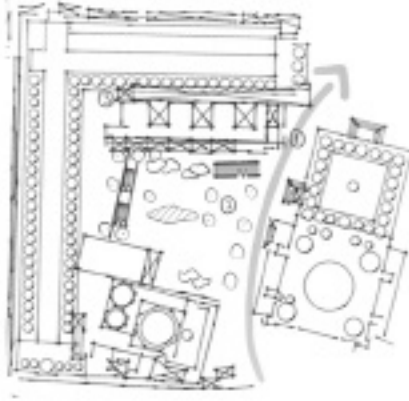
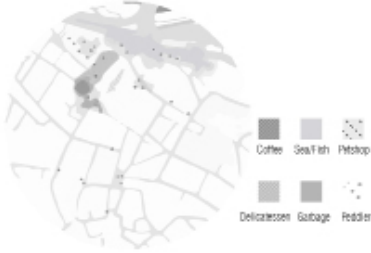


TRANSPORTATION ANALYSIS





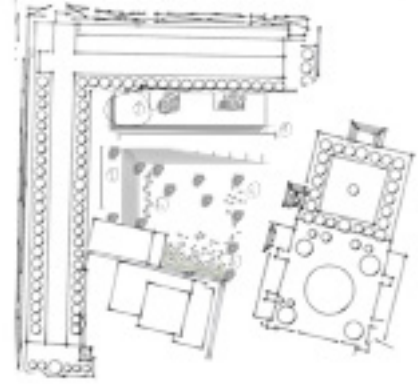
## Design Strategies



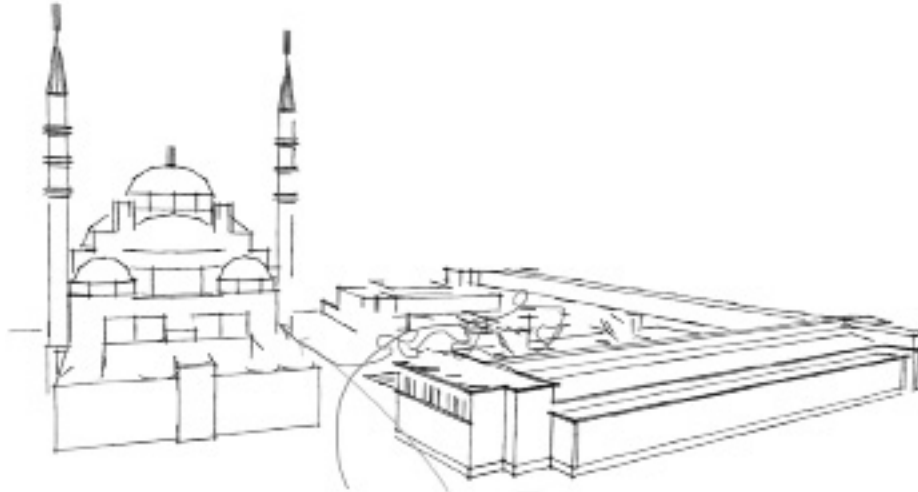
- 1.narrow and dense pedestrian path
- 2.field- restricting urban furniture
- 3.sale of animals in poor conditions, resulting malodour spread

Gray line shows pedestrians' flow axis and peddlers' evening route. Targeted pedestrians' flow axis and peddlers' evening route showed with black line.

- 1.Widened and accessible pedestrian path
- 2.Space for workshops and activiites
- 3.Seed institue intertwined with the flower market
- 4.Planted seating area. The seating units were inspired by the historical texture of the area and designed as stones symbolizing the building blocks of the area.
- 5.It was aimed to create an open space and close communication of the institute with pedestrians. Stone blocks will rise from thr ground like a barrier system according to the usage needs.
- 6.Depending on the pedestrian density of the area, these sitting units will not be pemanent. It will allow the scene to be watched by rising from the ground depending to the need.

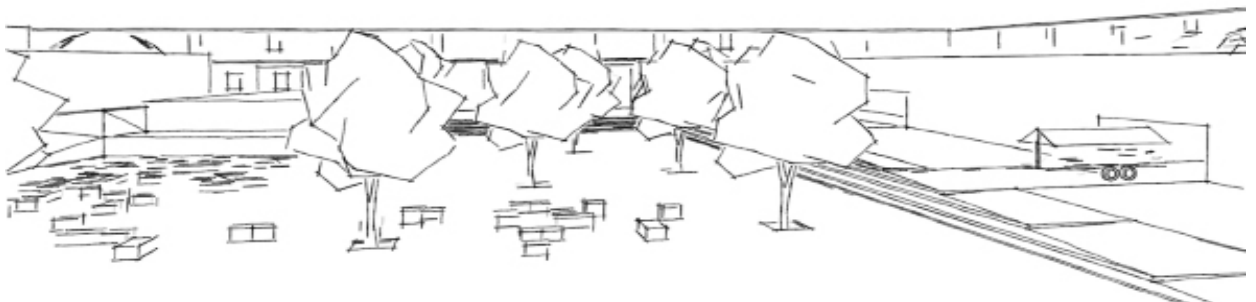


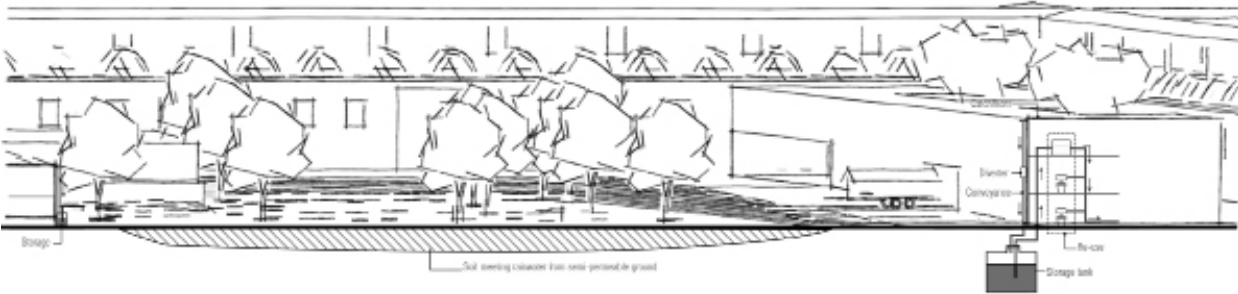
The new mosque square is a historical square that also houses the spice bazaar and the seed market. The walls, which are the important elements of the Golden Horn, also shown themselves here. It is rumored that near the Bahçekapı, which is thought to be behind the New Mosque, there was a tower in the Byzantine Period, and that one end of the chain stretched to the mouth of the Golden Horn was connected to the tower and the other to the Galata Tower.



Ingrained

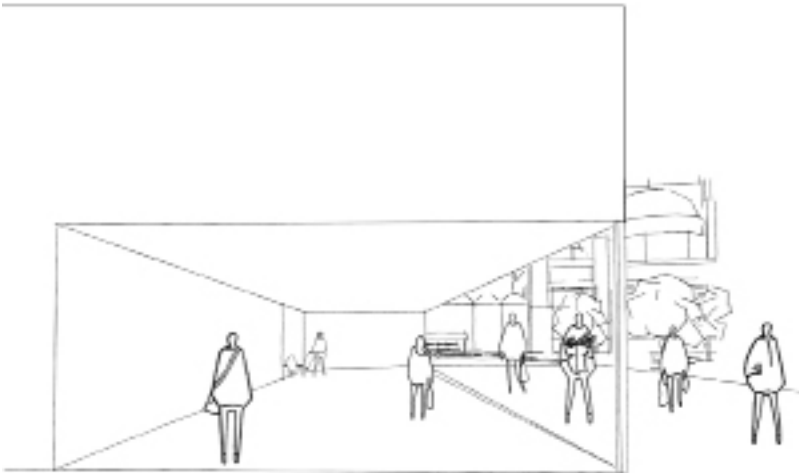
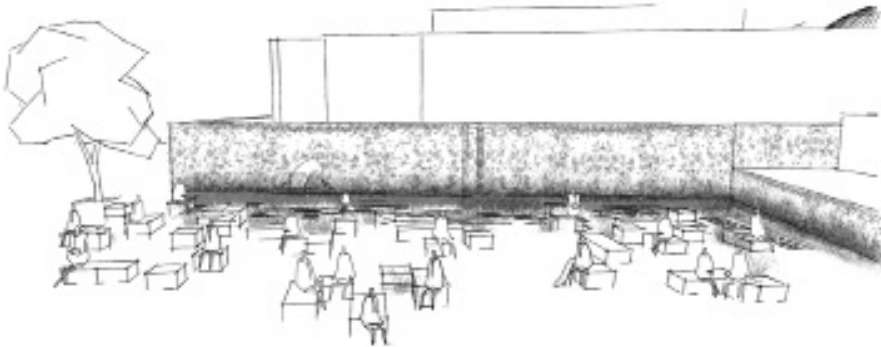
Bilge Nur Tunçay





With rain harvesting, water from the roofs was collected in tanks and reused. In addition, the plants in the area with little water need benefited from these waters. Thus, waste was reduced by recycling the water. The impact of stormwater runoff in the area is reduced.

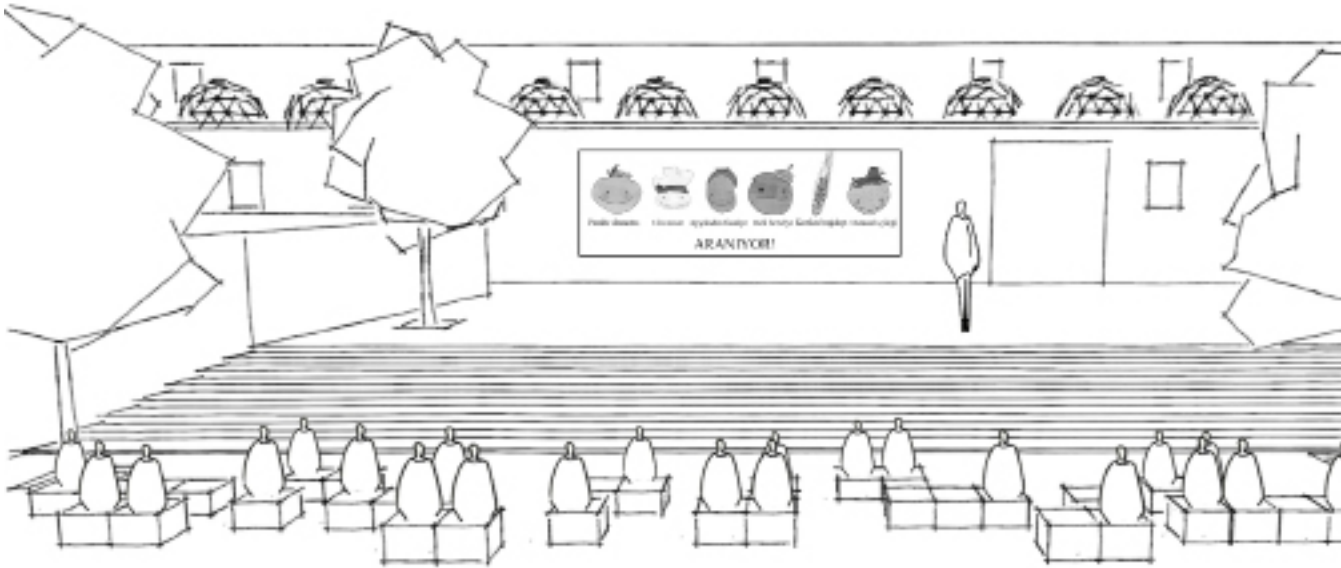
The corner created in ivy and evergreen bushes provides a green seating area and a smooth transition between the wall and the square. The slow flow of the very shallow puddles designed together with the sitting unit and with the effect of the plants aimed to design a corner where the noise of the square is reduced to the people sitting in the cafe.



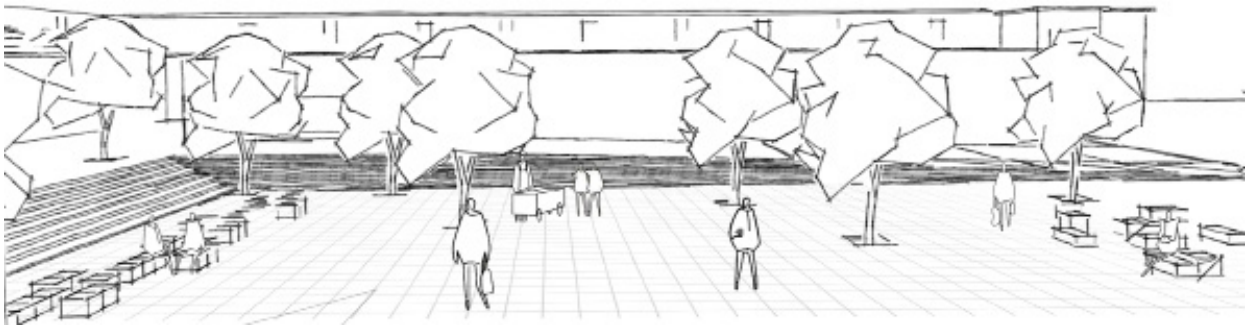
With this area opened in the building, it was aimed to establish close communication with pedestrians passing through the corridor and ramp.

It was designed as a stage by making use of the existing height of this area, which can be climbed from the ramp or directly from the stairs. The seating units built here will be produced like a barrier system, rising and falling according to pedestrian density and activity.

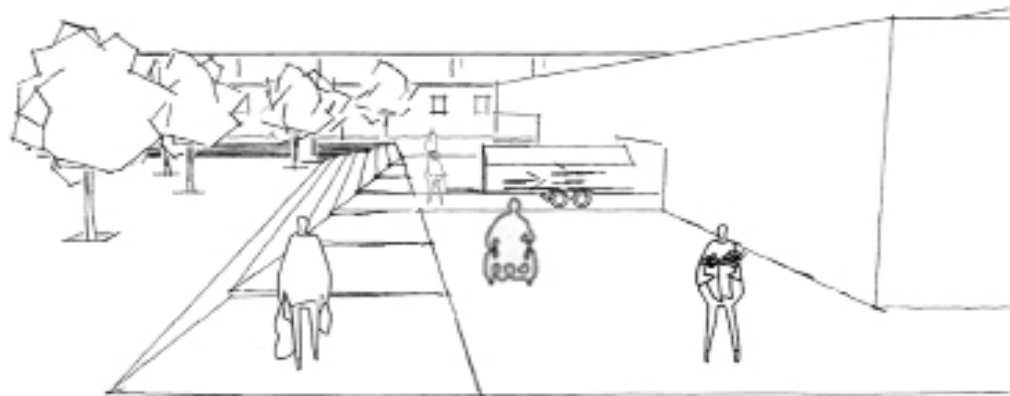




Workshops, talks and exchanges will take place in this area designed for the event needs of the institue. The Wall of the Spice Bazaar facing the square can be used with methods such as projection. In line with these purposes, the seating area is designed mostly for the audience.



The soft transition of the green area and semi-permeable surface were aimed with the grass emerging from the stones.

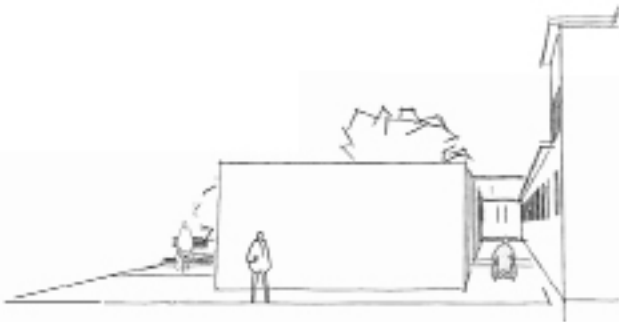
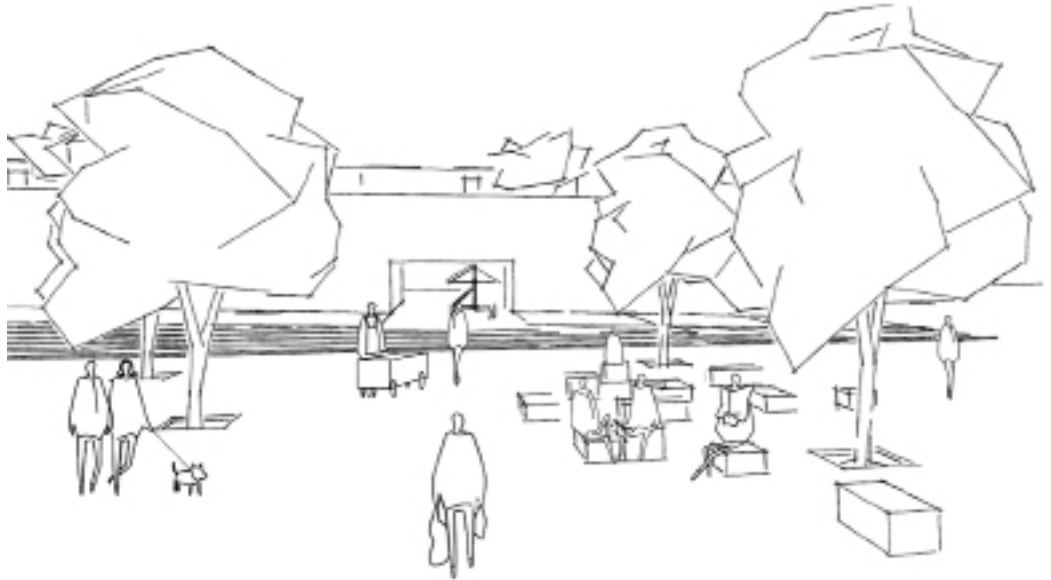


By widening the walking area, stairs and ramps were combined to create a more accessible pedestrian path. By opening corridors on both sides of the flower market, transportation was facilitated and human density was reduced.

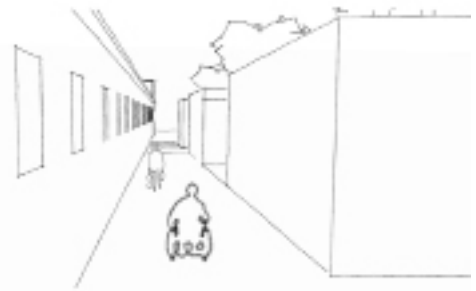




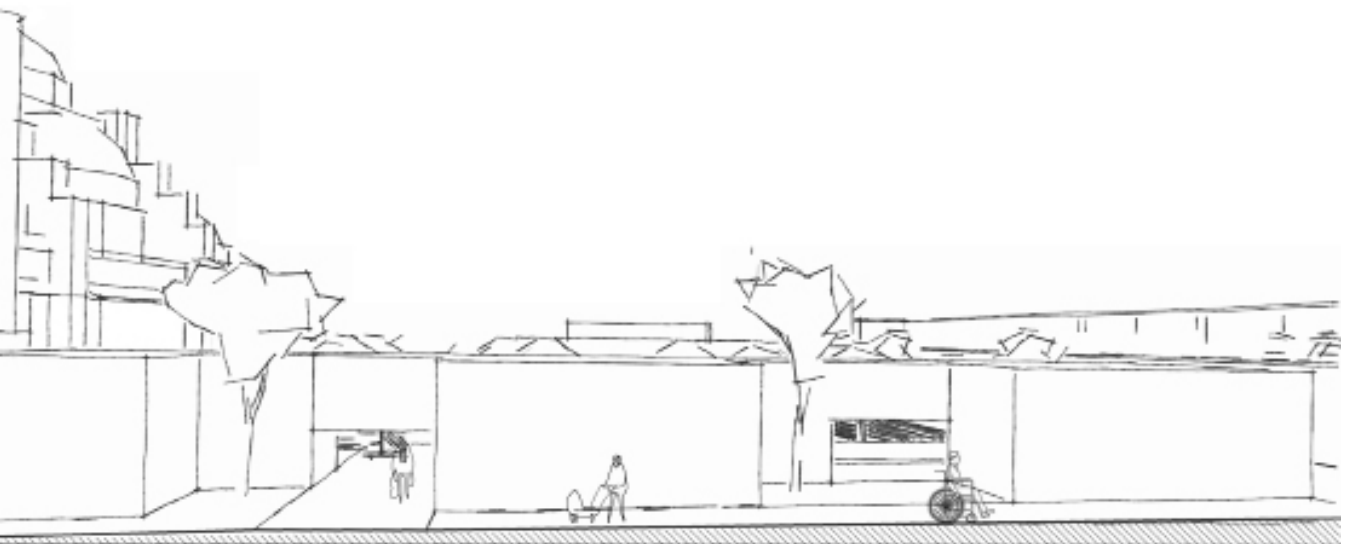
Due to the open space requirement of the square, non-permanent seating units were designed. These seating units will act as barrier systems, will be adjusted to the desired height and will exhibit the building blocks of the square, which is inspired to be designed. It can be used for the institute to establish close contact with pedestrians, as well as a sitting unit under the shade of trees. It will also prevent parking in the square at night.

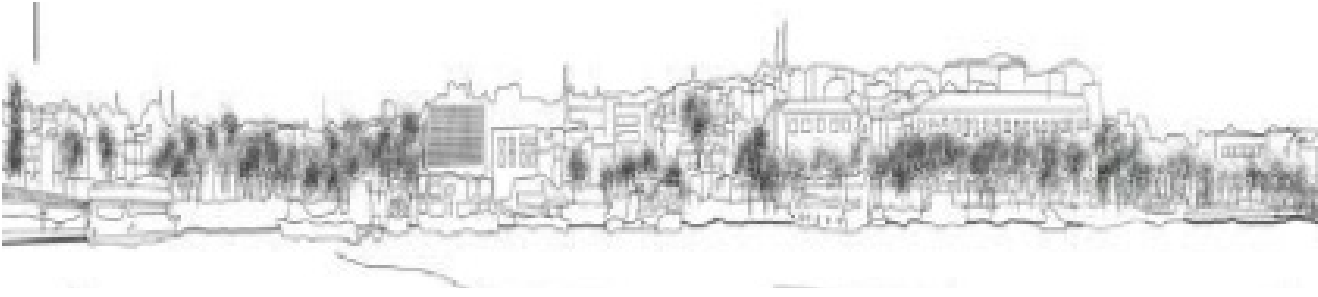


A more accessible pedestrian path was created with 2% sloped ramps on both sides of the flower market.



Pedestrian flow is relieved with two corridors passing through the flower market.





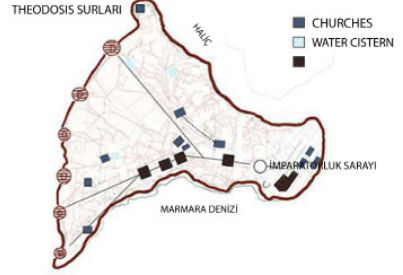
BIZANTION GREEK CITY



KONSTANTINO POLIS(CITY OF THE ROMAN)



KONSTANTINOPOLIS (BYZANTINE PERIOD)



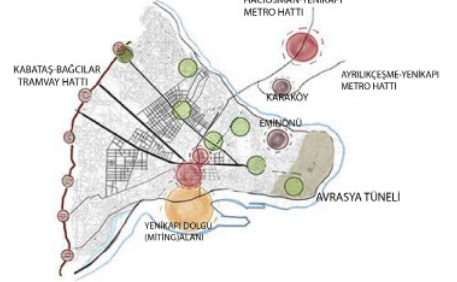
KONSTANTINIYE (OTTOMAN CITY)



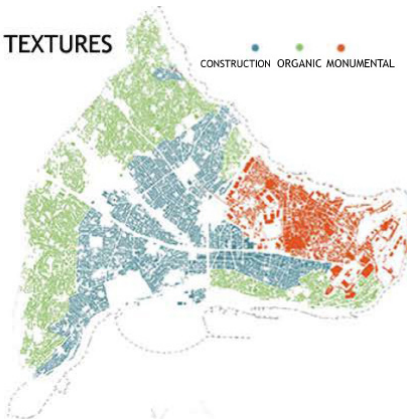
MODERN DONEM (REPUBLIC PERIOD)



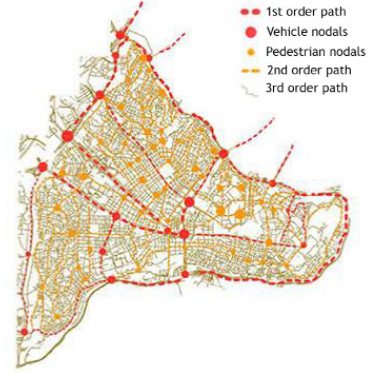
PRESENT DAY



TEXTURES



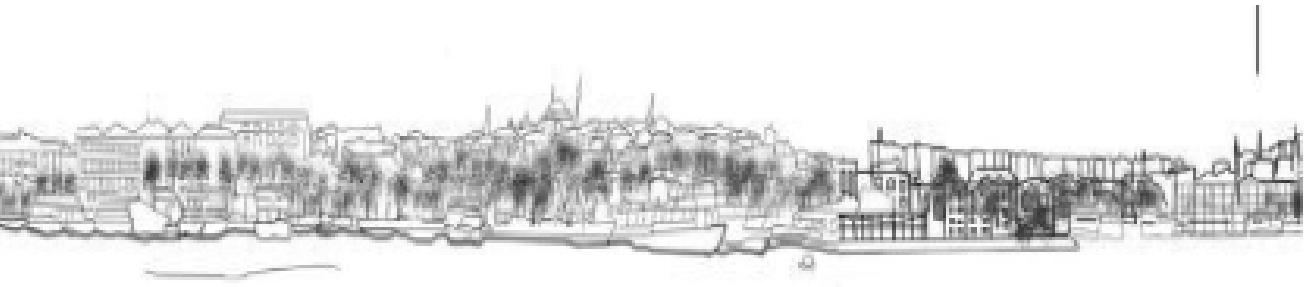
AXLES AND NODES



Haliç

Rebeka Kayakoparan  
Aybüke Yarbaskan  
Tuğçe İrem Özer





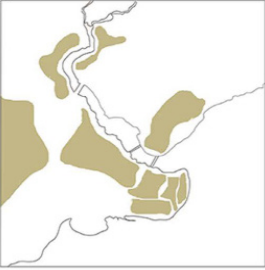
1/WORLD HERITAGE SITE



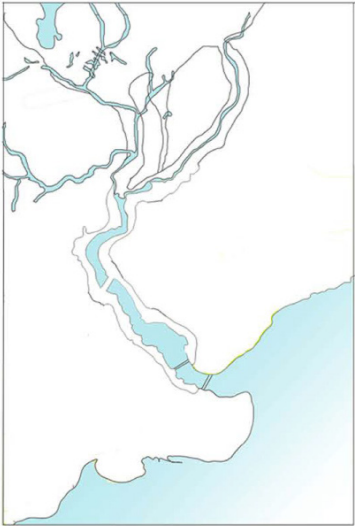
2/PROTECTED AREAS



3/TEXTURE OF HISTORICAL SETTLEMENT



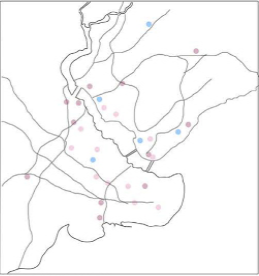
8/WATER RESOURCES



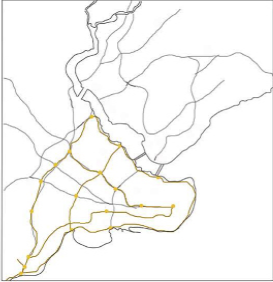
4/LOCATIONS OF HISTORICAL MOUMENTS



5/LOCATIONS OF LANDMARKS



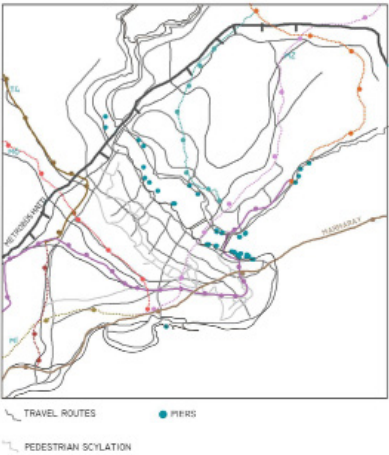
9/ MAIN VEHICALE & BIKE PATHS



DETERMINING THESE LOCATIONS IS IMPORTANT FOR DETERMINING THE DENSITY OF PEOPLE IN THE CITY, DETERMINING THE TRANSPORT AXES AND DETERMINING THE COLLECTION AREAS.

● TRANSPORTATION LANDMARKS ● URBAN LANDMARKS  
● HISTORICAL LANDMARKS

CO-SCREENING: PEDESTRIAN CYCLATION & TRAVEL ROUTES & PUBLIC TRANSPORTATION



6/TEXTURE OF URBAN SETTLEMENT



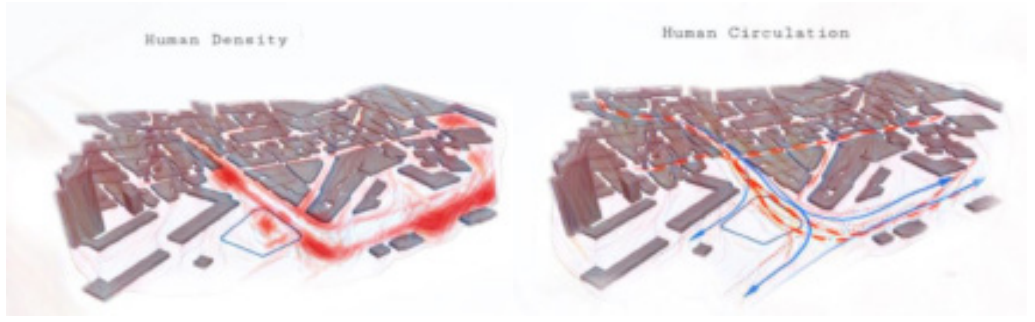
7/GREEN AREAS FOR SUITABLE PROJECT



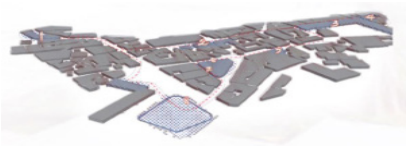
AREAS USED AS EMPTY LAND IN THE HISTORICAL PROCESS TURN INTO NEW RESIDENTIAL AREAS WITH URBANIZATION







It has been a place where circus people can find almost all the needs of their homes for a long time. The time spent there and the conversations are the warmth and sincerity people seek today. There are many different points made, but these seven places are the most frequently visited.



## Haliç

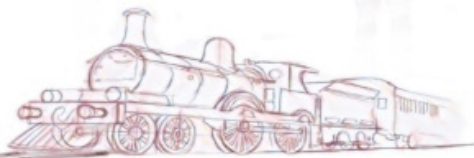
### Rebeka Kayakoparan

The main purpose for people to use the park to wait and spend time rest and breathe gather or meet.

The stations have important places in cinema and literature as well as symbols of the periods when they were built. But most importantly, it is the place that we use as the gateway of cities, as points of reunion and separation in our memories. Sirkeci station is also the first and last place seen in İstanbul in this respect. In addition, this station is the country's gateway to Europe, so it is one of the indispensable places.

For this reason, people have numerous memories in this station, and there are also many works that have been the subject of this station in history. In this station, many topics such as love, separation, reunion, adventure have been discussed and have taken place in people's lives. Agatha Marthin, one of the World famous writers, wrote most of his books in this train journey and his characters were inspired by train passengers.





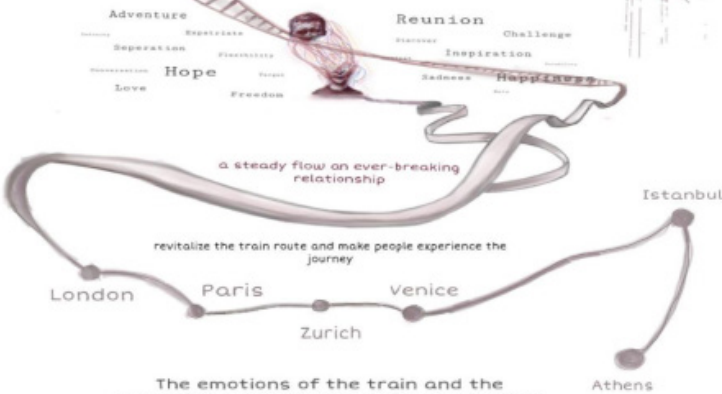
Agatha Christie came to Istanbul with the Orient Express in 1915. During her journey, she met and was impressed by a Dutch engineer. The Dutch engineer told that he knew Istanbul very well and that he should not trust anyone to be careful here. The writer was very impressed by the fact that he was very interested in him and accepted his travel offer to go to Istanbul. After having a great time together, he dropped him off at his hotel and left, saying 'WATER, WATER, NOW, it would be better if I didn't tell you when the writer returns, he came to see him off with yellow roses in his hand. The author described these beautiful feelings he experienced in his mind, which tells about his travels, saying that mother and son meet.



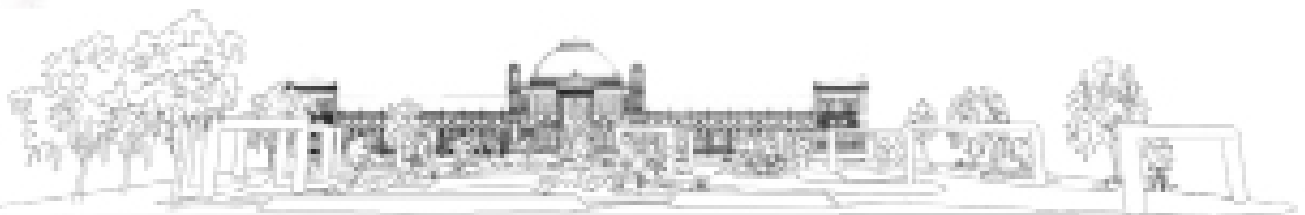
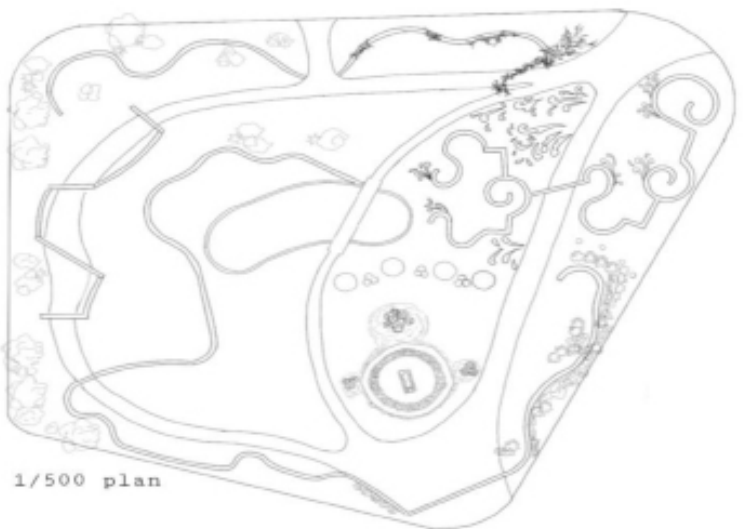
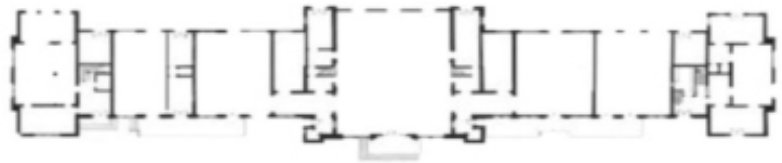
Vassil Zaharyas is a Greek citizen and Sir Basil Zaharoff, who made a huge fortune in Monte Carlo in 1915 through the international arms trade, preferred and used the Orient Express's 7-numbered compartment, up to the age of 75, she had met Maria Khar Angel Petrosia Simons and Giorgio Benelli, whom she met and fell in love with, 80 years ago at the Orient Express at the Istanbul Station. Vassil has lost the love he had been waiting for years and finally achieved.

This station gives people many emotions at the same time, even happiness and sadness.

They go to find a new life, adventures, loves, and go on with their lives no matter what.

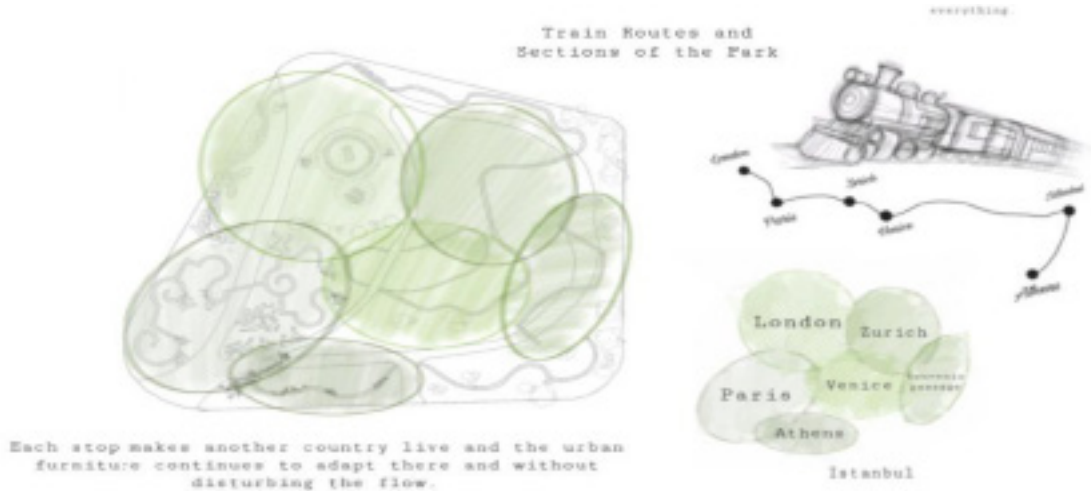


The emotions of the train and the memories accumulated during the journey are revived in the urban space.

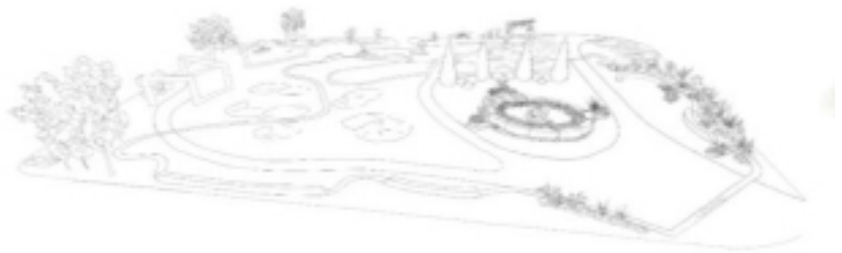




My urban furniture design, which is in a constant flow, changes and transforms according to the stop it finds, represents the flow of the train and also that human life continues despite everything.



Spatial memory animation in the park by starting from the routes made by the train.





Different Places to Explore  
in the Park



In order to keep Athens alive various sculptures were added to the garden bades on ancient green architecture.



Inspired by Roman architecture, the bridge was designed compensate for canoe trips and spectacular water channels in Venice.



A memorial passage telling the memories and stories of the Sirkeci Station.



Urban furniture has been adapted to this design in order to reflect the french garden design.



The garden was designed based on the flashy designs of English gardens.



Small hillocks were design to reflect the peaceful nature of Switzerland thus creating a space for people to relax.

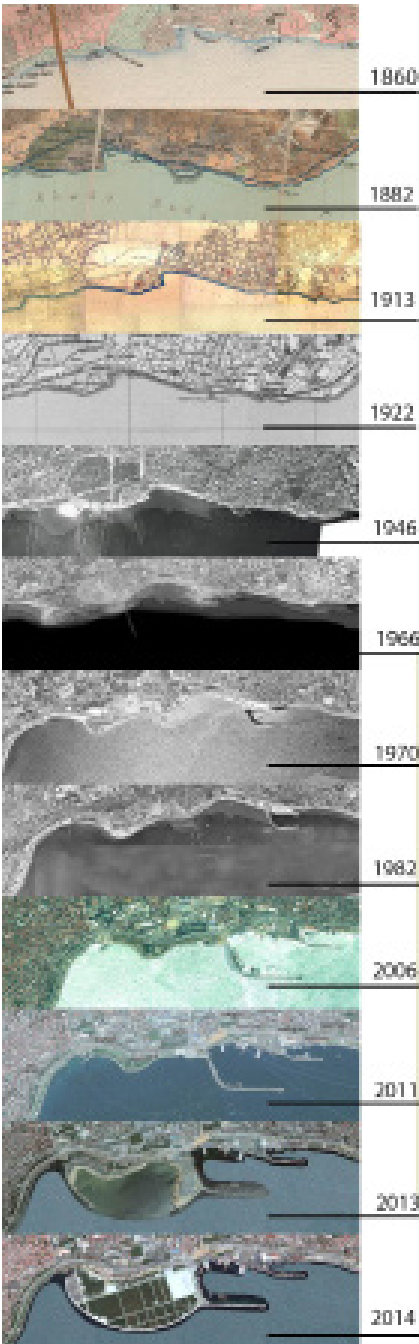


As we move through the park, we experience different places with the routes made by the train, and urban furniture allows us to catch the flow.

Maitaining Spatial Memory in the Park  
with Train Station Memories and Train  
Routes.

COMMON MODULE

Common Module 1: A Virtual approach  
to Urban Stories  
Ece Nur Doğan



YENİKAPI

Group 5



Archaeological finds which dugged out at the Marmaray excavations.

