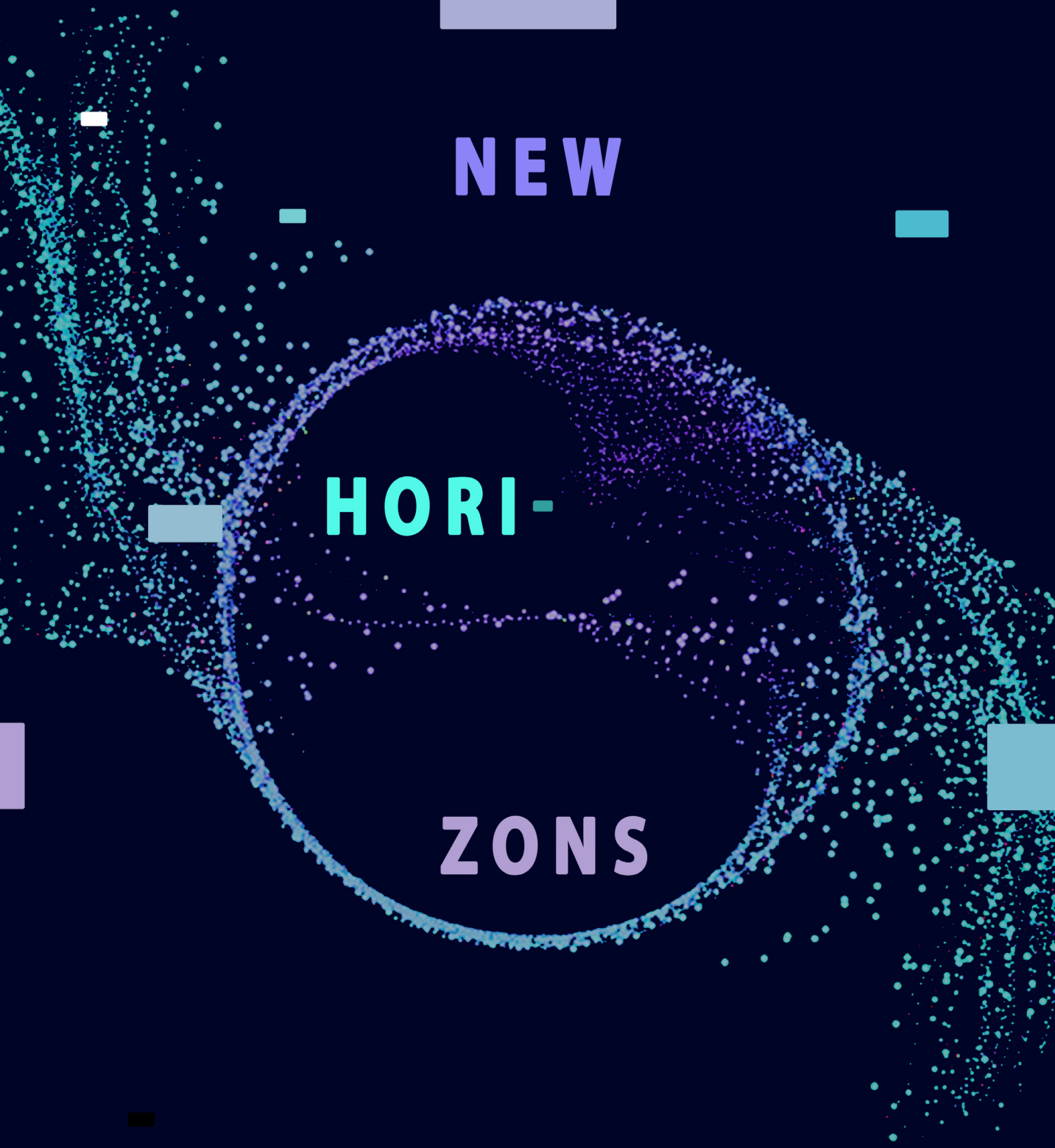

PEM 211E

TES STUDIO 3

PROJECT 3

Istanbul Technical University,
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PEM 211E
TES PROJECT III

design studio III

landscape

Dr. Meliz Akyol Alay
Res. Assist. Çisem Demirel

STUDIO . 04
MODULE 1 . 08
MODULE 2 . 30
COMMON MODULE . 42

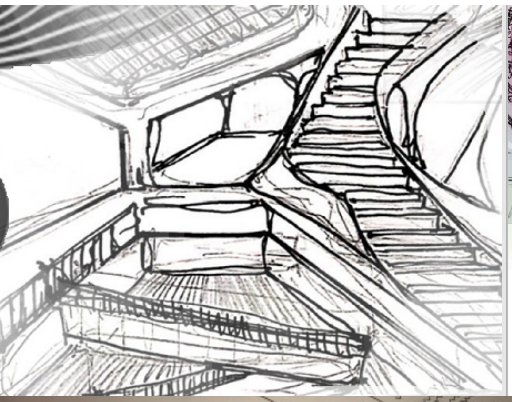
01 STUDIO

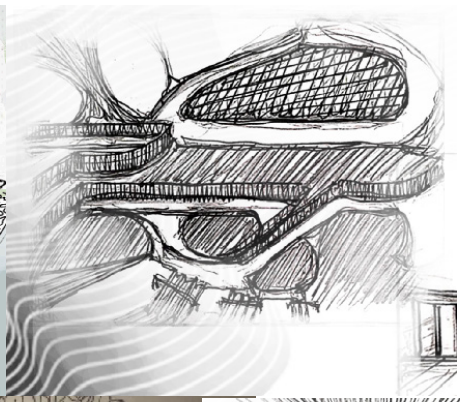
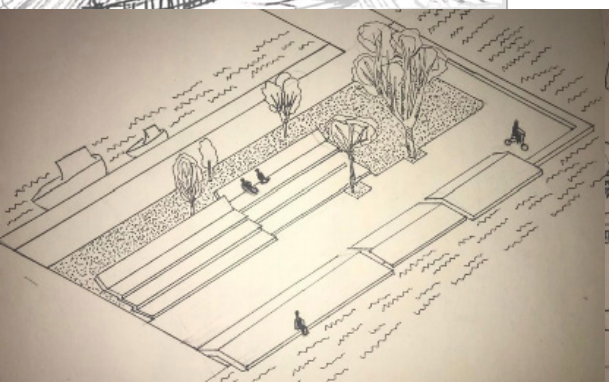
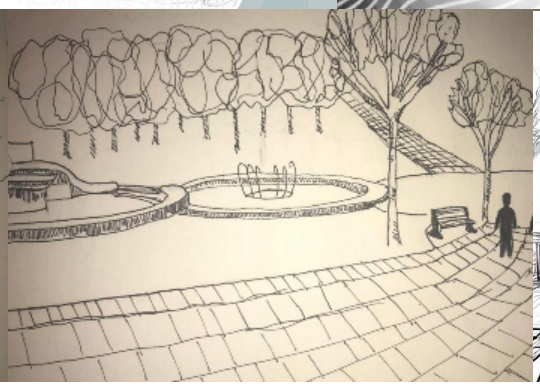
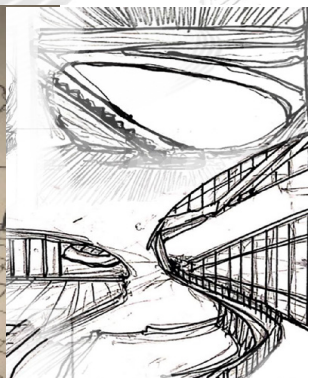
landscape fundamentals

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, ability to represent 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.

NEW HORIZONS

The perception of landscape architecture changes the shape of our living environments. Cities or rural lands, they are all reflections of cultural and ecological changes through land, vegetation, water, natural and constructed environment. This studio discusses the fundamental design approaches while focusing on the observer and the outer user profile. The studio will be conducted under two main modules "Realizing the Future on Mars" and "Future of Landscape in Historical Reality".



02 NEW HORIZONS

MODULE I

REALIZING THE FUTURE ON MARS

MODULE II

HALIÇ-FUTURE OF LANDSCAPE IN HISTORICAL REALITY

COMMON MODULE

CONTEMPORARY AGENDA

NEW HORI- ZONS

2019-2020 FALL

DR. MELIZ AKYOL ALAY

RES. ASSIST. ÇISEM DEMİREL

MONDAY - THURSDAY 13:30-17:30
PEM TES211E PROJECT III

MODULE 1

REALIZING THE FUTURE ON MARS

MODULE 2 HALIÇ

FUTURE OF LANDSCAPE IN HISTORICAL REALITY

THE PERCEPTION OF LANDSCAPE ARCHITECTURE CHANGES THE SHAPE OF OUR LIVING ENVIRONMENTS. CITIES OR RURAL LANDS, THEY ARE ALL REFLECTIONS OF CULTURAL AND ECOLOGICAL CHANGES THROUGH LAND, VEGETATION, WATER, NATURAL AND CONSTRUCTED ENVIRONMENT. THIS STUDIO DISCUSSES THE FUNDAMENTAL DESIGN APPROACHES WHILE FOCUSING ON THE OBSERVER AND THE OUTER USER PROFILE.
THE STUDIO WILL BE CONDUCTED UNDER TWO MAIN MODULES "REALIZING THE FUTURE ON MARS" AND "FUTURE OF LANDSCAPE IN HISTORICAL REALITY".

MODULE I

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.

Week	Date	Studio Work	
MODULE 1 – MARS *Realizing the Future on Mars*			
1	19 Oct.	Introduction to the Studio / Program and Context	Introduction and Discussions
	22 Oct.	**Mars Project.** Personal experiences / Site Dynamics / Recording textures / Sketches - Discussion on online lecture and communal production	Studio Work
2	26 Oct.	Reading the topographical landscape of MARS Exploring the landscape models and model materials	Studio Work
	29 Oct.	Understanding & Representing the Landscape Idea	Studio Work
3	2 Nov.	Development of Conceptual Framework / Sketches / Collages / Free scale mapping / Hybrid drafting techniques	Studio Work
	5 Nov.	Landscape Analysis 1/500 Analyzes and assessment examples with Sketch / Section and Plans	Submissions
4	9 Nov.	Landscape design plans 1/100 Sections, perspectives and 3d representations	Studio Work
	12 Nov.	**Landscape analysis of MARS (A-1 poster format)/ Photo collage**	Pin-up
	26 Nov.	Landscape design plans 1/100 Sections, perspectives and 3d representations	Studio works
7	30 Nov.	Landscape design plans 1/100- 1/50 Sections, perspectives and 3d representations	
	3 Dec.	Landscape design plans 1/100- 1/50 Sections, perspectives and 3d representations	Studio works
8	7 Dec.	Landscape design plans 1/50 Sections, perspectives and 3d representations	Studio works
	10 Dec.	JURY	Jury, Panel and submission

FELICIS

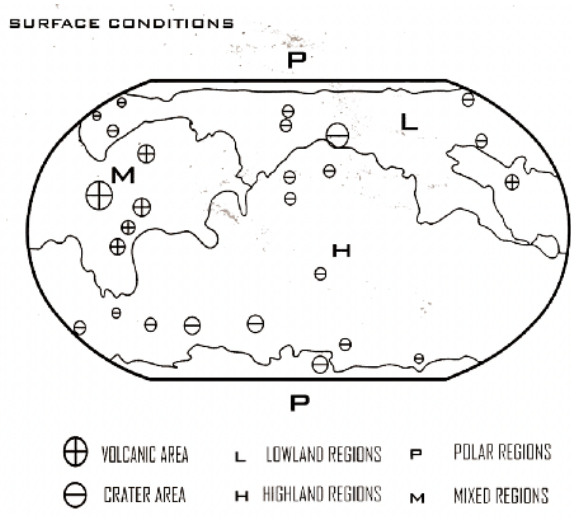
IREM KARABULUTLU

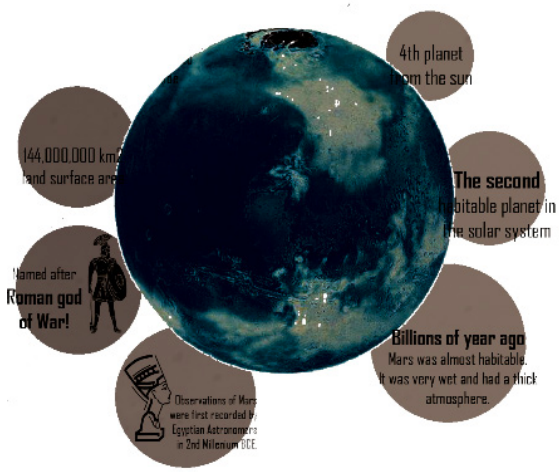
Jezero crater the landing site of the mars, as it may have looked billions of years go on mars, when it was a lake. An inlet and outlet are also visible on either side of the lake.

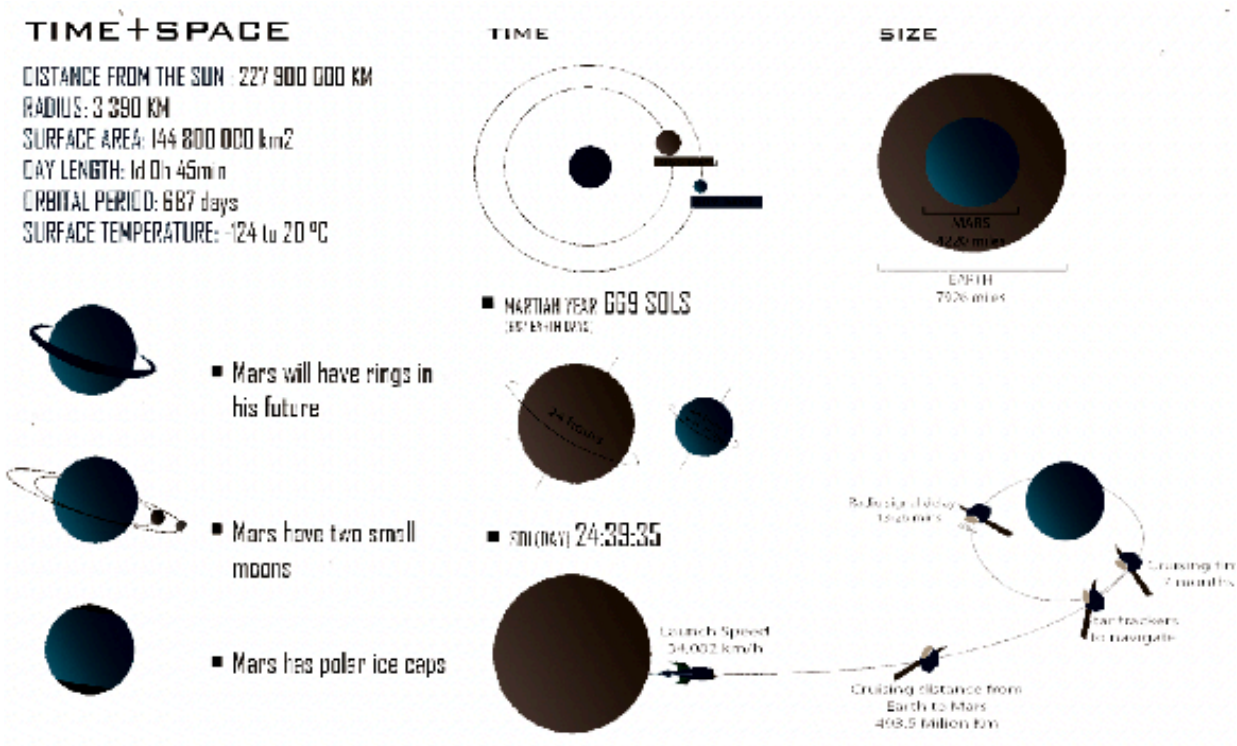
A key objective for mission on mars is astrobiology, including the search for signs of ancient microbial life. The rovers will characterize the planet's geology and past climate, pave the way for human exploration of the red planet, and be the first mission to collect and cache martian rock and regolith (broken rock and dust)

After the team that went to investigate, when the necessary conditions are met, new teams will continue to be sent for mars colonization.

First term: 6 years
Mission deadline: until death







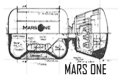
FEBRUARY 30, 2021

OCTOBER 10 , 2018 : FELICIS BEGINS SEEKING VOLUNTEERS FOR THE TRIP MORE THAN 900.000 PEOPLE FROM MORE THAN 140 COUNTRIES APPLY. BY THE END OF THE YEAR, THE GROUP OF SIX PEOPLE WAS SELECTED AND LINKED TO TRAINING. THEY WERE TRAINED TO USE AND REPAIR EQUIPMENT, MEDICAL KNOWLEDGE AND DENTAL SKILLS, AND SPACE AGRICULTURE.

FELICIS PLANNED TO SEND EQUIPMENT TO MARS TO TEST WHETHER MANY OF THE SYSTEMS NECESSARY FOR HUMANS WOULD ACTUALLY WORK THERE. A COMMUNICATIONS SATELLITE LAUNCHED INTO ORBIT AROUND MARS TO ESTABLISH A RELAY LINK BETWEEN EARTH AND THE MARTIAN SURFACE.

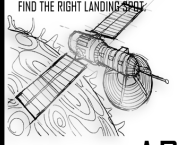
POSITIONS
COMMAND PILOT
PILOT
BIOLOGIST - PLANT SCIENTIST
DOCTOR
AIRCRAFT-SPACE ENGINEER
MECHANICAL ENGINEER

A ROVER AND TRAILER WENT FIRST, LIKE A ROBOTIC SCOUT TEAM, TO FIND AND PREPARE A PLACE FOR THE SETTLEMENT. THE IDEAL SPOT IS FLAT AND SUNNY, WITH SOIL THAT CONTAINS A LOT OF WATER. A SECOND COMMUNICATIONS SATELLITE LAUNCHED INTO ORBIT AROUND THE SUN SO THAT SIGNALS CAN TRAVEL BETWEEN MARS AND EARTH EVEN WHEN THE SUN IS BETWEEN THEM.



MARS ONE

A FULL-SCALE CARGO MISSION LIFTED OFF, WITH ANOTHER ROVER, TWO "LIVING UNITS." TWO LIFE-SUPPORT SYSTEMS AND A SUPPLY UNIT. THEY USED THE FIRST ROVER'S SIGNAL AS A BEACON TO FIND THE RIGHT LANDING SPOT.

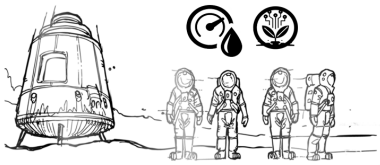


MARS ONE, FEED SOIL INTO THE SYSTEM THAT WILL EXTRACT AND STORE WATER. ANOTHER SYSTEM MIXED NITROGEN AND ARGON FROM THE MARTIAN ATMOSPHERE WITH OXYGEN FROM THE WATER TO MAKE BREATHABLE AIR.

PEOPLE DIDNT START THEIR JOURNEY UNTIL THE LIVING QUARTERS CONTAIN 3.000 LITERS OF WATER AND 120 KG OF OXYGEN AND HAVE A LIVABLE BAROMETRIC PRESSURE. MARTIAN AIR DOESN'T CONTAIN ENOUGH OXYGEN FOR HUMANS, AND THE AIR PRESSURE IS TOO THIN.

APRIL 20 , 2024

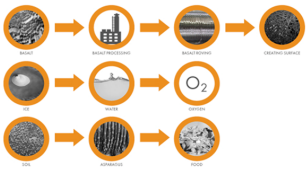
AFTER A 7-MONTH JOURNEY, THE FIRST TEAM ARRIVES TO MARS. SOLAR PANELS ARE PLACED AND ENERGY BEGINS. THE CORRIDORS BETWEEN THE LANDING TEAMS AND BEGINS AGRICULTURAL WORKS ASAP

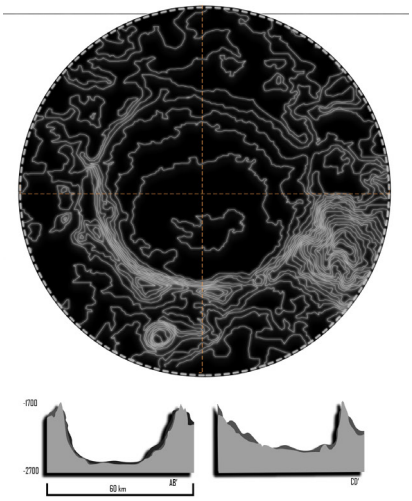


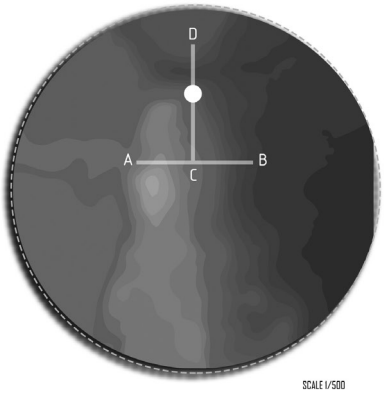
THE MARTIANS WILL HAVE TO BE THEIR OWN REPAIRMAN, DOCTORS, DENTISTS AND FARMERS. THEY'LL NEED SPACESUITS TO WALK OUTSIDE.

SPECIAL PROTECTIVE SUITES
- PRESSURE
- TEMPERATURE
- BREATHING
- RADIATION
- DUST SENSITIVITY

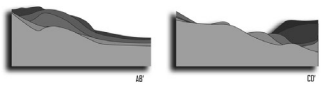
AFTER THE FIRST TEAM REACHES THE LEVEL TO MEET THEIR LIFE NEEDS, THE SECOND TEAM WILL START SETTLEMENT WORKS.
WHEN SUCCESSFUL FOOD PRODUCTION FROM MARS SOIL AND EXTRACT ENOUGH WATER FROM THE CRATER, THE SECOND TEAM WILL BE SENT TO MARS AFTER A 6-YEAR PROCESS.

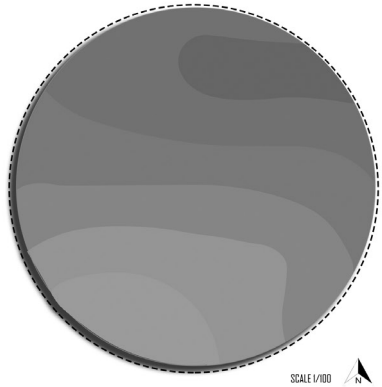






SCALE 1/500





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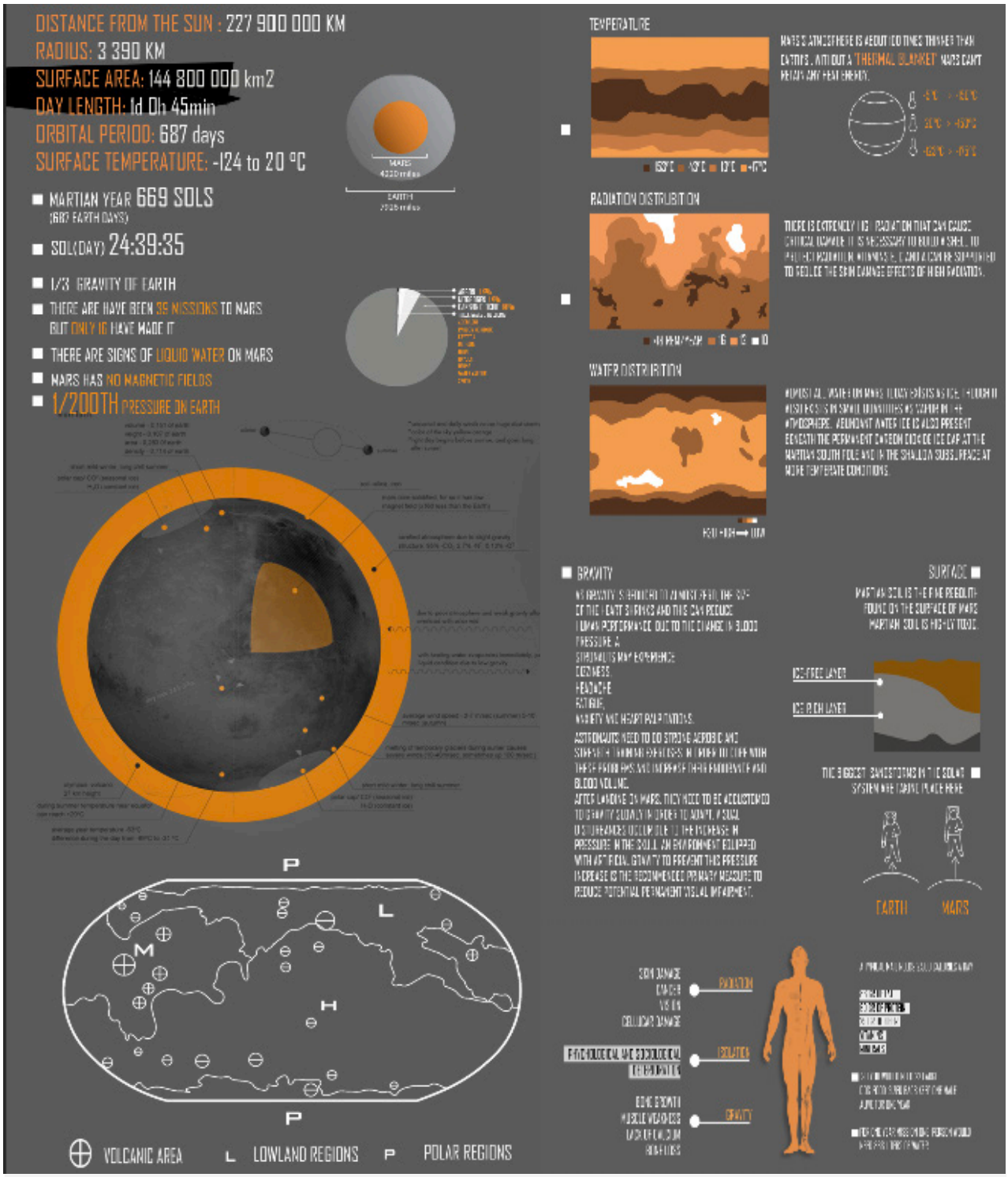
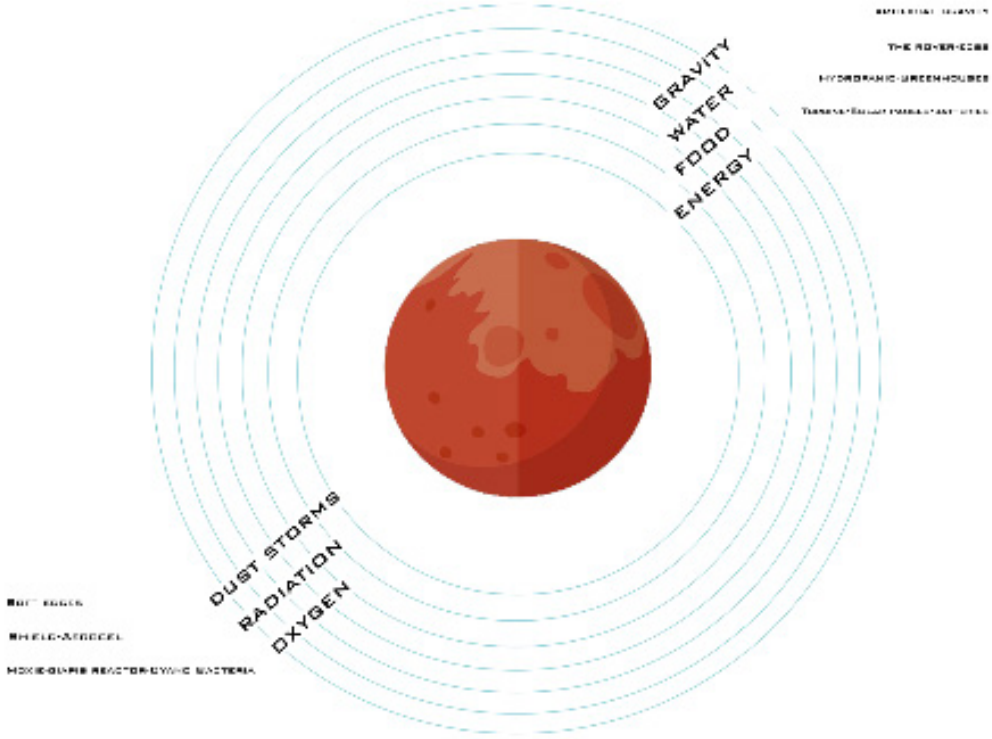


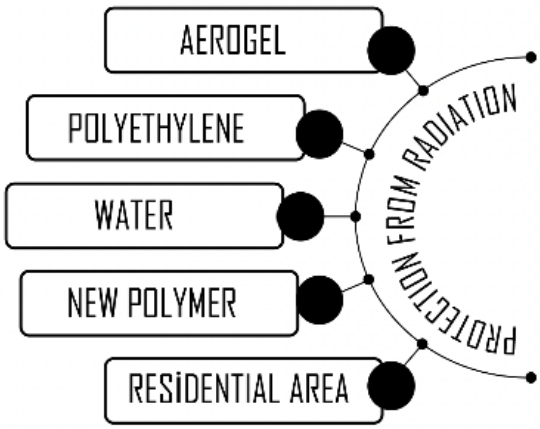
AS GRAVITY IS REDUCED TO ALMOST ZERO, THE SIZE OF THE HEART SHRINKS AND THIS CAN REDUCE HUMAN PERFORMANCE. DUE TO THE CHANGE IN BLOOD PRESSURE, ASTRONAUTS MAY EXPERIENCE DIZZINESS, HEADACHE, FATIGUE, ANXIETY AND HEART PALPITATIONS

ASTRONAUTS NEED TO DO STRONG AEROBIC AND STRENGTH TRAINING EXERCISES IN ORDER TO COPE WITH THESE PROBLEMS AND INCREASE THEIR ENDURANCE AND BLOOD VOLUME.

AFTER LANDING ON MARS, THEY NEED TO BE ACCUSTOMED TO GRAVITY SLOWLY IN ORDER TO ADAPT. VISUAL DISTURBANCES OCCUR DUE TO THE INCREASE IN PRESSURE IN THE SKULL. AN ENVIRONMENT EQUIPPED WITH ARTIFICIAL GRAVITY TO PREVENT THIS PRESSURE INCREASE IS THE RECOMMENDED PRIMARY MEASURE TO REDUCE POTENTIAL PERMANENT VISUAL IMPAIRMENT.



RADIATION



FOOD

HYDROPONIC AGRICULTURE

is a method used for growing plants in a soilless environment. Hydroponic cultivation is easy, besides professional greenhouses, it is an agricultural method that you can do on your balcony and terrace, as well as it is a good method for growing healthy plants.

Some of the vegetables commonly grown with this system are: tomatoes, sweet peppers, cucumbers, zucchini, sultan peas, beans, spinach, lettuce, chard, hot pepper,basil and broccoli. Apart from these, you can grow medicinal and aromatic plants, flower and houseplants.

Using synthetic biology to create Martien-adapted crops

MICROBIAL CROPS: The future of life off (and on) Earth

The ideal microorganism candidates are yeast and algae. Both can readily withstand harsh conditions on Earth and are relatively easy to engineer. They are nutritious, reproduce rapidly, and take up far less space than traditional crops.

PSEUDOMONAS PUTIDA is a Gram negative,

saprotrophic soil bacterium. It has a diversified metabolism which allows it to degrade organic compounds and it also has a great capacity to tolerate heavy metals and metalloids.

WATER

HYDRAZINE

taking the excess hydrazine from the lander and using chemistry to convert it into water.

$N_2H_4 \quad N_2 + 2\,H_2$

$2\,H_2 + O_2 \quad 2\,H_2O$

MAKING WATER FROM CO2

Basically, it goes like this: take carbon dioxide from the atmosphere of Mars, combine it with hydrogen, and you get methane (CH_4) and water, according to the reaction:

$CO_2 + 4\,H_2 \quad CH_4 + 2\,H_2O$

REVERSE OSMOSIS

Basically, it involves pushing seawater through a thin plastic membrane to make fresh water. The membrane has holes in it -- small enough to not let salt or dirt through, but large enough to let water through. The nasty stuff collects on one side one of the membrane while clean, clear water passes through.

RECYCLING WATER WITH ECLSS

Its purpose is to create a system that can completely recycle air, water and human waste in a closed environment. The ECLSS is a comprehensive recycling system that recycles those things we all consume or give off as waste – oxygen, carbon dioxide, water, heat, humidity, even urine and... Well, you get it.

Extracting the Water from Soil

The carbon dioxide gas is compressed and passed over the Martian rocks and soil. The gas dissolves some of the water trapped in the soil. When the gas is allowed to expand, clean water is released.
Another method is to collect the saturated soils and then heat them to 500 o C, the water seperates from the soil and escapes as steam. Steam can be collected and condensed into pure, desalinated water.

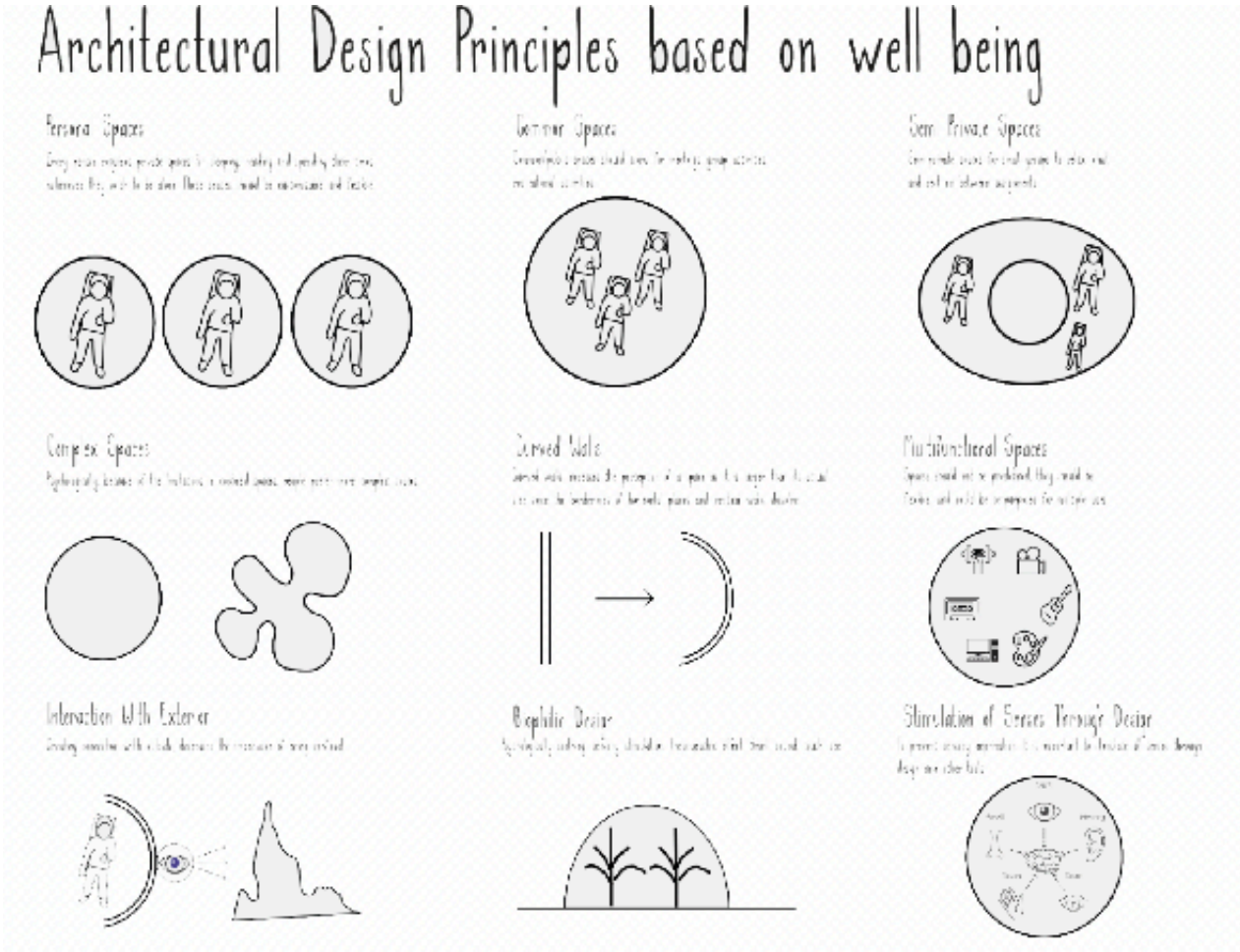
ENERGY

NICKEL-HYDROGEN BATTERIES
During each two-hour orbit around Mars the spacecraft experiences a "day" and a "night."

BIOGAS
Move over solar and wind power, there's another renewable energy source: stool.

SOLAR PANELS
At Mars, the two panels together produce 1,000 watts of power.

MARS TURBINE
These extremely mobile energy generators, christened with the acronym MARS, will float high in the air at altitudes ranging from 600 to 1,000 feet



HABITAGALE

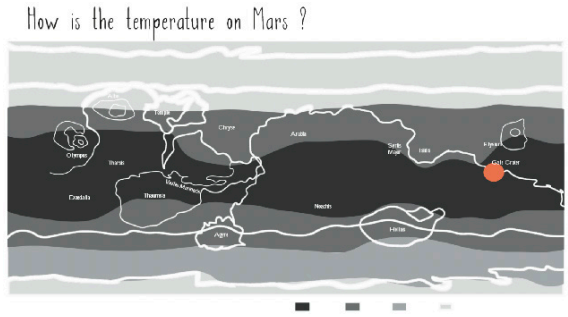
ALMİRA ENDİCAN

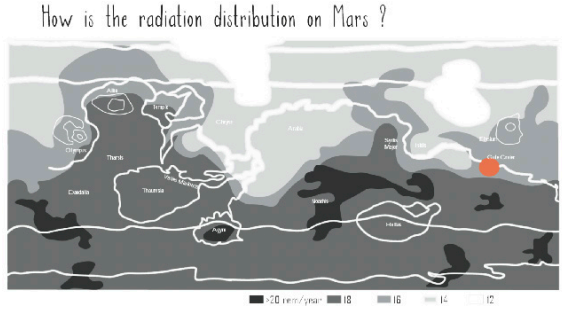
Gale Crater is potentially great place to be explored and habitated by the Martians. It has mountained layered of materials could be observed which is called Mount Sharp, about 5 km at height. Layers of the Mountain could give us a hint about the history of the Red Planet. Based on the height, there are different materials exposed. The bottom layers consist of clay minerals.Above them, there are sulfur and oxygen bearing minerals exist (NASA,n.d).

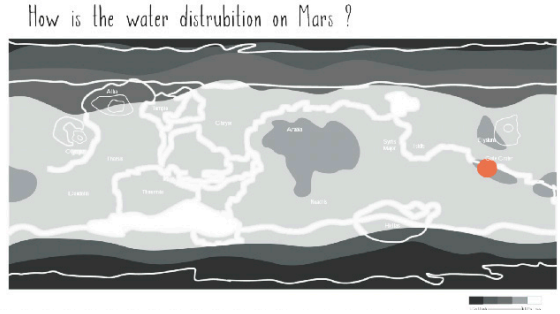
Gale Crater's diameter is about 150 km. It is predicted that, crater is about 3.5 million to 3.8 million years old. This also makes the crater interesting place to be explored (Mars Odyssey Themis, n.d).

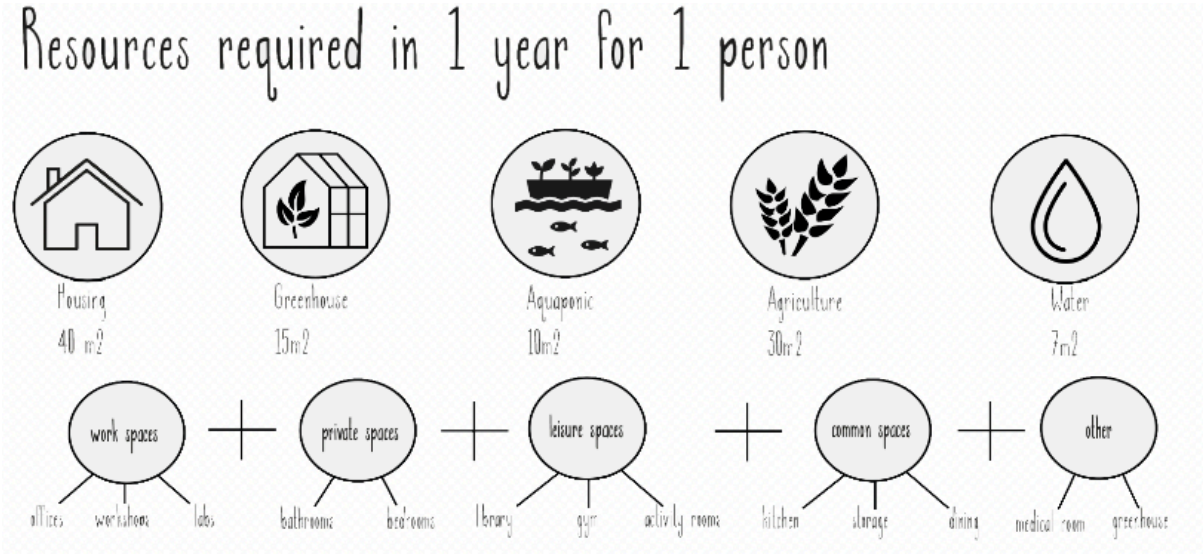
According to scientists, potential of the water's existence makes the area very favorable area. This also creates the possiblity of microbial life (Mars Odyssey Themis, n.d).

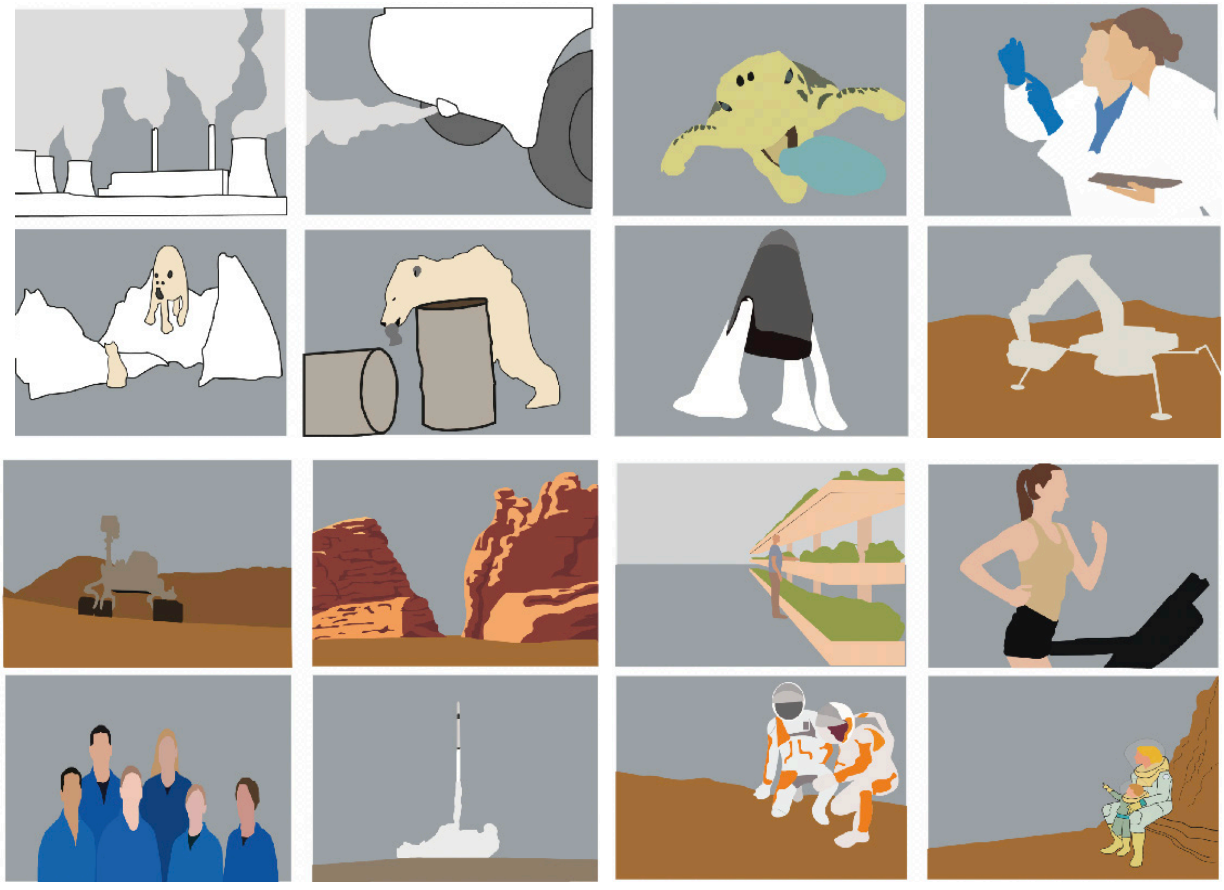
On September 26, 2013, NASA scientists reported that Curiosity detected "abundant, easily accessible" water (1.5 to 3 weight percent) in soil samples at the Rocknest region of Aeolis Palus in Gale. This is a favorable situation for future Martians. Since Gale Crater is located in Equatorial climate zone, this makes the crater human friendly.



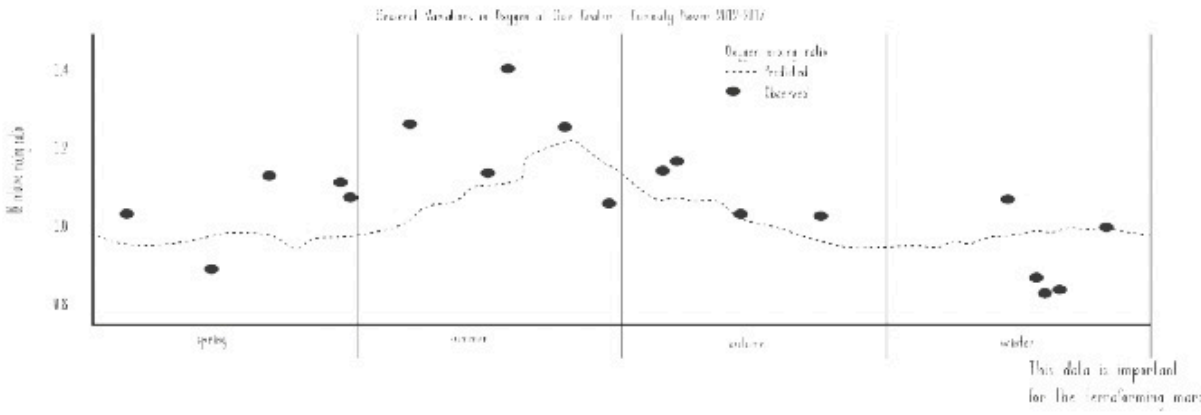





Resources required in 1 year for 1 person
Housing
40 m2
Greenhouse
15m2
Aquaponic
10m2
Agriculture
30m2
Water
7m2
work spaces
offices
workshops
labs
private spaces
bathrooms
bedrooms
leisure spaces
library
gym
activity rooms
common spaces
kitchen
storage
dining
other
medical room
greenhouse



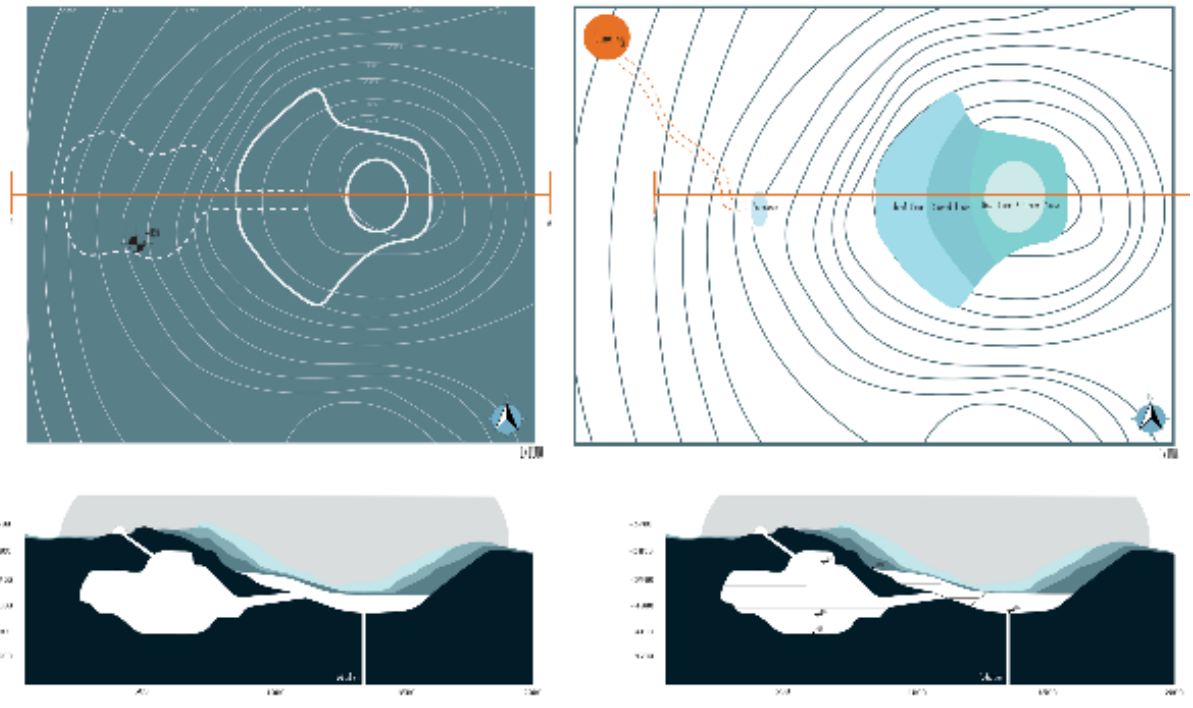

Psychological Stressors
Psychological Effects
Social isolation
High work load
Cultural differences
Life's danger
Environmental isolation
Spatial confinment
Spatial boredom
Monotony
Earth out of view phenomenon
Alterations in sensory stimuli
Limited habitability
Sensory deprivation
Depression
Anxiety
Emotional liability

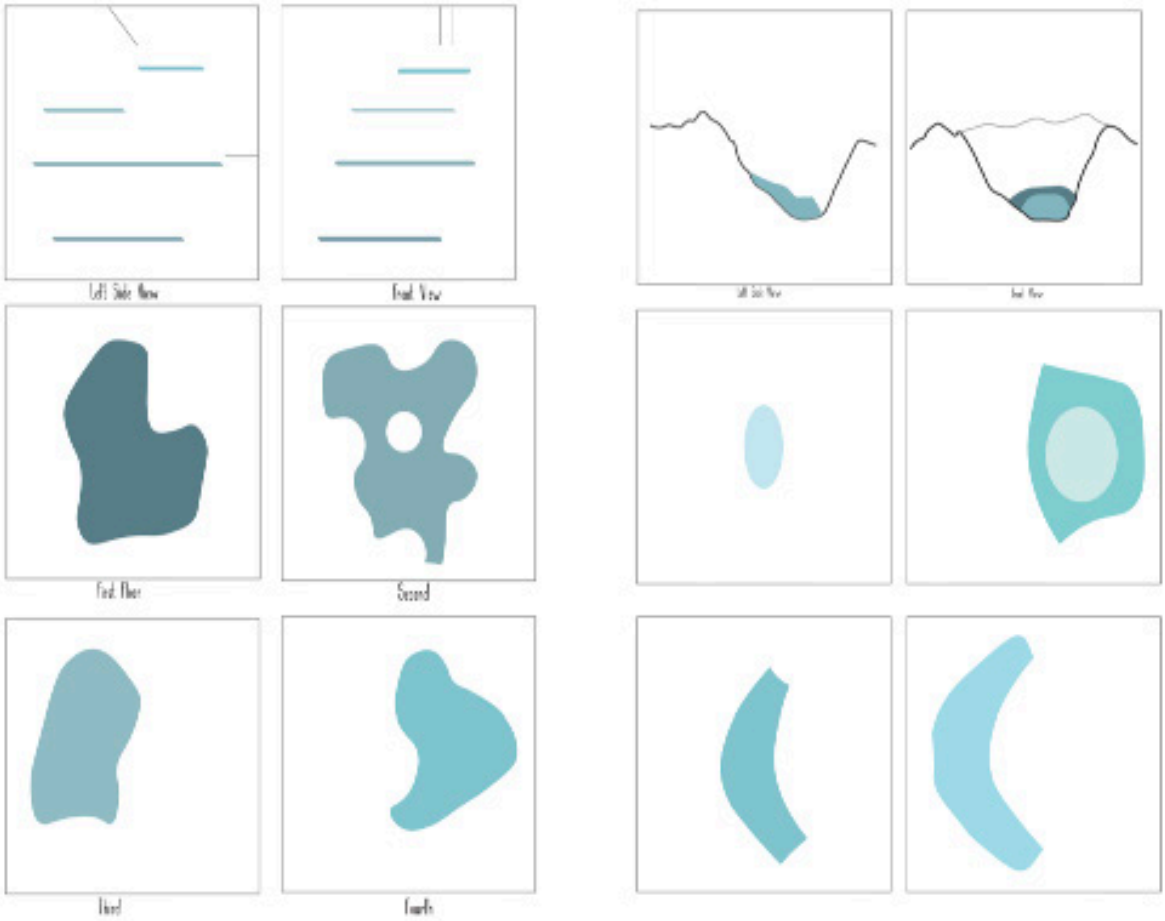


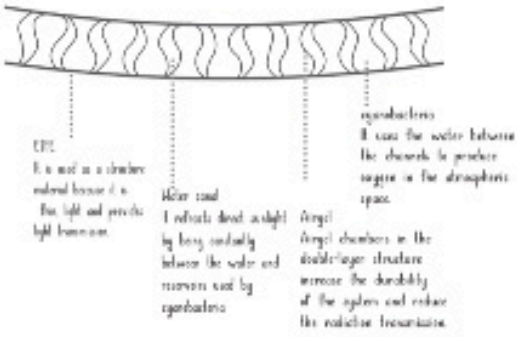
Why Gale Crater?

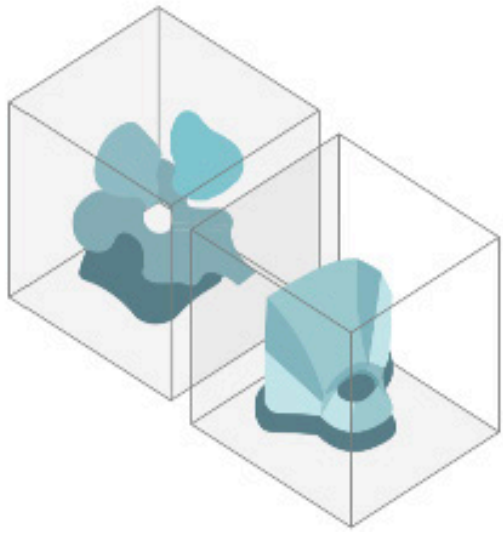
In order to create a sustainable life on Mars, factors such as radiation, water and air temperature must be taken into account.
Gale Crater is an area that has potential in terms of these factors and is one of the focal points of NASA. The fact that it is located in the Northern Hemisphere, its proximity to other potentially habitable areas, and the presence of a lake in the past are also
important factors affecting the selection.

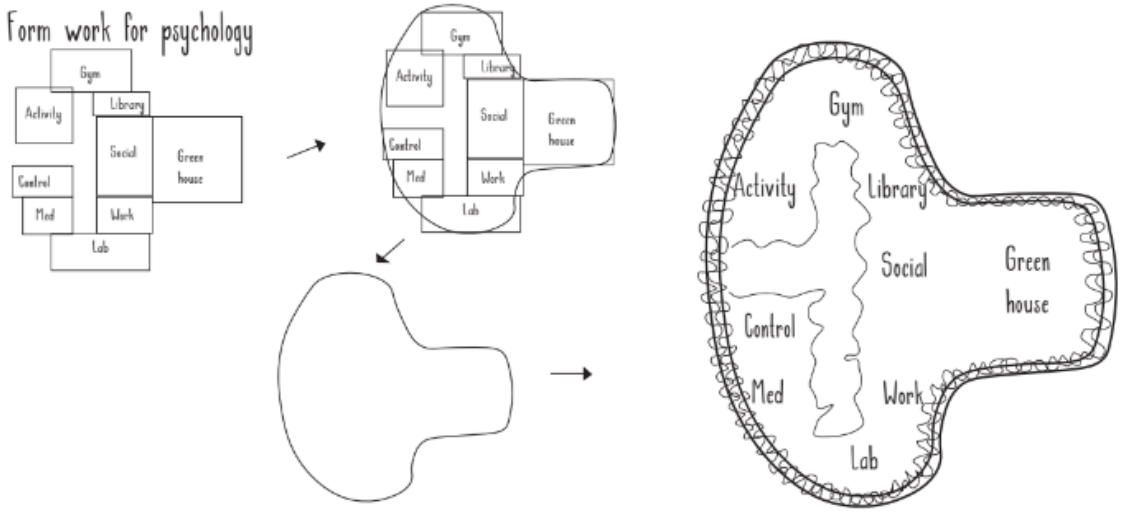
Since the basic and most important priority of this design is safety, the desire to avoid unknown factors and dangers, thanks to many researches and data found on Gale Crater, also influenced the decision of Gale Crater.




Left Side View
Front View
First Floor
Second
Third
Fourth


ETFE
It is used as a structure material because it is
Blue light and provides light transmission
Water canal
It reflects direct sunlight by being constantly between the water and reservoirs used by cyanobacteria
cyanobacteria
It uses the water between the channels to produce oxygen in the atmospheric space.
Airgel
Airgel chambers in the double-layer structure increase the durability of the system and reduce the radiation transmission

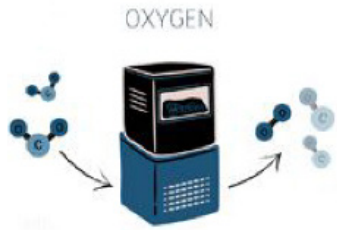


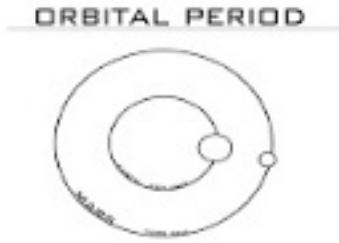

Form work for psychology
Gym
Activity
Library
Social
Green house
Control
Med
Work
Lab

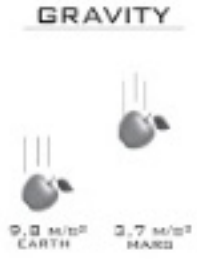
A NEW HOME

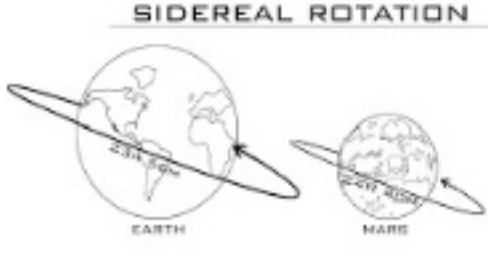
ÖZGE NAZ GÜLER

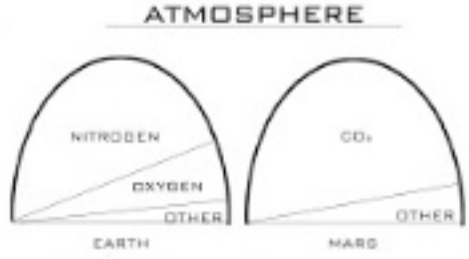
The pit for landing and settlement site is it takes place in the northwest of The Gale Crater.To land depth has important advantages for thespaceship's more atmosphere above. The landing site must be safe and lat surface to land, low altitudes are better since we will have more tmosphere above us. Near Equator can be preferred for solar power to get more sunlight and moderate temprature.

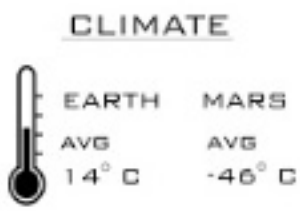


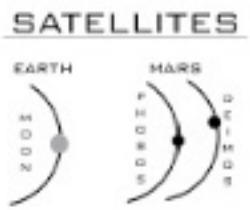


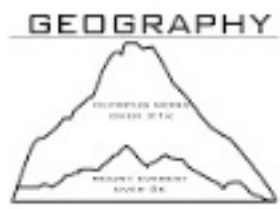


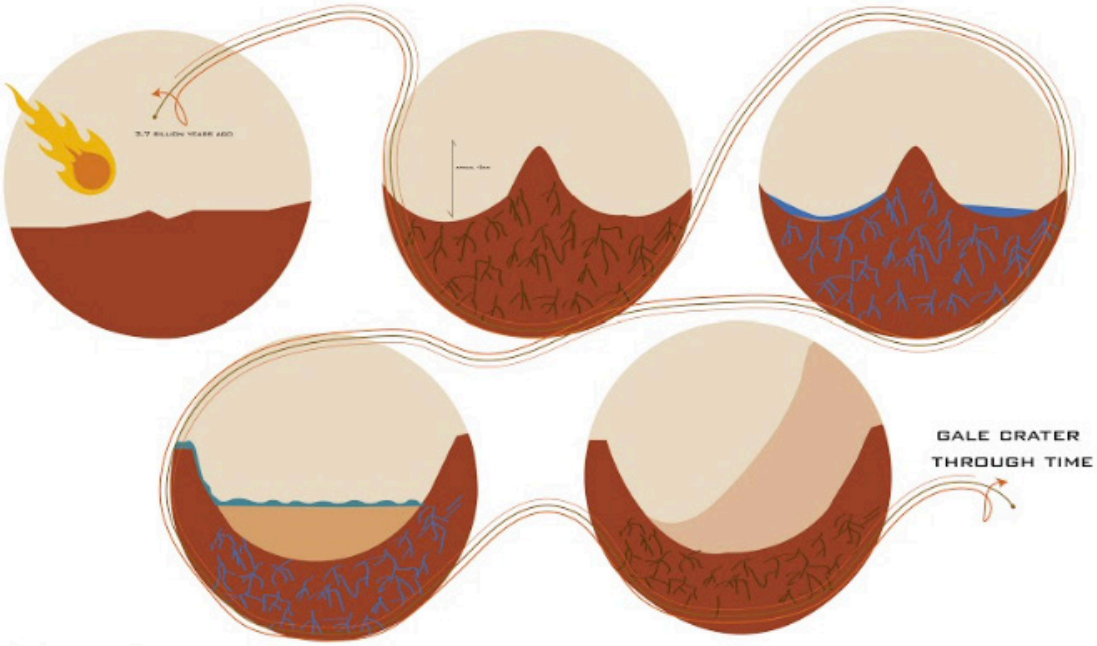


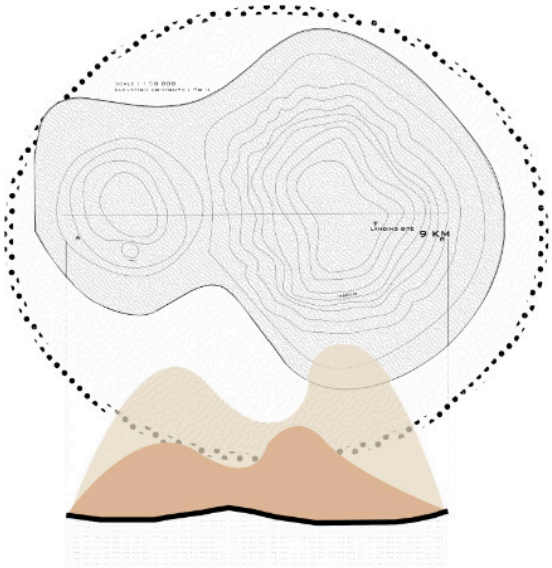






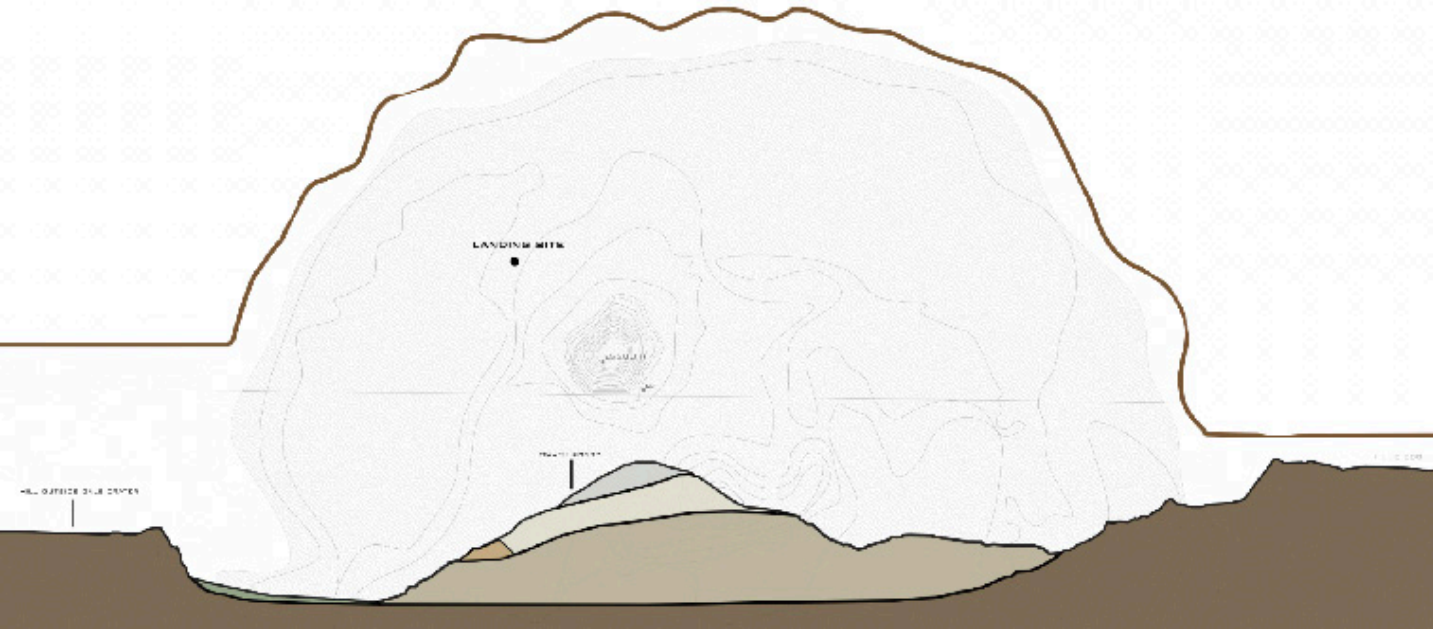






COLONIZING MARS

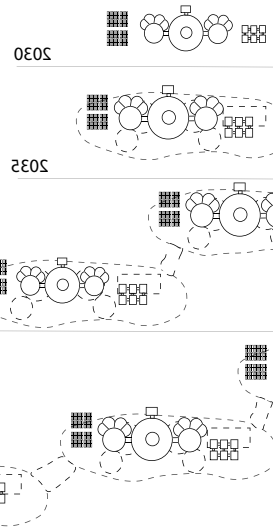
First mission to extratc or find water and fossils beneath the ground. Extracted water will be converted to oxygen and hydrogen for a sustainable life. For protecting above ground habitats from radiation, martian soil will be converted to the in flatablle modules encased in ceramics with 3d printing technique. Greenhouse area willhave artifical lightning for growing plants. Labs will work on martian soil to make it useful for growing plants. In the beginning Nutrients for the plants could come from recycling human waste. Rye, cress and alges will be first to plant in labs.

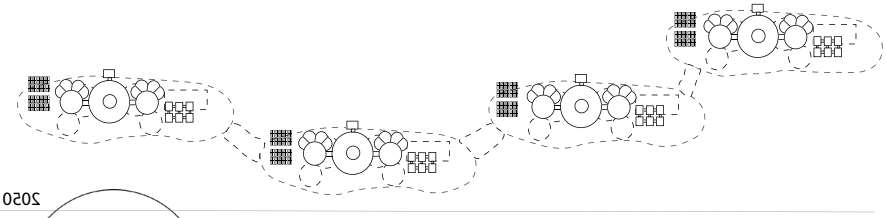


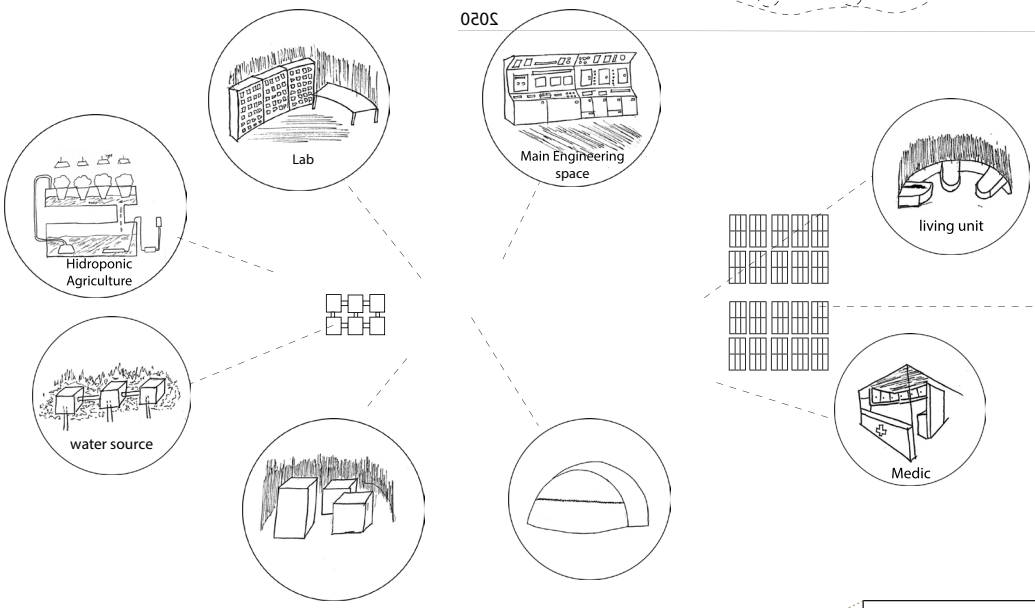
COLONIZING MARS

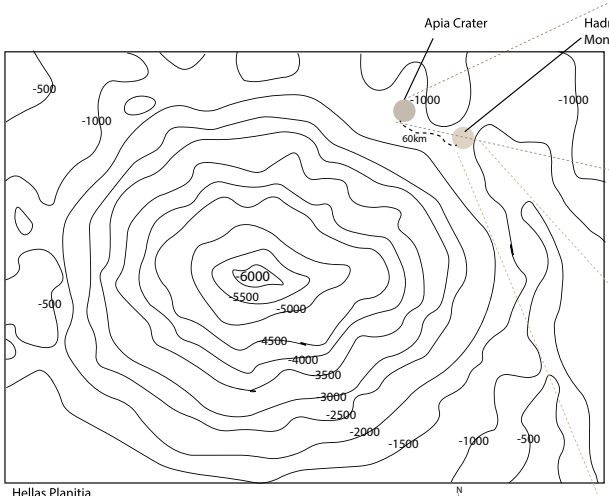
BEYZA NUR ÖZTÜRK

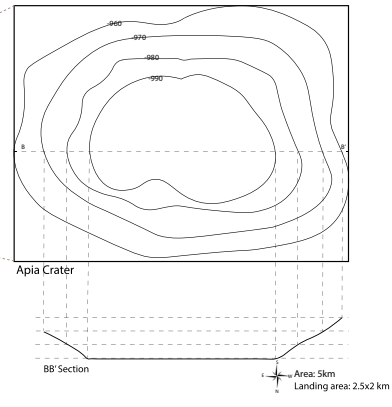
IF WE DESTROY THE EARTH AS HUMANS, PERHAPS WE IGHT END UP LIVING UNDERGROUND ON A PLANET.

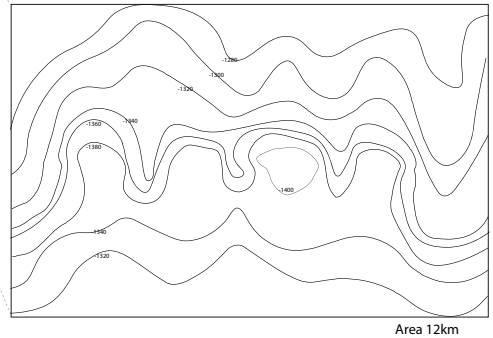


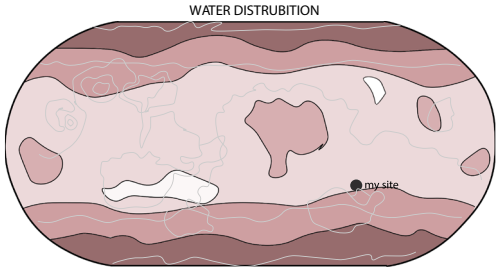


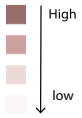


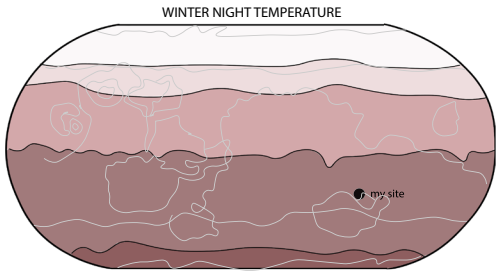


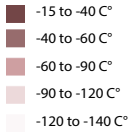


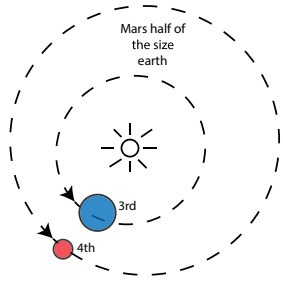




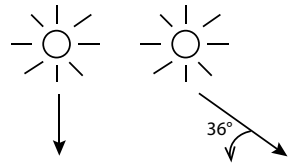




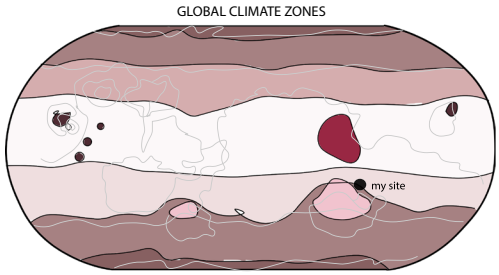


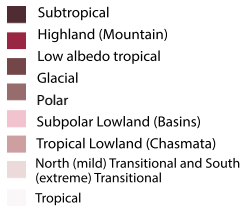


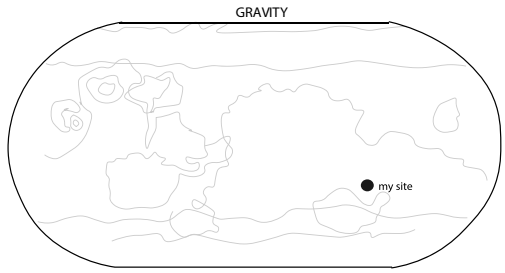
1 Martian day 24 hours
39 minutes
1 Martian year 687 sol

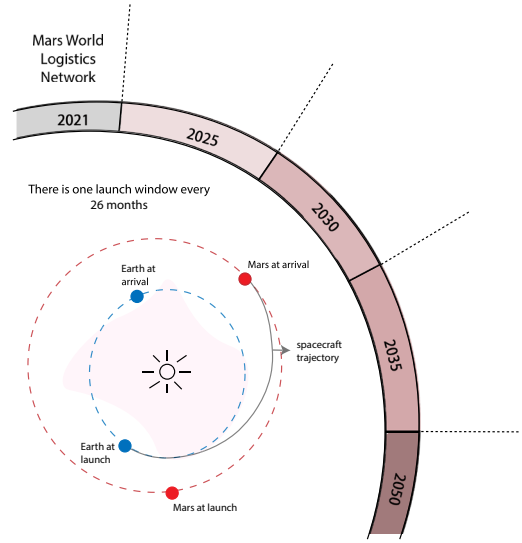


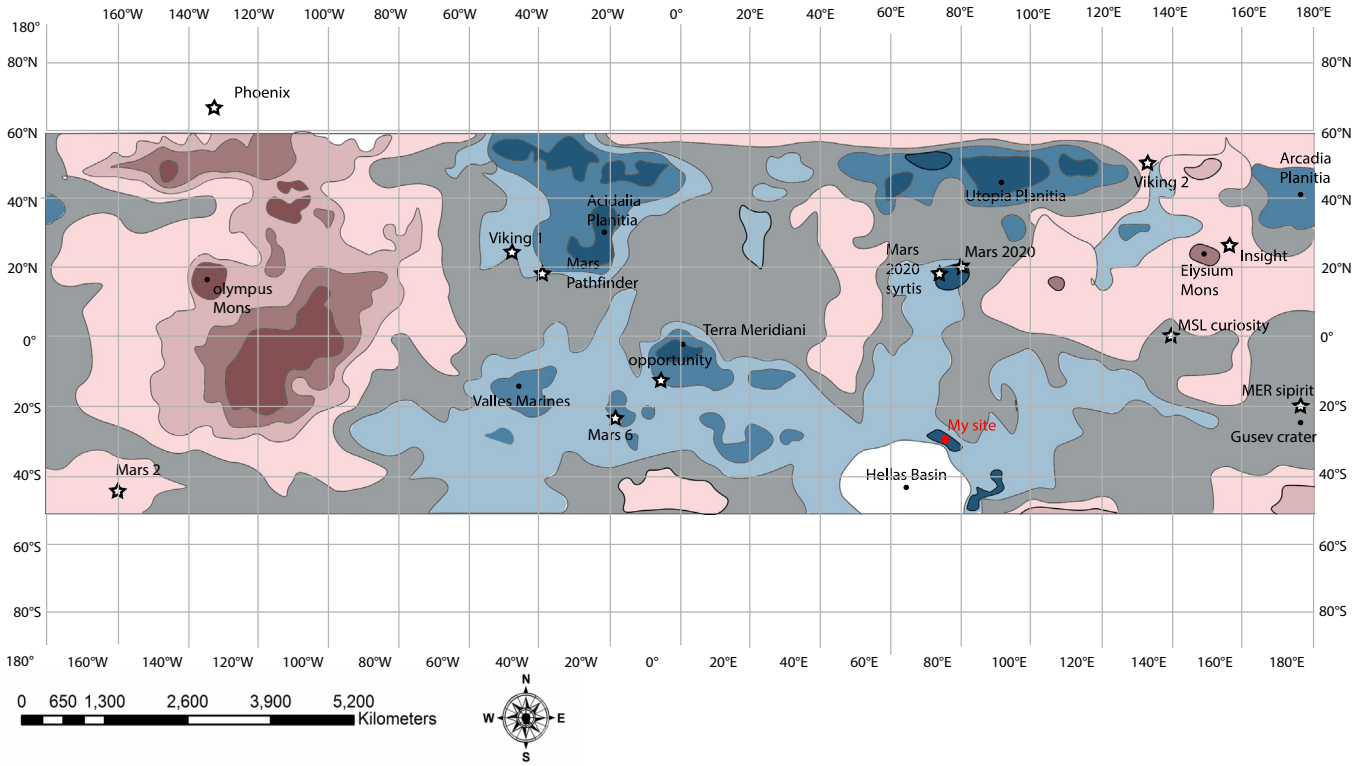
The Maximum Intensity of the noonday sun on mars = The Intensity of the Sun on Earth at 36°





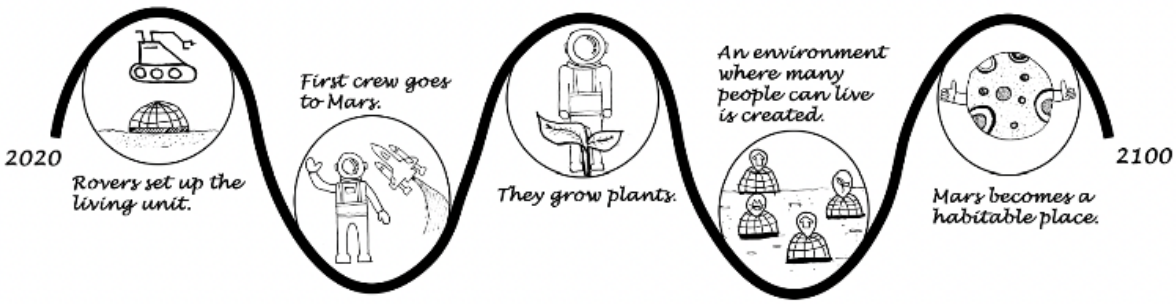


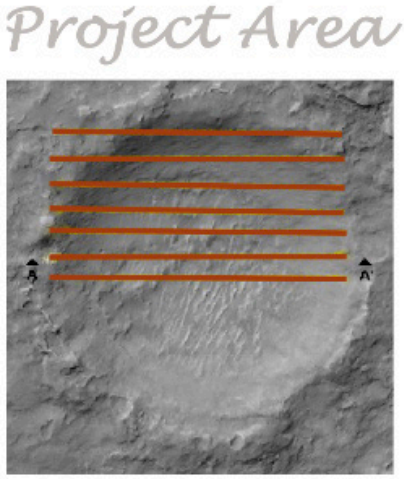


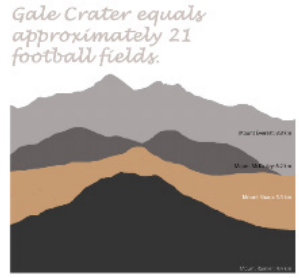


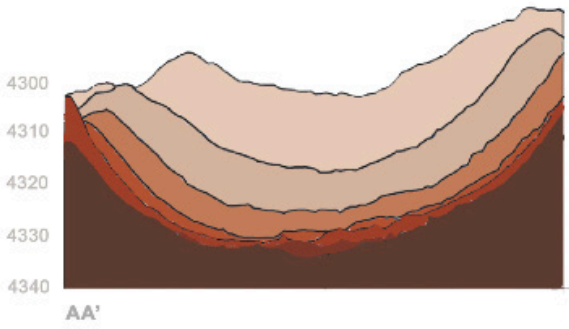
MARS

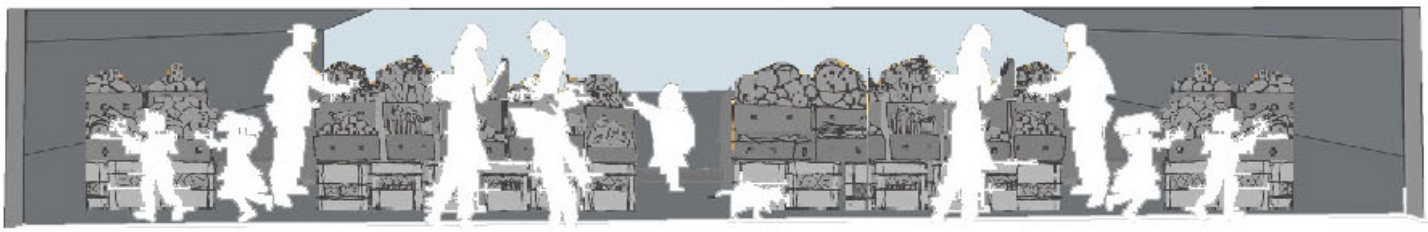
AYŞENUR ERASLAN

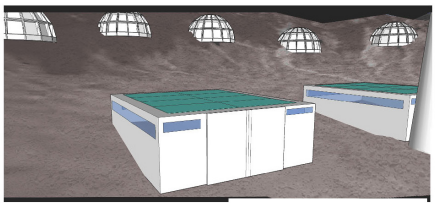


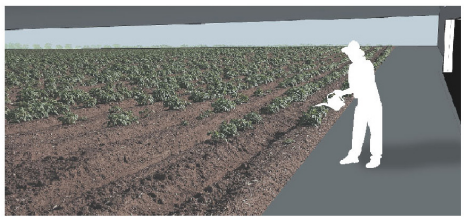


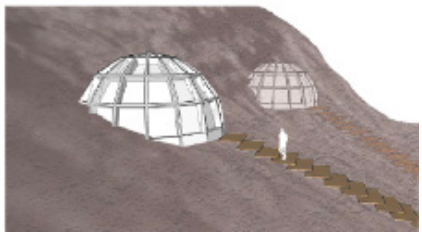


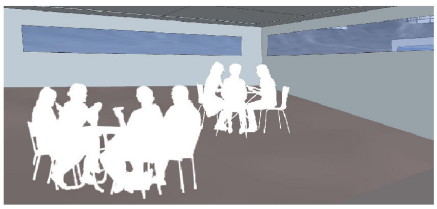


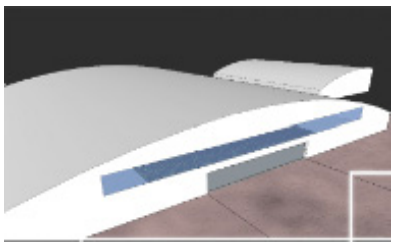


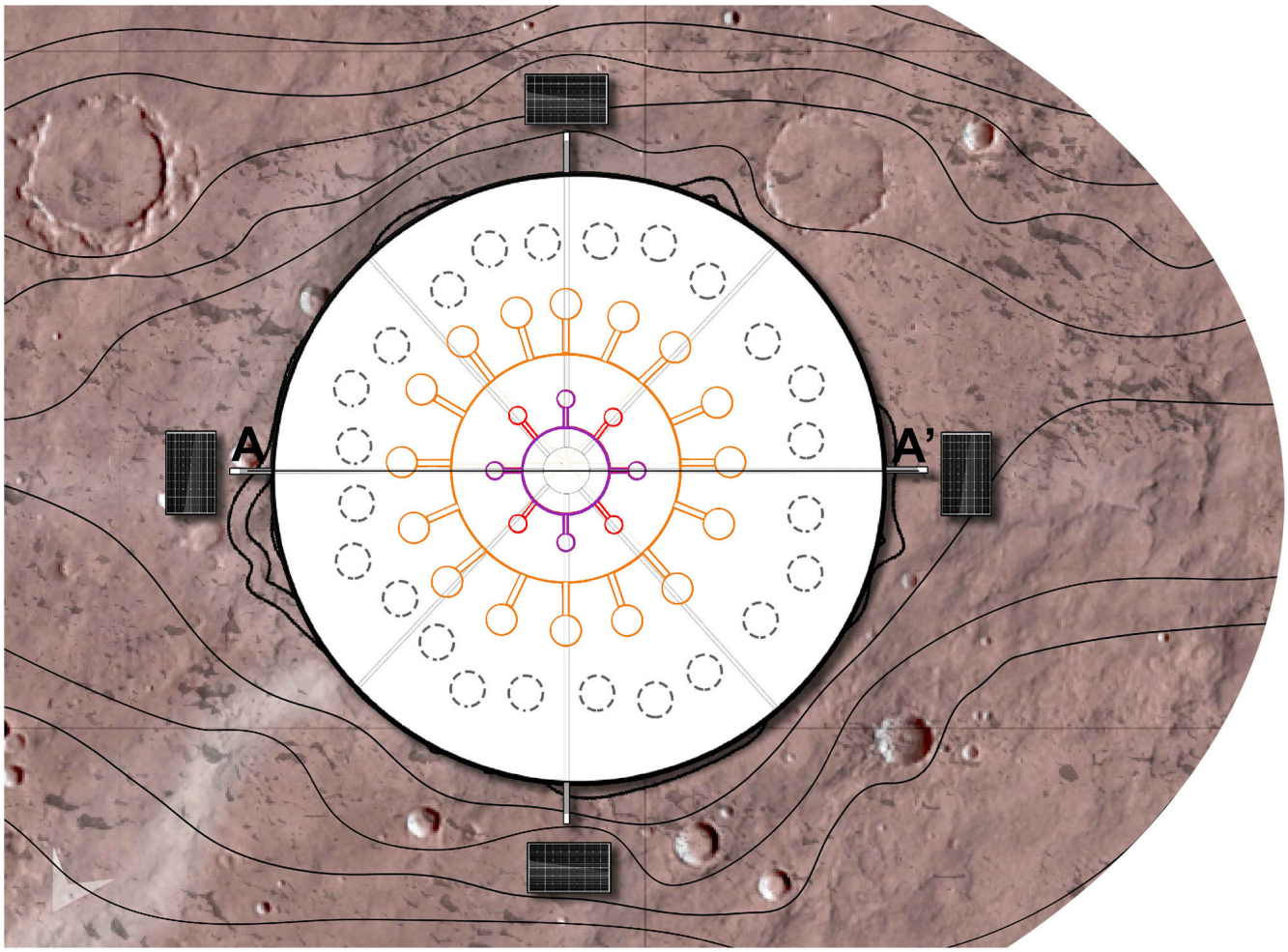








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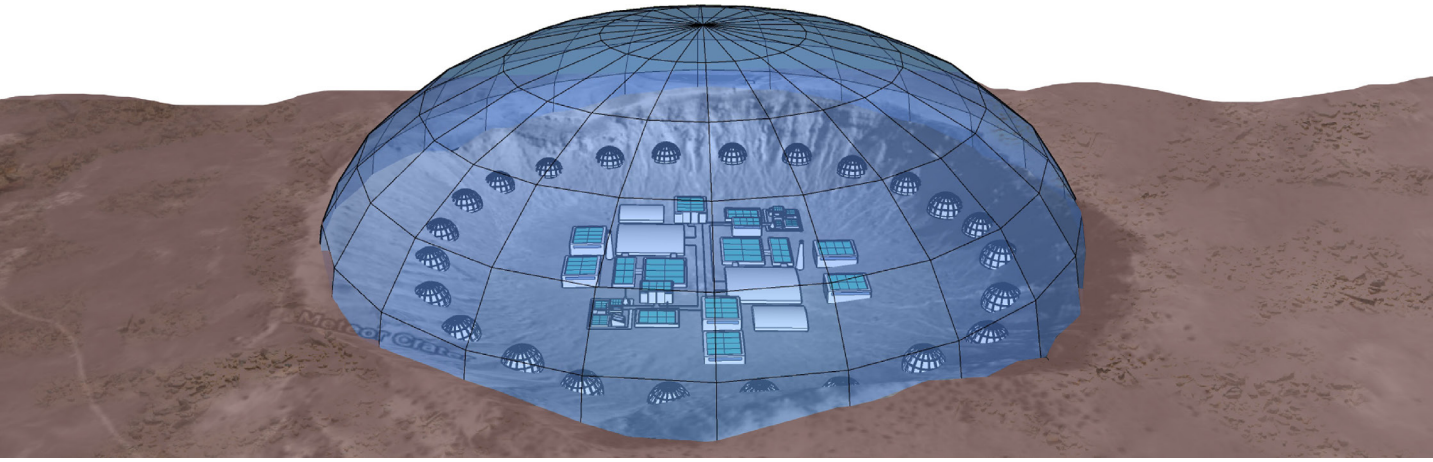
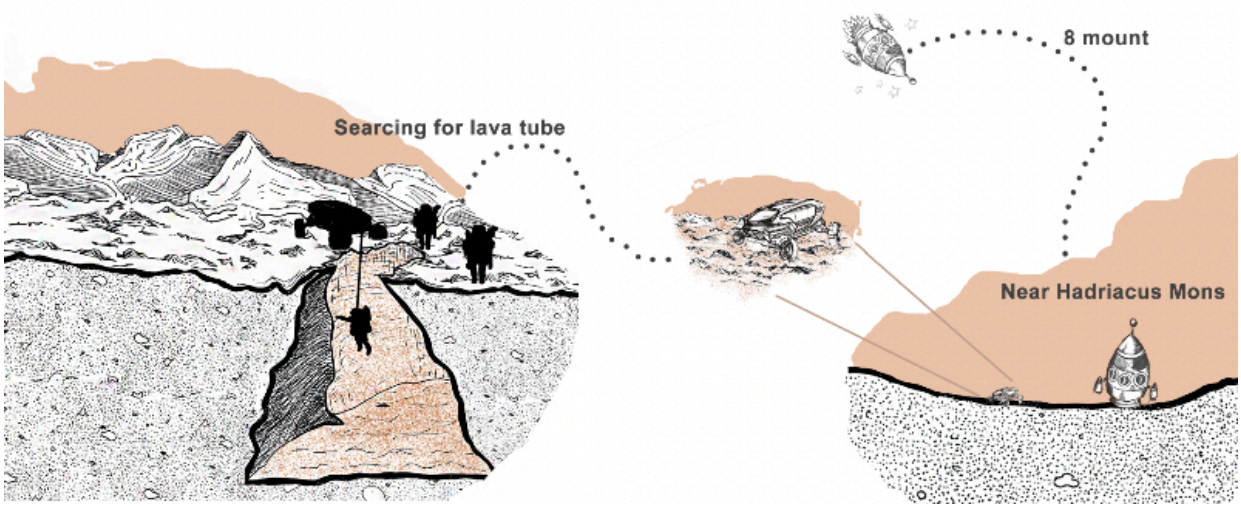


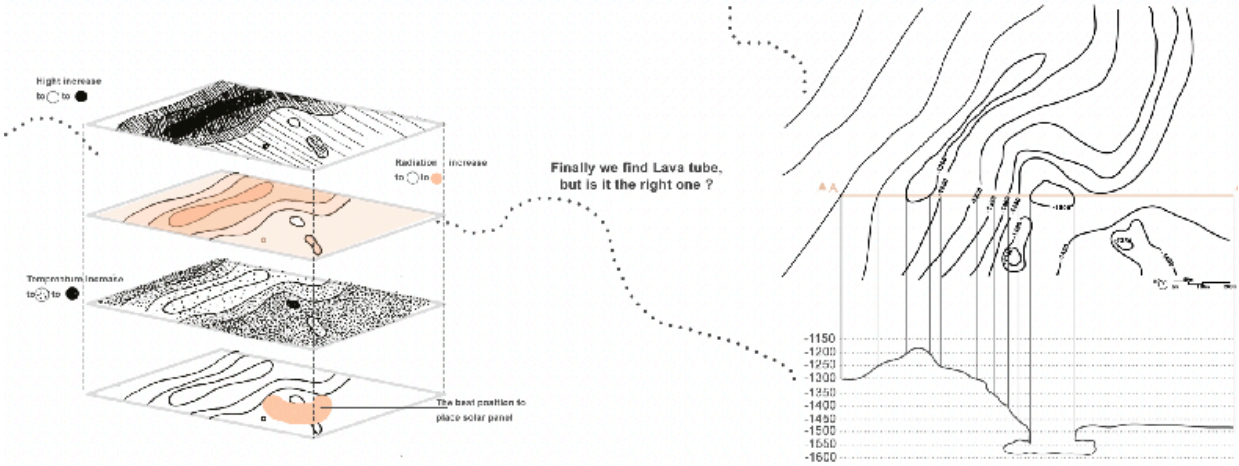
CIRTRIO COLONI

NERGIS ŞENKAYA

Why Mars
Mars know as the similarty with the earth. Mars has waters, dry ices which are importnt for live. Mars also has minerald soils and different soil types that maybe enables to grove plant. But Mars has really huge radiontion affect that makes people cancer or die. Also Mars was really cold planet that human can not stay at outside without special cloth and Mars does not have enough 02 to breath.

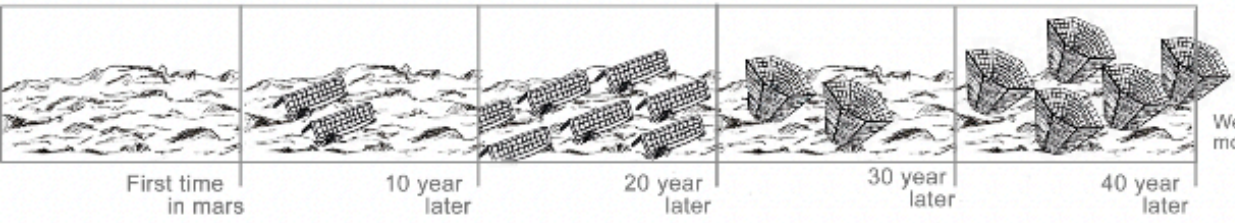
So, How we can find the best place to live?



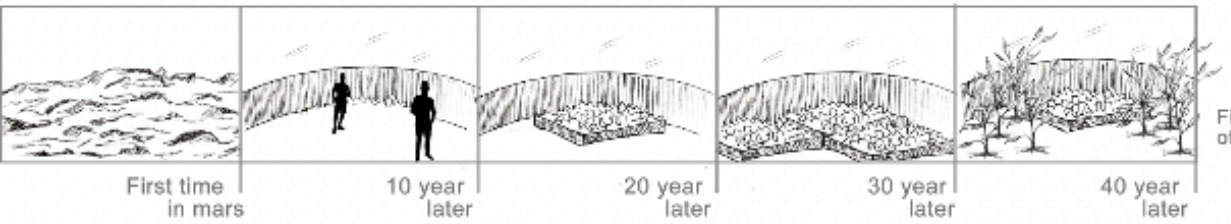


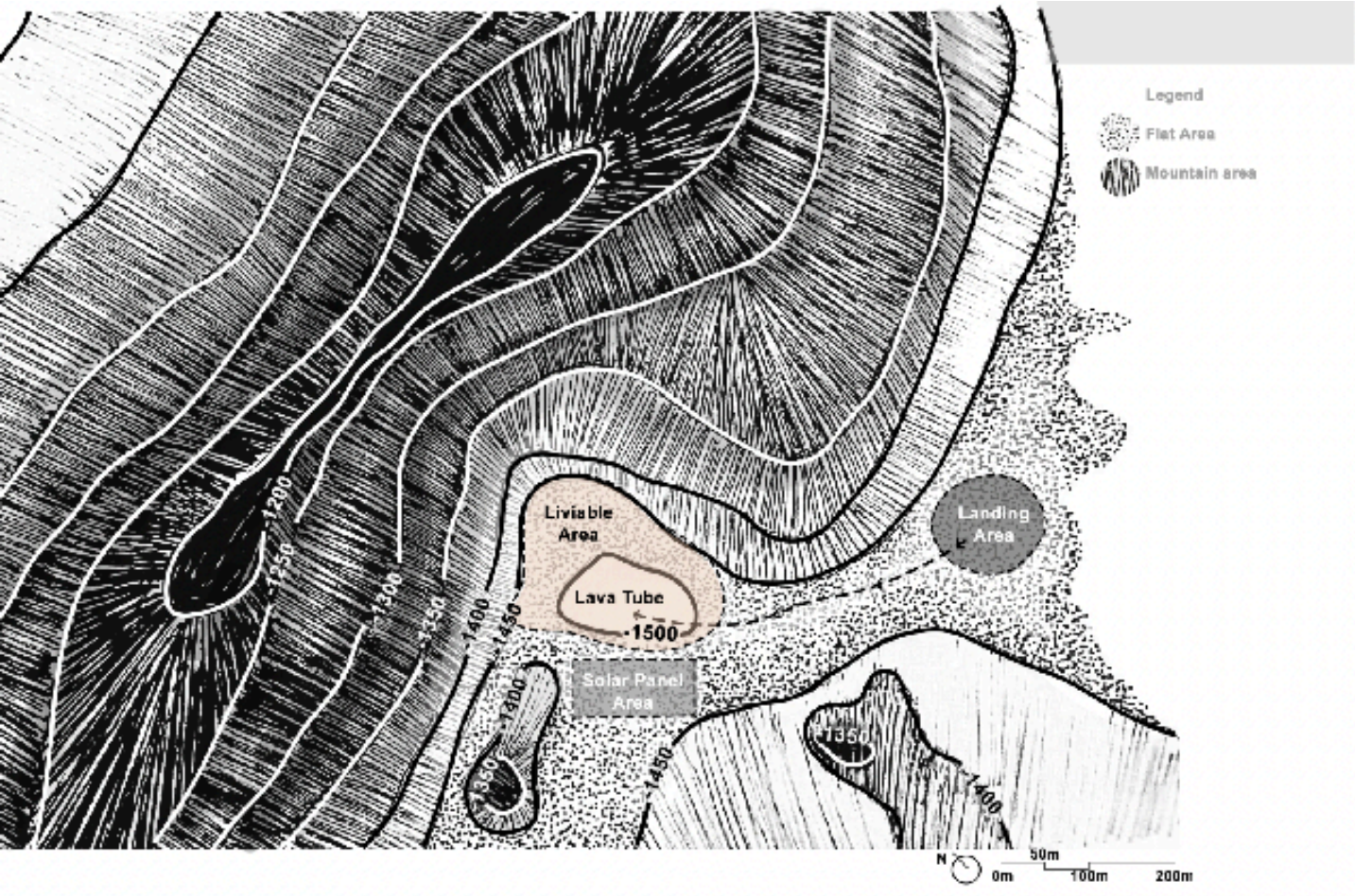
In Mars;
We need to find water or ice water for our life. Also we need energy for electric and machines. We need places that which can carry our foods and water. We need greenhouses to produce O2 and later we can grove another plants and creater our organic foods. Finally and most important thing is we need a place to be our home...

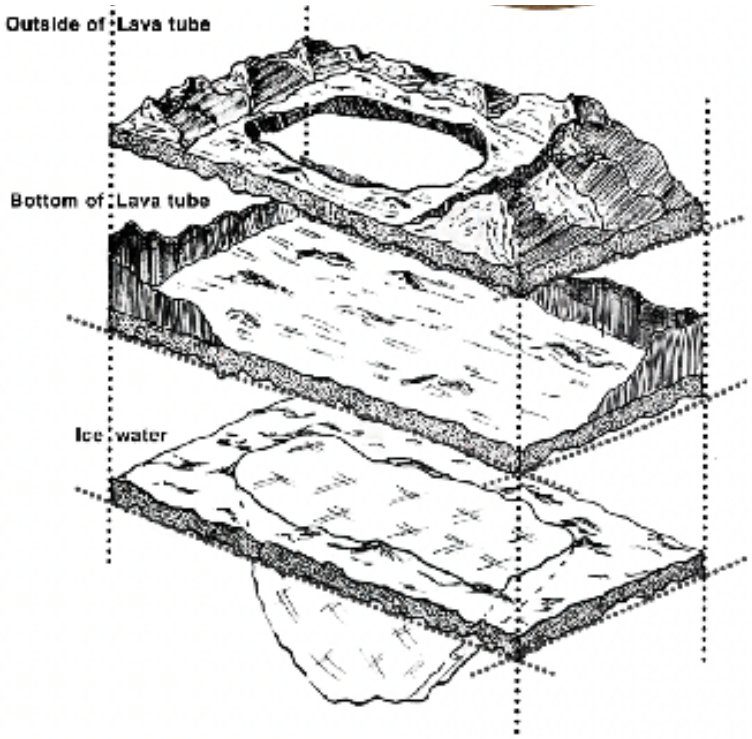

First time in mars
10 year later
20 year later
30 year later
40 year later
Population grove

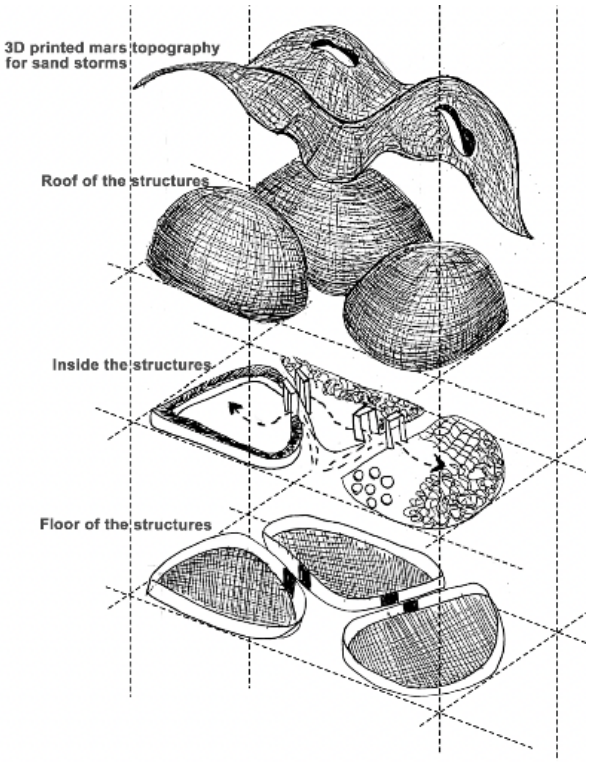

First time in mars
10 year later
20 year later
30 year later
40 year later
We always need more energy

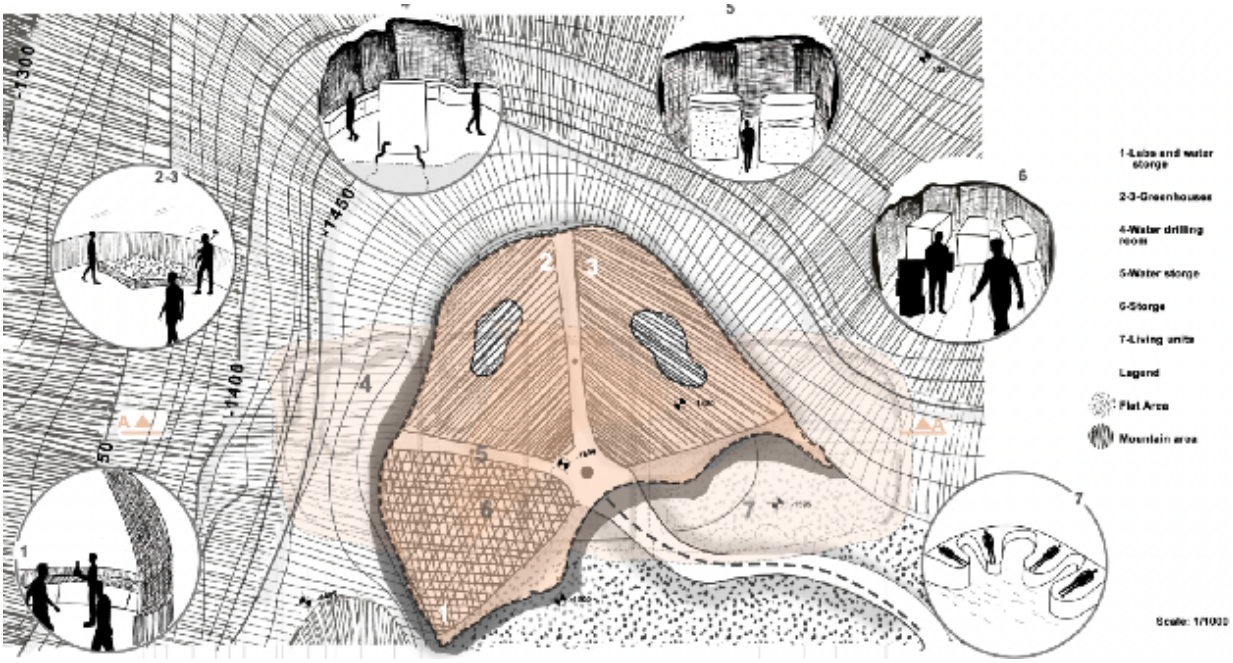

First time in mars
10 year later
20 year later
30 year later
40 year later
We find the ice water and use it


First time in mars
10 year later
20 year later
30 year later
40 year later
Finally we ccn grove other plants

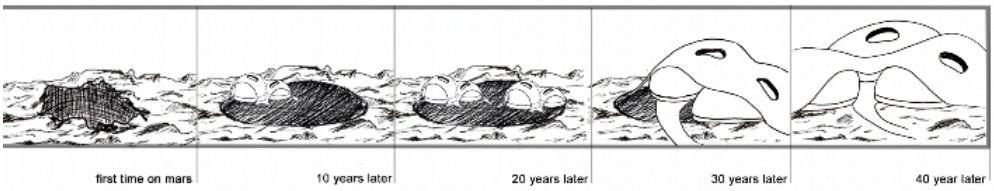

Legend
Flat Area
Mountain area
Liviable Area
Lava Tube
1500
Landing Area
Solar Panel Area
1200
1250
1300
1350
1400
1450
N
0m
50m
100m
200m


Outside of Lava tube
Bottom of Lava tube
Ice water

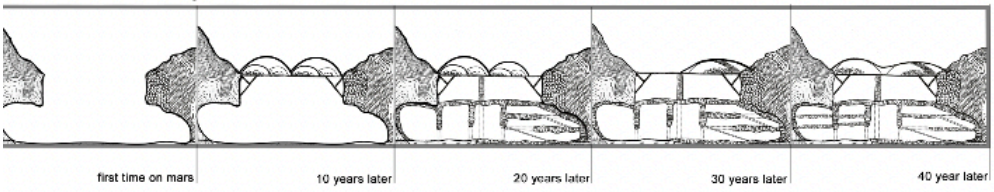

3D printed mars topography
for sand storms
Roof of the structures
Inside the structures
Floor of the structures

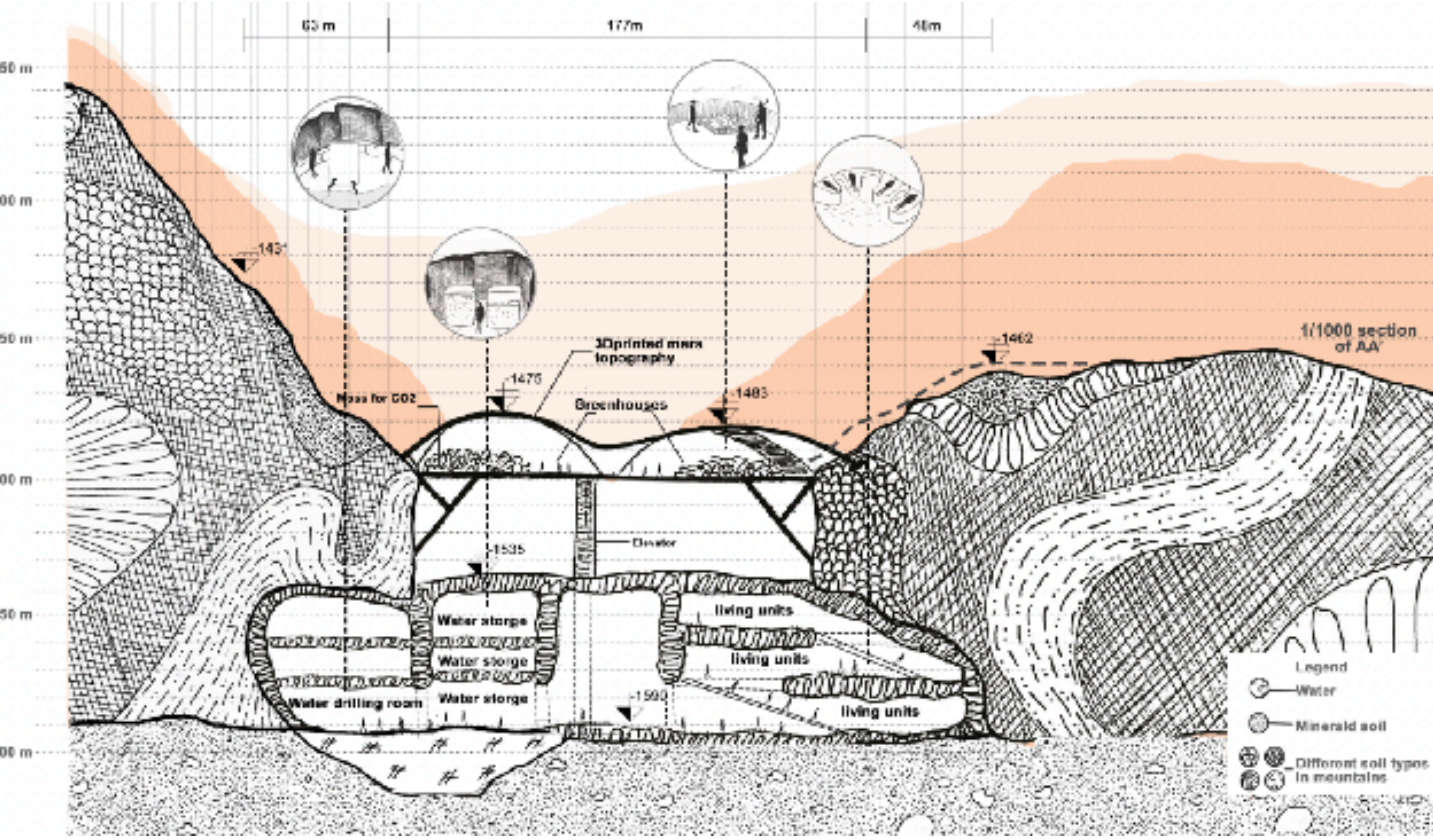


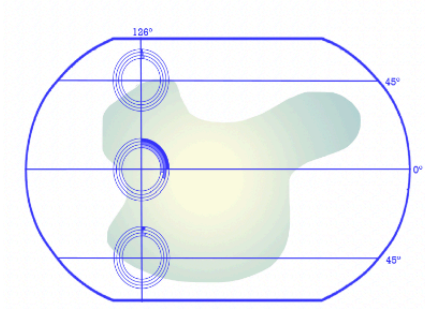
Timeline of the surface



Timeline of the underground



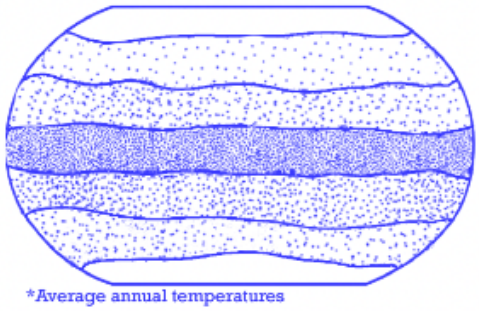




10.04.2020
10.08.2020
10.12.2020

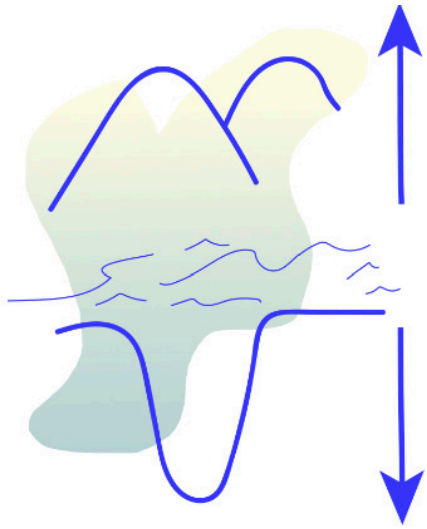
According to NASA, a place where sufficient power can be provided for the lander should be selected for landing at any time of the year. The sun comes to areas near the equator at the most favorable angle for the lander year-round. The most suitable latitudes for this are between the latitudes of North 3 degrees and North 5 degrees.

*Minimum sun angles from three points (northern hemisphere, equator and southern hemisphere) taken from the same longitude during the day



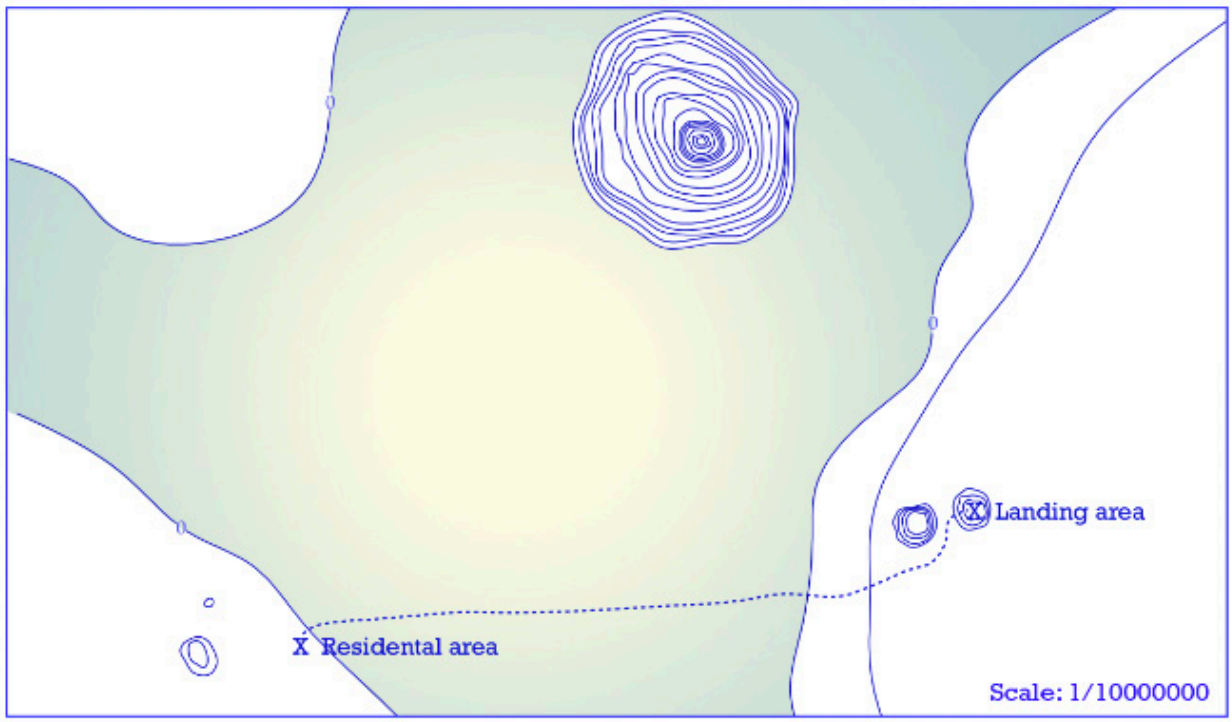
205 K
215 K
245 K
260 K
270 K

*Average annual temperatures



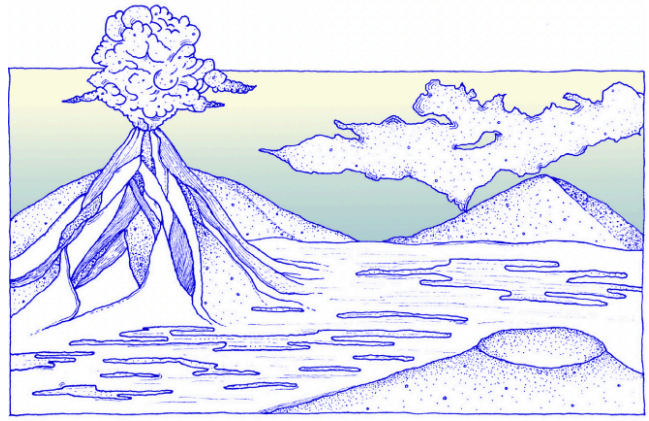
Surface:
-Unstable temperatures
-Load radiation amount

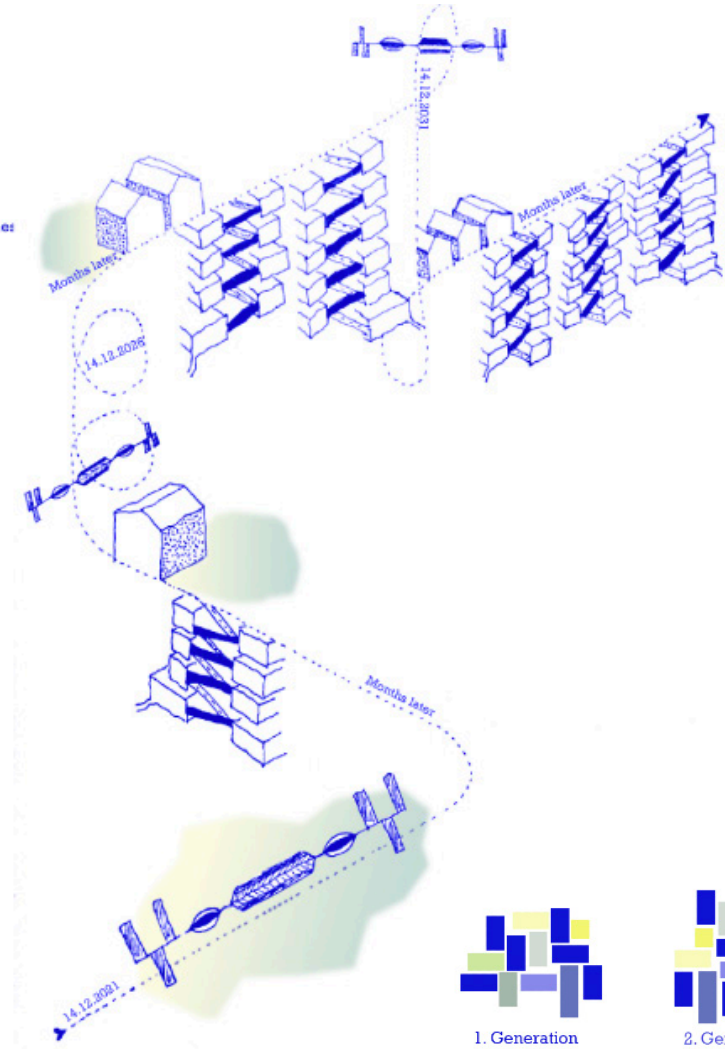
Lava Tube:
+Stable temperature differences
+Radiation protection
+Shelter for wind storms
+Capture of volatiles such as water
+Old ice reservoirs that can be encountered due to temperature stability

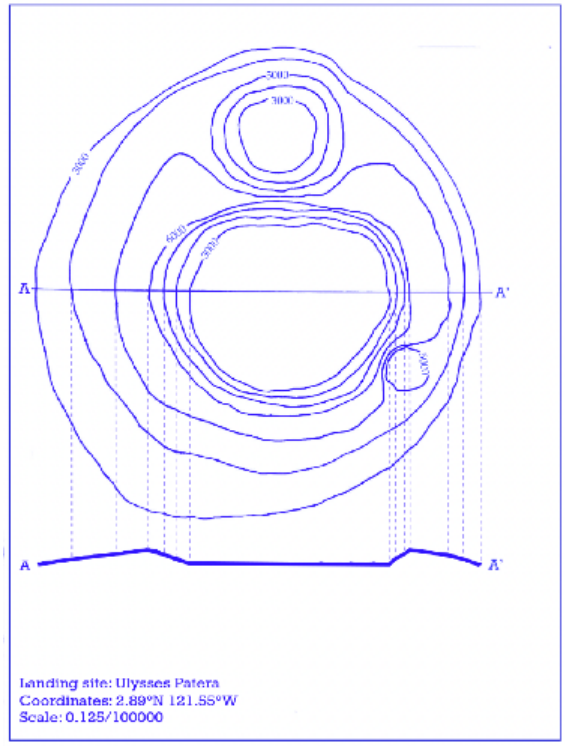


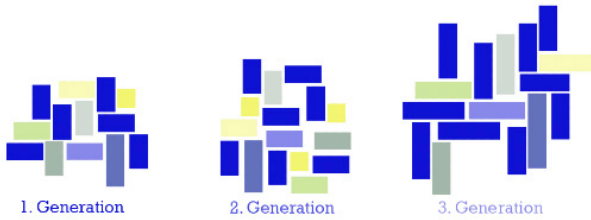
DEEP IN MARS

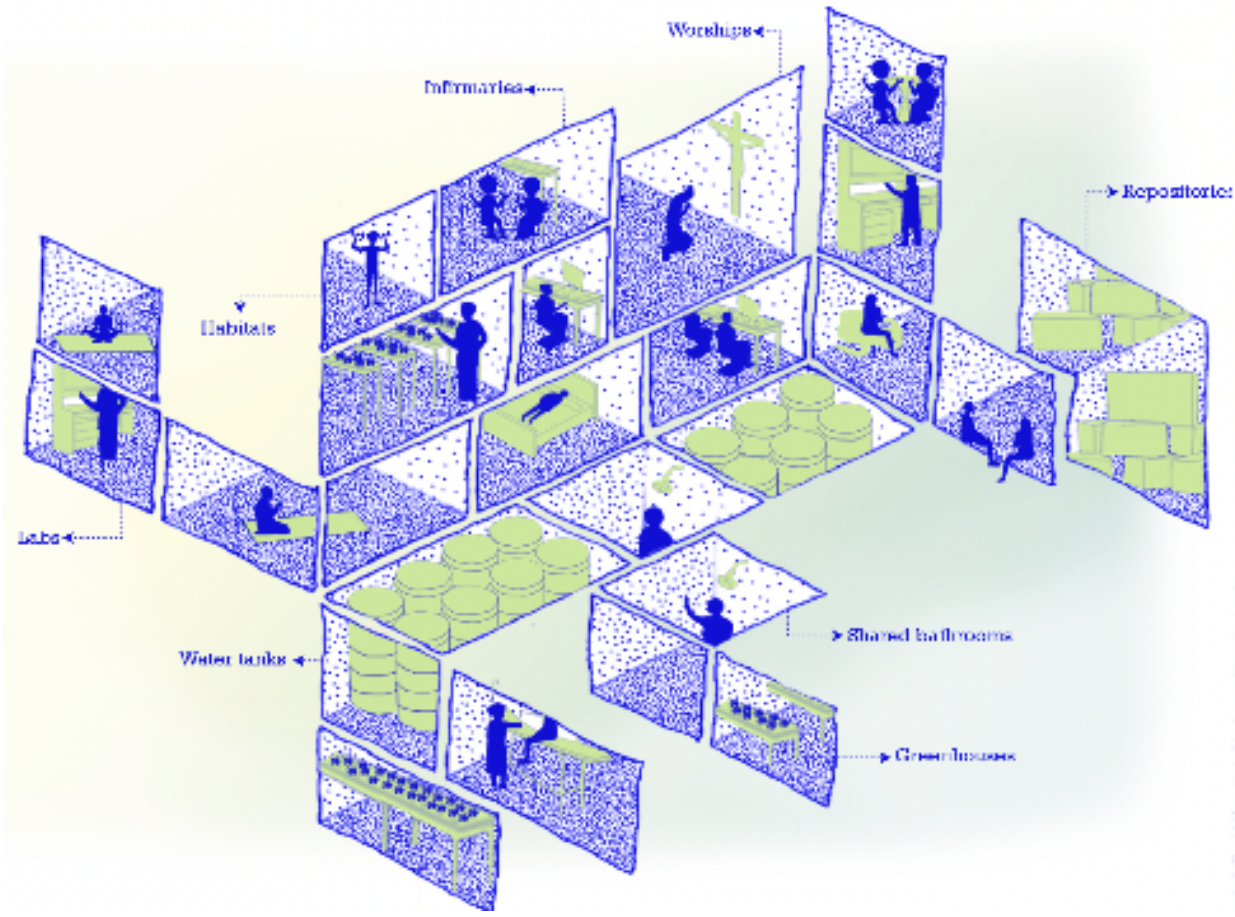
RÜMEYSA YAPAR




14.12.2031
Months later
Months later
14.12.2026
Months later
14.12.2021


5000
3000
A
A'
Landing site: Ulysses Patera
Coordinates: 2.89°N 121.55°W
Scale: 0.125/100000


1. Generation
2. Generation
3. Generation
Habitats
Greenhouses
Water tanks
Infirmaries
Labs
Worships
Shared bathrooms
Repositories


Worships
Infirmaries
Repositories
Habitats
Labs
Water tanks
Shared bathrooms
Greenhouses

MODULE II

FUTURE OF LANDSCAPE IN HISTORICAL REALITY

The second module of the studio includes development of design ideas with respect to 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. Site specific design regarding these cultural settings, geographical context and topography will be expected from students.

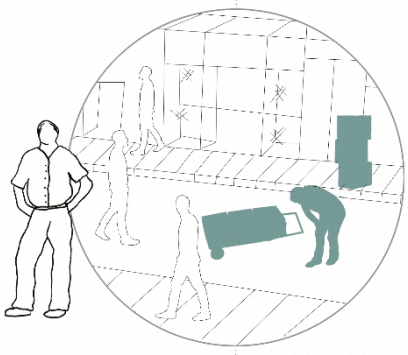
The design proposals will be developed for the sites which will be chosen by students in the light of their individual assessments. The potentials of the land, topographical advantages, vista points, natural setting, usage behavior, existing spatial layout, historic and cultural characteristics will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

The decisions on landscape design, the location, spatiality, materiality, structural composition and its relation to topography will be precisely defined by the student.
Following issues should be answered with landscape representation techniques (plans, sections, drawings, axons, isometrics, photo collages, models).

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.

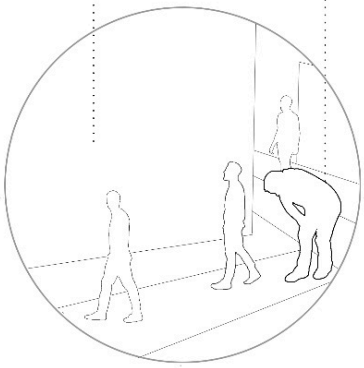
MODULE 2 | *The Historical Port of Istanbul –HALIC* *Future of Landscape In Historical Reality*			
9	14 Dec.	Introduction to the Studio / Program and Context	Studio works
	17 Dec.	Understanding & Representing the Landscape Idea	Studio works
10	21 Dec.	Development of Conceptual Framework / Sketches / Collages / Free scale mapping / Hybrid drafting techniques	Studio works
	24 Dec.	Development of Conceptual Framework / Sketches / Collages / Free scale mapping / Hybrid drafting techniques	Studio works
11	28 Dec.	Through Conceptual Thinking to Design Thinking / Landscape Design Plan & Sections / Scale 1/500	Studio works
	31 Dec.	Through Conceptual Thinking to Design Thinking / Landscape Design Plan & Sections / Scale 1/500	Studio works
12	4 Jan.	Through Conceptual Thinking to Design Thinking / Landscape Design Plan & Sections / Scale 1/500	Studio works
	7 Jan.	Landscape Design with Model / Structures in landscape/ 1/200 scale landscape design	Studio works
13	11 Jan.	Landscape Design with Model / Structures in landscape/ 1/200 scale landscape design	Studio works
	14 Jan.	Landscape Design with Model / Structures in landscape/ 1/200 scale landscape design	Studio works
14	18 Jan.	Detail Design in Landscape / Materials, point details. Urban furniture	Studio works
	21 Jan.	Detail Design in Landscape / Materials, point details. Urban furniture	Jury, Panel and submission

COSTA VERDE NERGİS SENKAYA

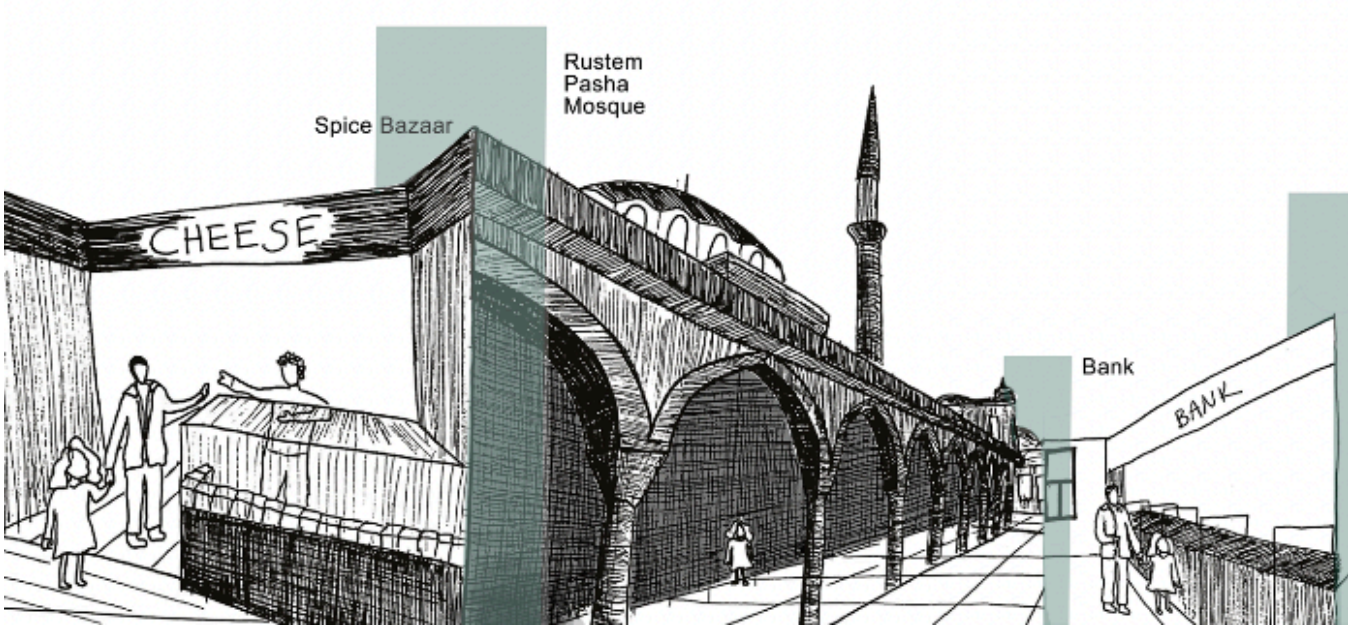


It is very difficult to carry goods due to the bad road and the slope.

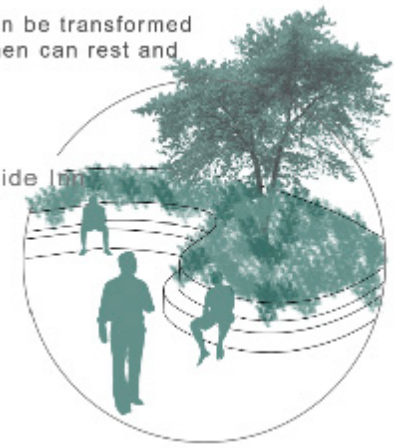
There are blank walls in the area. Urban furniture can be made for people who get tired on the empty walls in the area.



Climbing the hill is very tiring, no place to rest

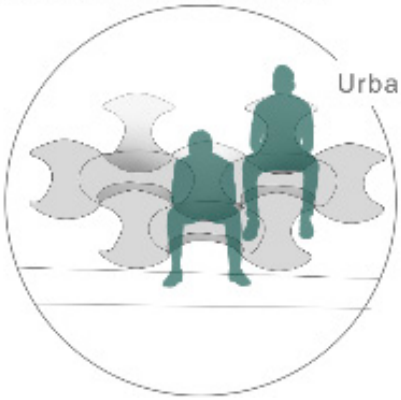


The courtyard of the inn can be transformed into an area where tradesmen can rest and tourists can also listen.

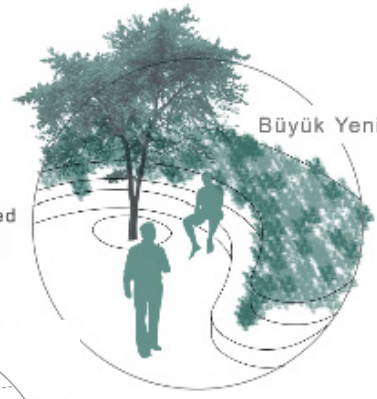


Büyük Valide Inn

It would be more efficient to use urban furniture attached to the wall in narrow streets.



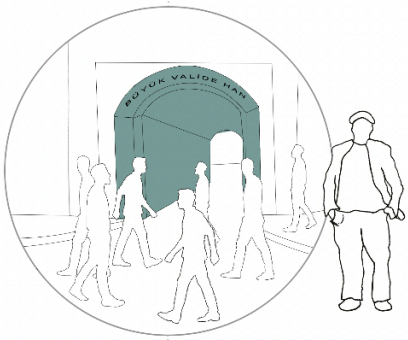
Urban furnitures



Büyük Yeni Inn

The courtyard of this inn can be transformed into an area where tradesmen can rest and tourists can also listen.

People can fall due to the bad designed and crowded roads.

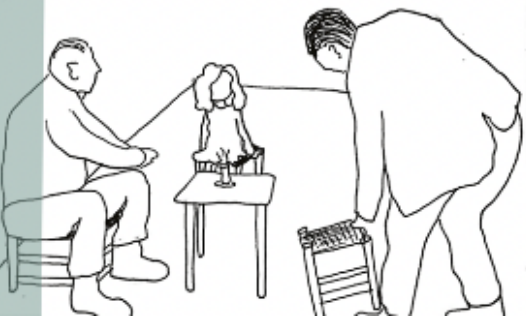


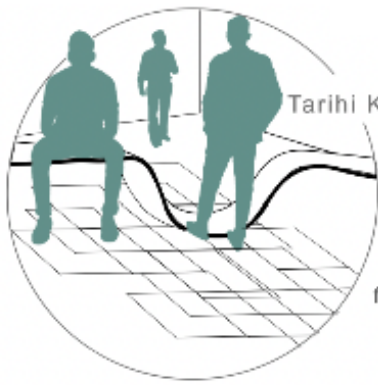
There is an inn in the middle of the slope at the closest distance to each road, but its courtyard is only a parking area

Roads

Some parts of the roads are rough and make walking very difficult. In some areas, the road suddenly turns asphalt. Roads must be designed.

Fabric shops-My grandfathers friend

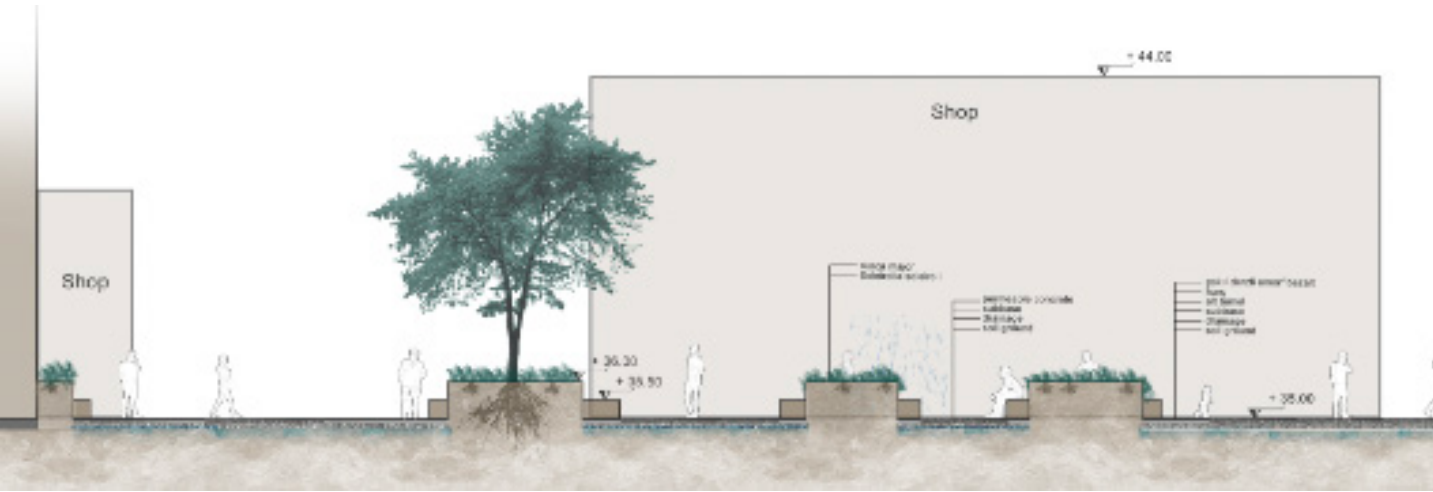


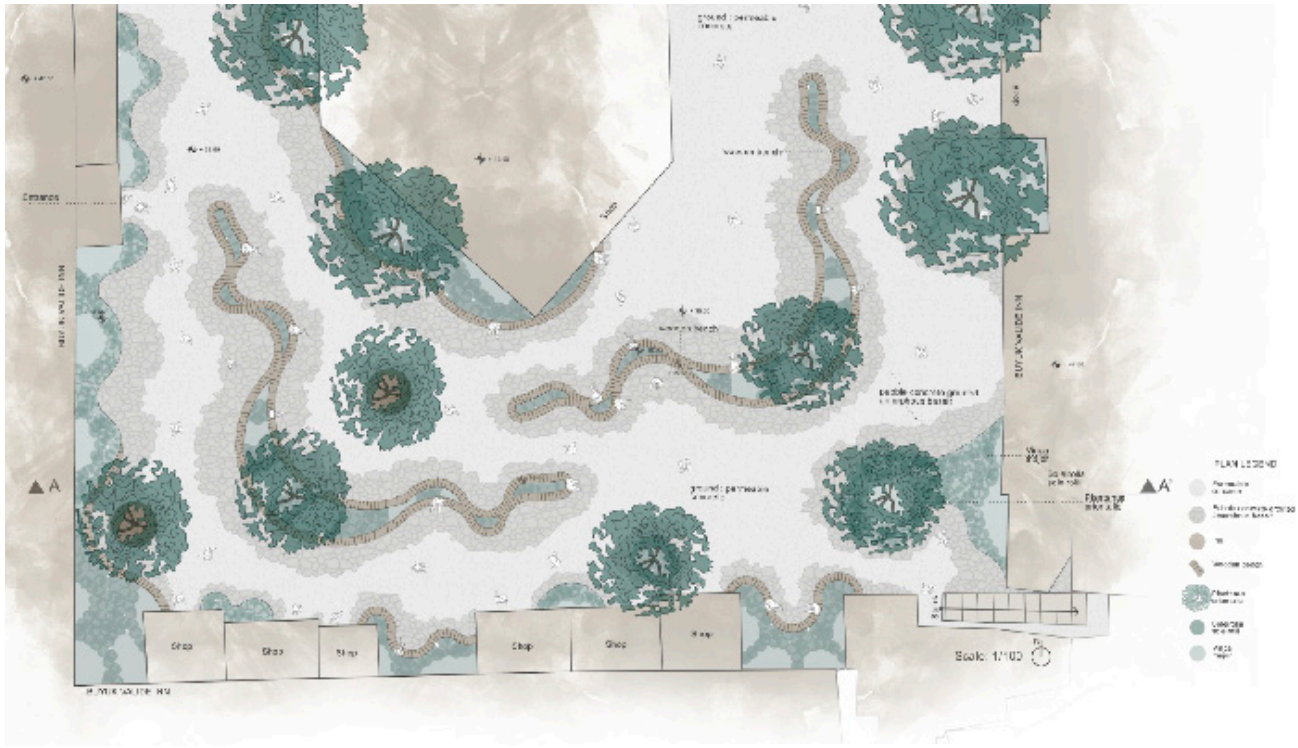


Tarihi Kürkçü Inn

This area is still busy but there is still no place to rest while shopping in the area.

I designed urban furniture for this inn and wanted to take attention with flooring to the furniture.


Shop
Shop



Scale: 1/500

Summer

Plantanus orientalis

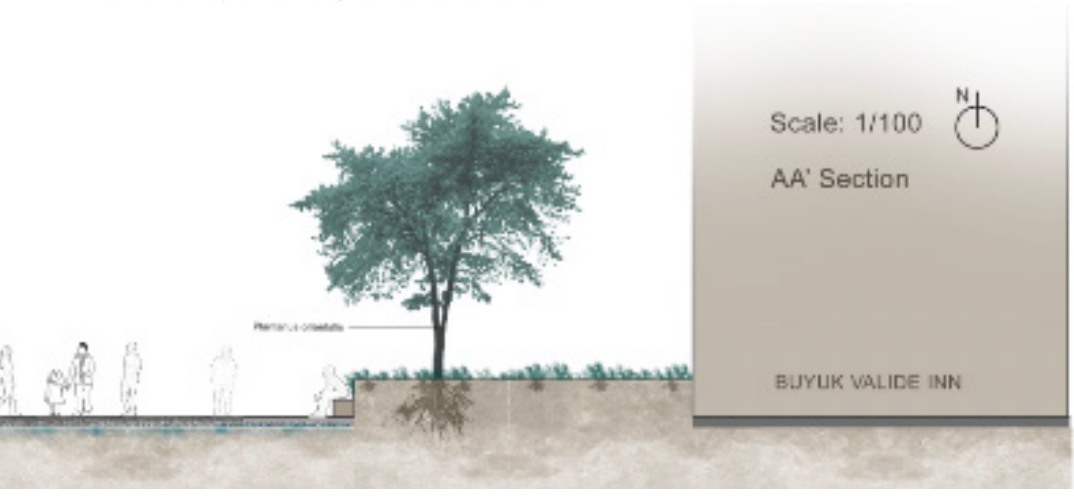
Autumn

Vinca Soleirolia major soleirolii

Autumn-Winter

Winter

Happy End

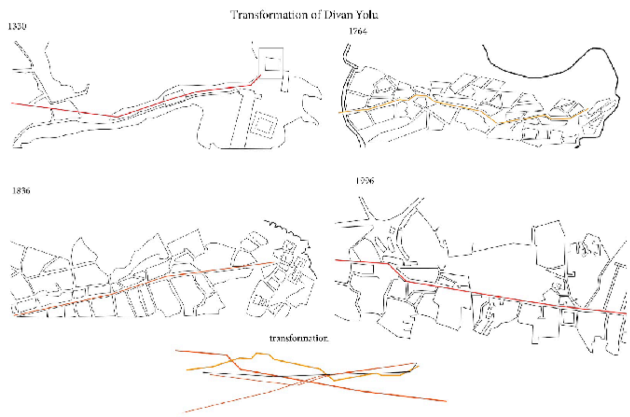


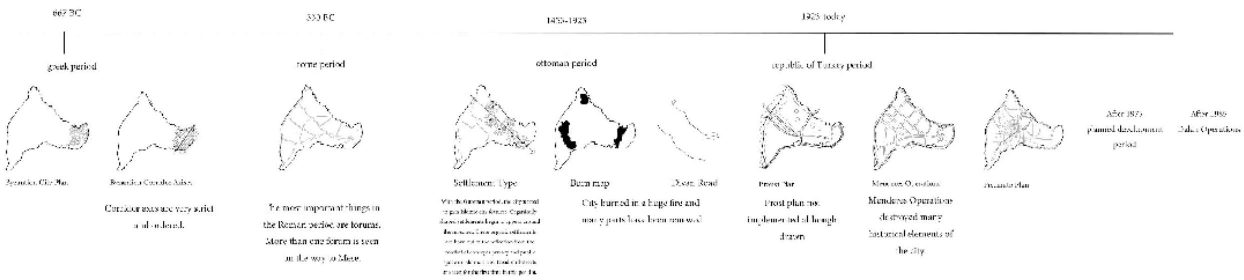
SECTION LEGEND

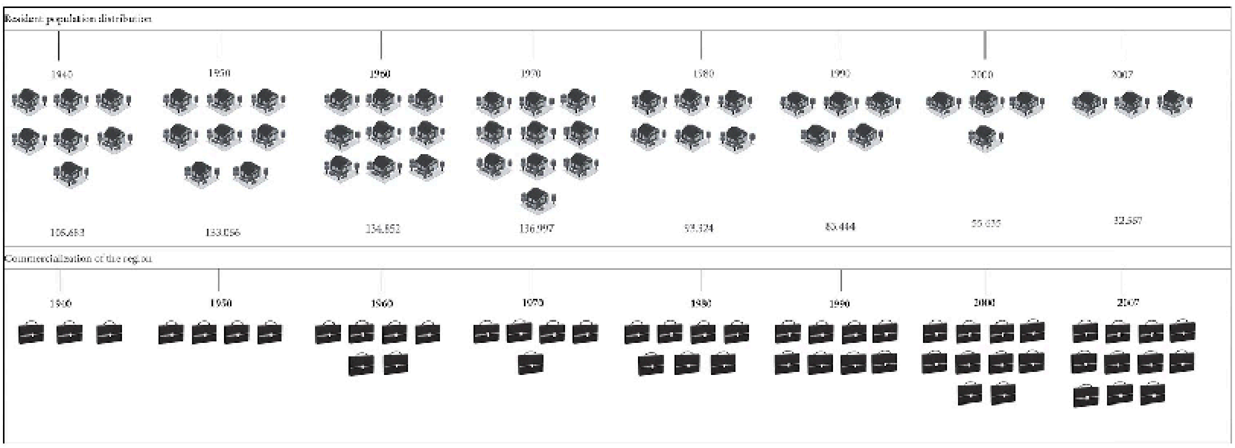
- Permeable concrete
- Pebble concrete grouted amorphous basalt
- Inn
- Wooden bench
- Plantanus orientalis
- Soleirolia soleirolii
- Vinca major

AN ISTANBUL STORY: DIVAN YOLU

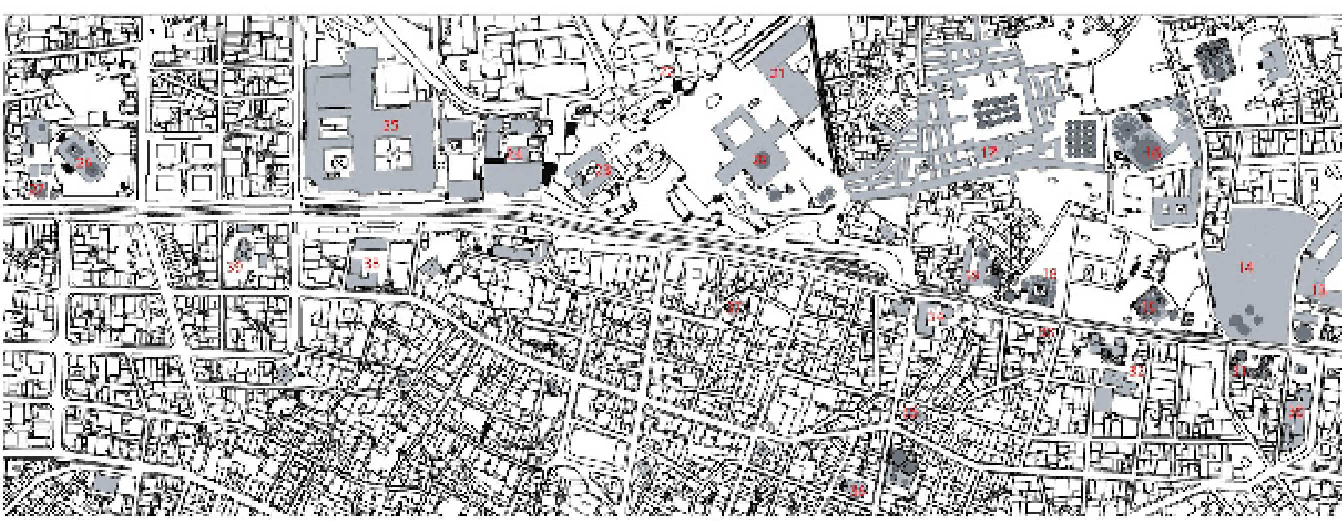
IREMNUR ALACA



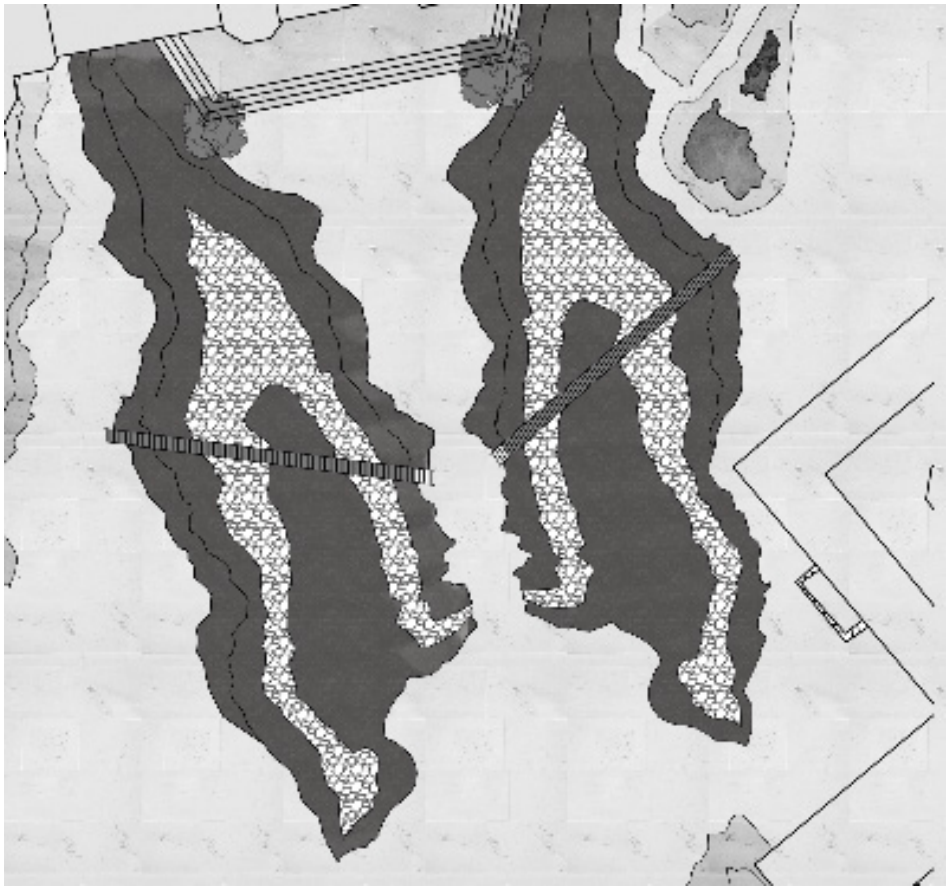


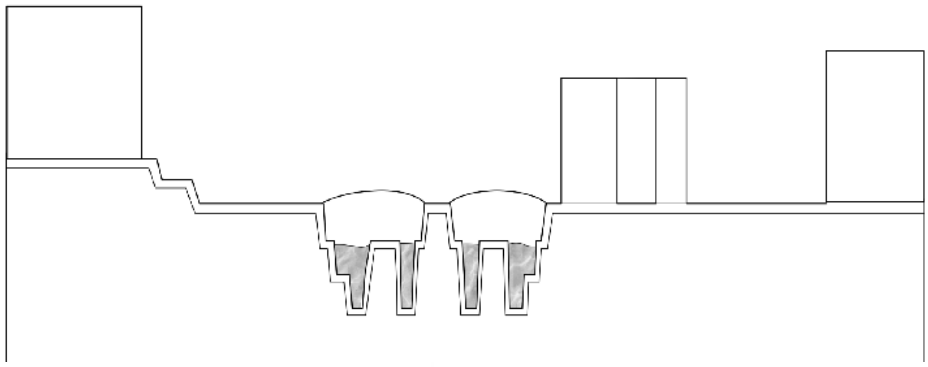


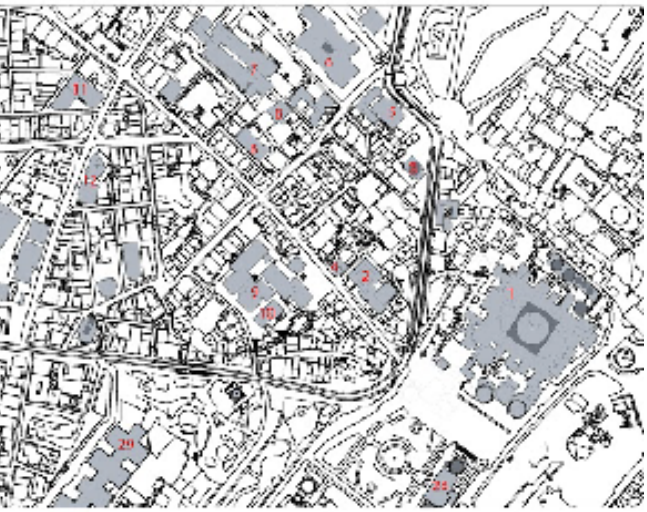
Today's Condition



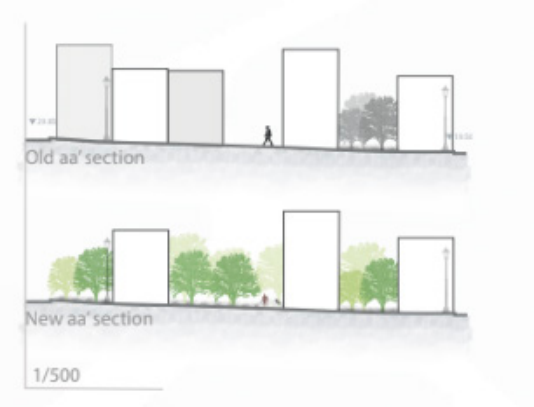
1- Ayasofya Mosque
2- Police Headquarters
3- Zeynep Sultan Mosque
4- Yerebatan Mosque
5- Juvenile Court
6- Istanbul Governorship
7- Istanbul Tax Office
8- KYK
9- Prime Ministry State Archives
10- Haseki Hospital
11- Public Education Center
12- Mahmut Nedimpaşa Mosque
13- Sultan 2. Abdülhamit Tomb
14- Çemberlitaş Bath
15- Atikali Mosque
16- Eminönü Müftülüğü
17- Grand Bazaar
18- Turkish Culture Society
19- Çorlulu Ali Paşa Madrasa
20- Beyazıt Mosque
21- Beyazıt Public Library
22- Istanbul University
23- Turkish Calligraphy Arts Museum
24- Merkez Library
25- Istanbul University Faculty of Literature
26- Laleli Mosque
27- 3rd Sultan Selim tomb
28- Haseki Hürrem Sultan Ba
29- İstanbul Adalet Sarayı
30- Eminönü Mayorship

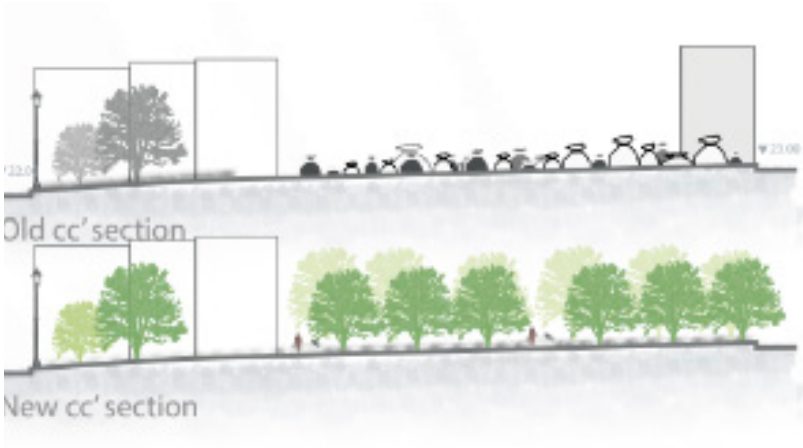


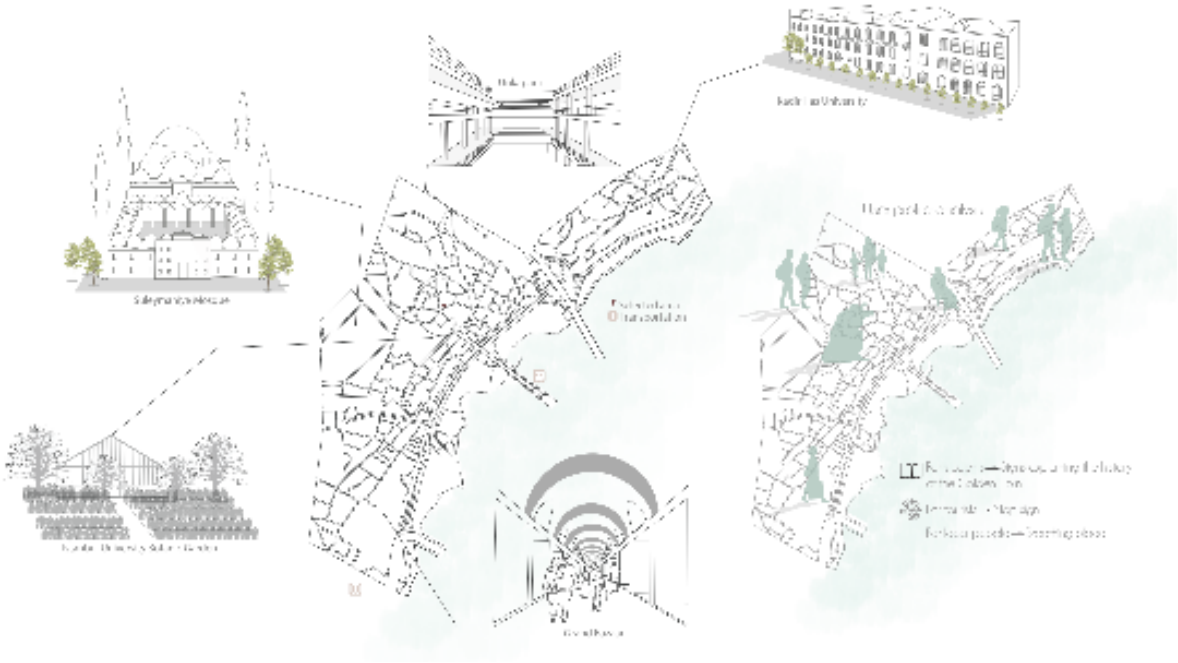




A NEW HALİÇ TUGBA KURT







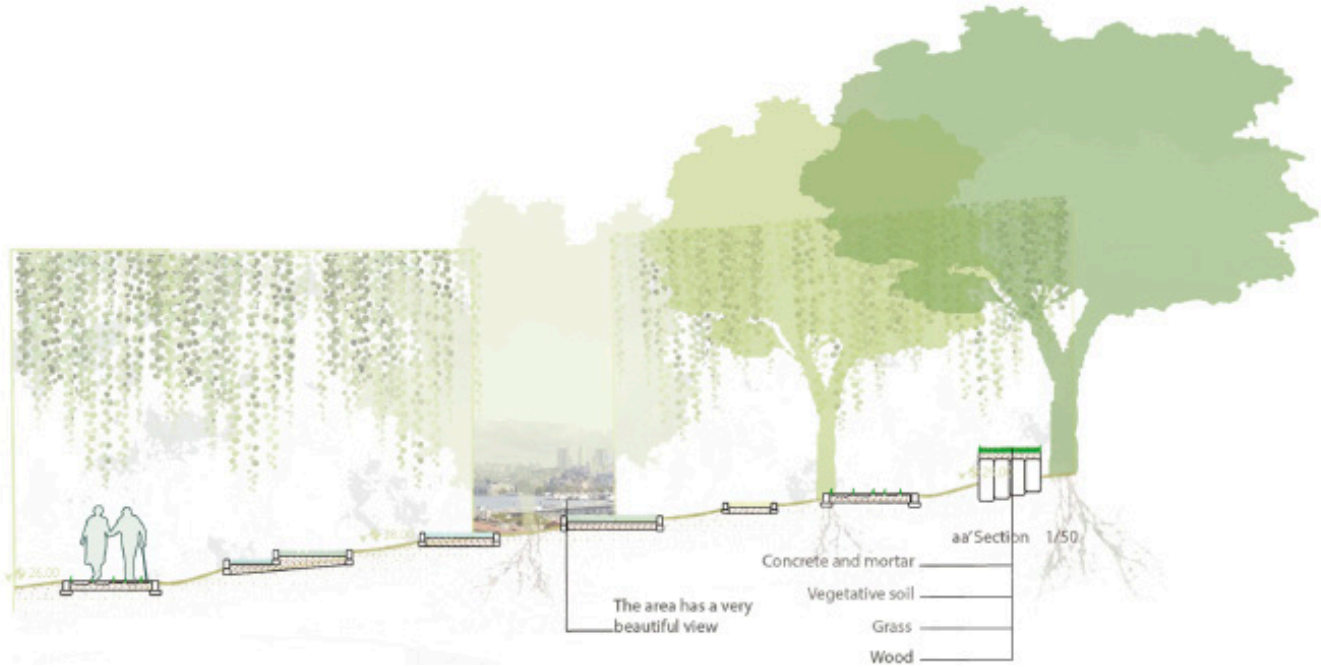
Green spaces and school analysis

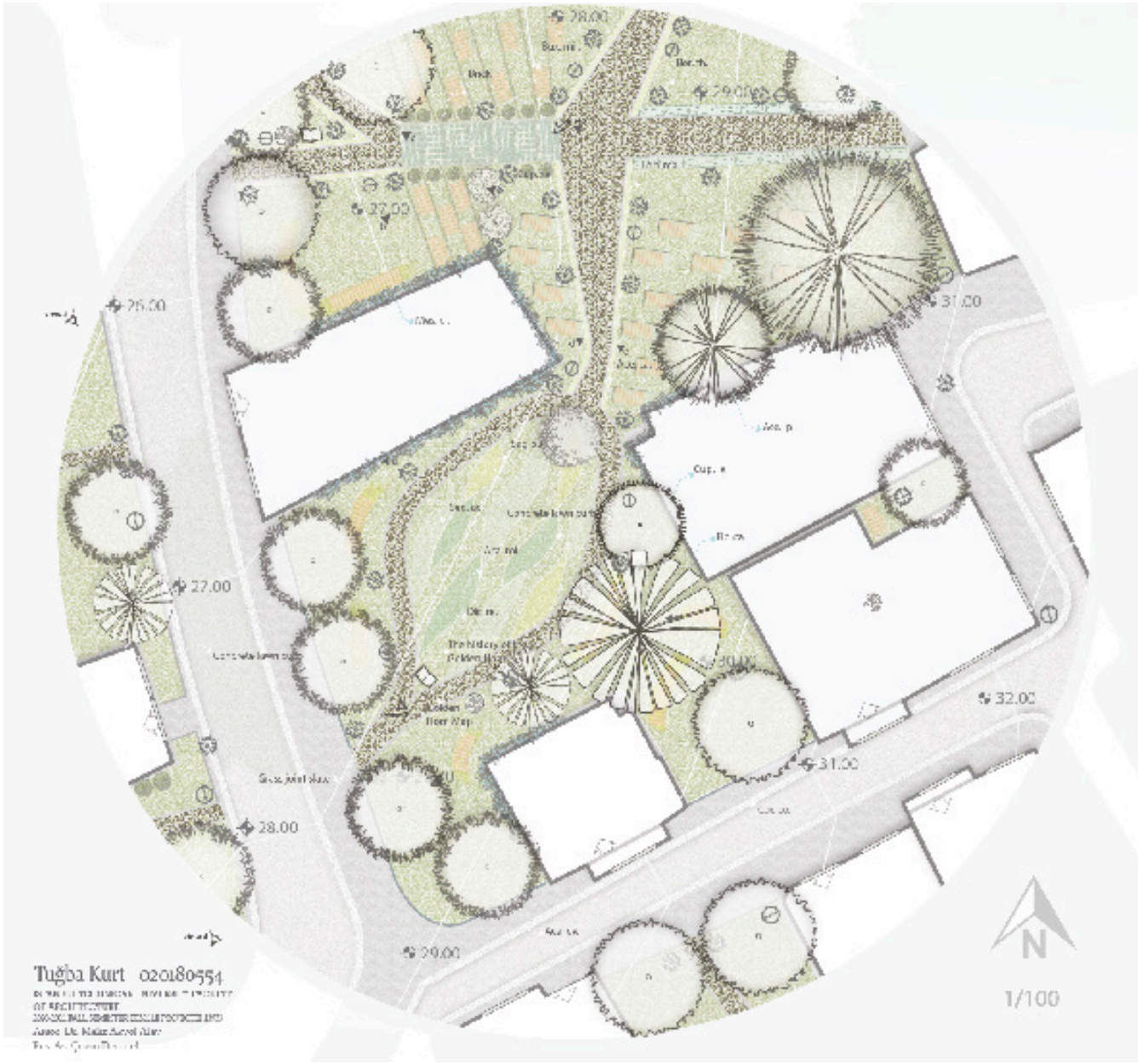
Top analysis

Contour line map


First version
10 days later
20 days later
30 days later
40 days later


Haliç
Parking Garage
Istanbul University Botanic Garden
Suleymaniye Mosque
N
1/500
Private garden
Street lamp
Green area unavailable
Waste area
Mosque
Wall
Ruin
Housing
Religious facility
Pathway


aa' Section 1/50
Concrete and mortar
Vegetative soil
Grass
Wood
The area has a very beautiful view


28.00
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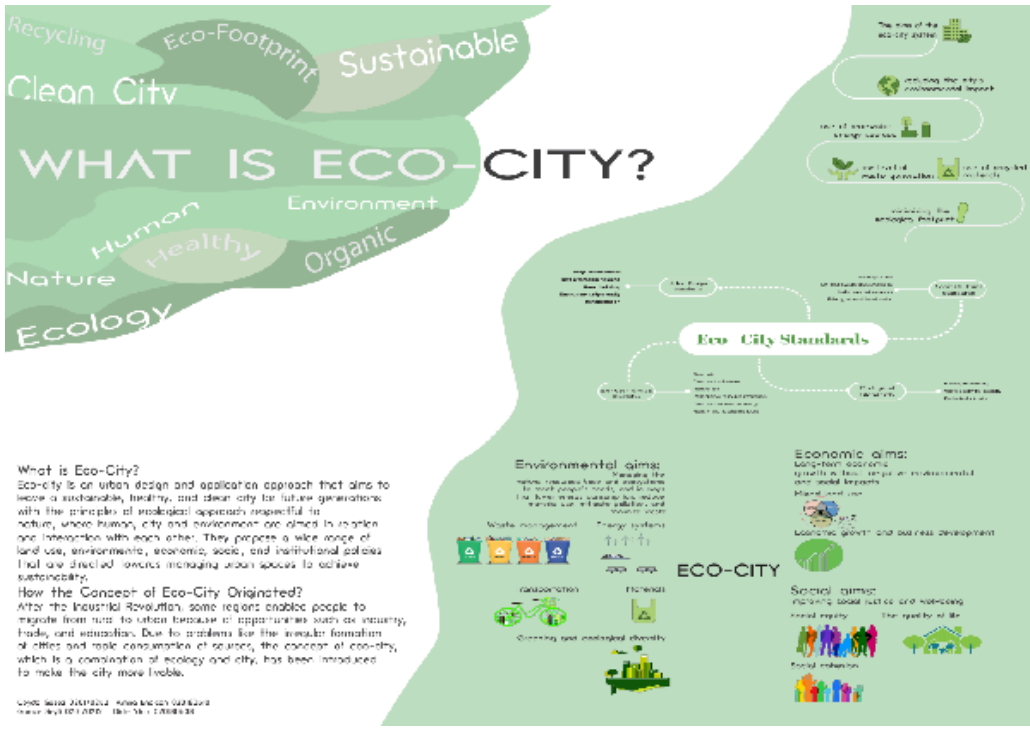
COMMON MODULE

COMMON MODULE

Contemporary Agenda | Observing emerging environmental issues with design
This common module will be held within Project III of the Foundation Studio for three studio meetings of the Fall semester of the 2019-2020 academic year. The activities of Common Module– Contemporary Agenda are designed to bring an approach towards the definition and perception of "ecological issues", "environmental change" and the "virtual design" in the disciplines including urban and regional planning, and landscape architecture. These topics include Climate change, International migration, Smart city, Eco-city, Universal design, Foot security, Virtual landscape, etc.

Altogether, the instructors will provide a learning environment for students from these departments. Attendees will work on common design problems, be expected to apply the knowledge and use the skills acquired via their respective experiences of their previous and current semesters.

5	16 Nov.	**COMMON MODULE** *Seminars on Landscape Architecture and general information on common module process.*	Seminar
	19 Nov.	**COMMON MODULE** *Seminars on Urban and Regional Planning and information about term paper and study groups and student distributions.*	Seminar
6	23 Nov.	**COMMON MODULE** *JURY: Final Panel of the workshop productions and critics*	Jury, Panel and submission



Landscape Architecture brings nature to the city, enables people to connect with the natural environment by creating green networks and living spaces. The vegetation in the city creates a natural habitat, reduces the heat island effect of the infrastructure built, improves air quality. It makes cities more livable and creates a sustainable solution with urban density and natural processes. Approaches such as permaculture, hobby and city gardens, roof gardens, vertical gardens, road afforestation, green corridor, green road are approaches that can be taken into consideration in terms of eco-city.

Urban Design

Eco-city planning system ensures the continuity of limited natural resources and sensitive ecological balances by determining suitable areas for potential land uses. Approaches that bring solutions compatible with natural processes and ecological characteristics are taken into consideration in the design studies of the city at different scales. In this context, factors such as topographic structure, geological-geomorphological structure, soil and drainage, climatic factors (prevailing winds, temperature, and humidity, sun, and shade for summer and winter), existing vegetation, land aesthetics, landscapes, groundwater, and rainfall should be handled holistically (Rezafar, 2011). Bicycles, public transport or low emission, non-polluting, environmentally friendly vehicles should be preferred (Akinci and Pouya, 2019).

VIRTUAL LANDSCAPE

Following the dictionary definitions, the word "virtual" connotes "temporarily simulated or extended by computer software" in its definition, and "landscape" means "the land's forms of a region in the aggregate". In a combination of these two definitions, a virtual landscape means "landforms and components of a region in aggregate, that are temporarily simulated or extended by computer software".

[illegible]

VR has really taken off in recent years, and is now being used in a variety of different fields, including military training, education and sport. NASA uses VR software to control robots on Mars. It has even begun to be used to treat mental health conditions by providing relaxing meditation experiences aimed at reducing stress and anxiety. This software (smartphone-based ones particularly) is being increasingly used in architecture and garden design.

WITHOUT VIRTUAL LANDSCAPE	WITH VIRTUAL LANDSCAPE
▪ Abstract, insufficient maps ▪ Plans are hard to understand for a client ▪ Manually modeled 3D scenes convince neither the stakeholders nor the public	▪ Real-time virtual landscapes enable the intuitive communication of a complex information ▪ Direct manipulation of landscape objects ▪ Interactive illustrative rendering ▪ The ability to choose and change designs immediately ▪ The ability to switch between any perspective view

[illegible]

3D Landscape models include:

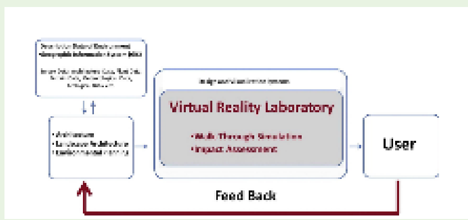
- Digital terrain model (DTM)
- 2D imagery data such as aerial photography or topographic maps
- 2D planning data such as cadastre data or street networks
- 3D building data
- 3D biotope and vegetation data.

The landscape model can be complemented by graphics objects (annotations, virtual sky, legends)

VR creates a digital 3D experience that we connect with, and allows the user to instantly engage with the space. They can explore and visualize designs by walking through gardens to see them before a build has even begun. VR gives the designer greater flexibility as the design develops, rather than producing photorealistic renders. This can be achieved by adding sound, wildlife effects, altering the weather and lighting, portraying the passing of time from sunrise to sunset, and even showing how the garden changes through the seasons.

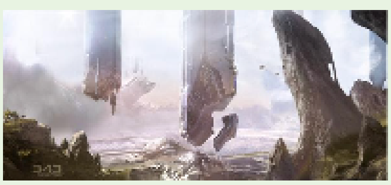
A design visualization rendered with Enscape [illegible]

[illegible]



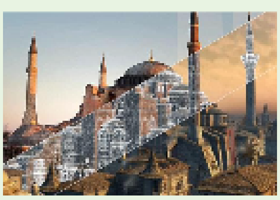
[illegible]

THE IMPORTANCE OF ARCHITECTURE IN VIDEO GAMES



[illegible]

Video game architecture can be perpetually dynamic, potentially shifting shape around real-time inputs and conditions. It can be laced with interactive features, bringing the architecture to life in ways no physical building could ever achieve.



It can theoretically exist eternally. Game environments are propagated throughout the world, on millions of individual computers. Video game architecture can reach tens of millions of people, connecting them from geographically disparate locations all over the world, in real-time.

SANSSOUCI PARK

A prominent use case for implementation of real-time virtual landscapes has been implemented by reconstruction of a "lost garden", the former "Italian cultural showpiece". It was largely arranged by Peter Joseph Lenné (1789–1866).

[illegible]

The garden was laid down in 1834 to the west of the Roman Baths in Sanssouci park. Within only 50 years after its creation nothing remained of the garden due to many of the plants used are not winter-hardy in central Europe.

[illegible]

In 2004, more than 30,000 people visited the exhibition "Prussian Green: From Royal Court Gardeners to Curators of a Historical Garden Heritage" where the virtually reconstructed Garden of the 19th century was presented to the public using the Lenné3D system within a virtual reality environment.