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Healthcare Station...2035

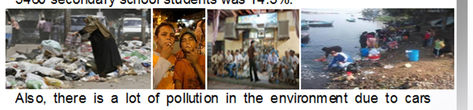
Connecting Healthcare with People

Healthcare in Egypt

The whole healthcare sector in Egypt suffers a great deterioration especially in healthcare buildings ,those buildings in Egypt are repellent, un safe and have too low quality mostly in rural areas. There are abominable stench ,infections, and no care about cleanness nor waste management Also, there are lack of services ,equipments , medicine , qualified staff,..... .According to the world healthcare organization the Egyptian population is about 92 million, Egypt have the highest prevalence of hepatitis c about 14% from its population ,high rates of obesity , hypertension and many chronic diseases.



On the other hand , there is no healthcare awareness among people in rular areas who suffers from extreme poverty and ignorance. For example the smoking rate in Egypt is getting higher every year and according to the Egyptian government about 19.6% of the Egyptians are smokers, and according to the WHO country office in Egypt the prevalence of smoking through a sample of 5460 secondary school students was 14.3%.

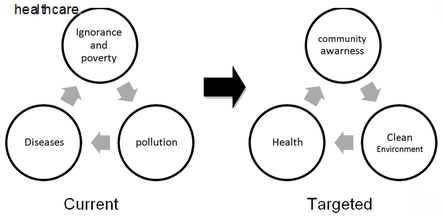


Also, there is a lot of pollution in the environment due to cars ,factories, burning garbage, etc .According to WHO Egypt in 2017 has an extremely high pollution level (PM_{10}179, PM_{25}76) ,and this makes the crises of healthcare goes worst.



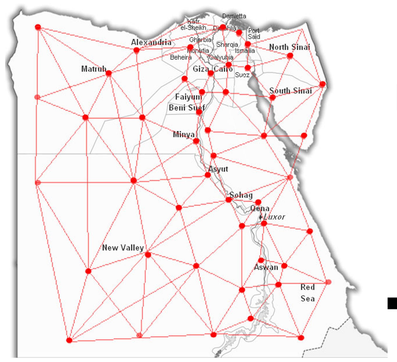
Project goal

The project aims to give a better quality of health life, by making a sustainable and integrated smart healthcare building ,which creates harmony between community ,environment and healthcare.



Project site

This project will be conceded as a typical building that could be repeated in many rural villages and cities in Egypt which suffers from poverty ,pollution ,diseases, ignorance , low quality of life and many other problems . The buildings all around Egypt will be digitally connected to provide an integrated healthcare system and database.

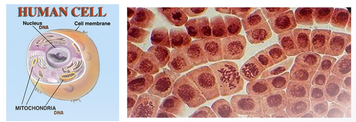


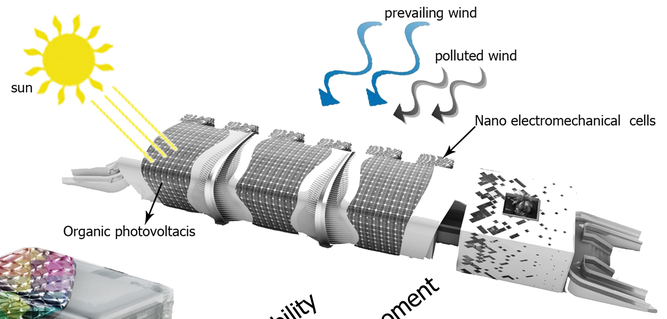
concept

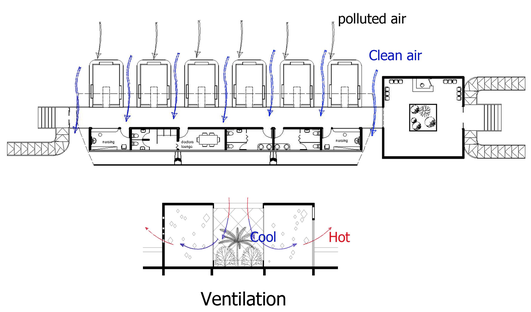
poverty → Ignorance → Pollution → Diseases

Because of the extreme ignorance and poverty in a lot of Egyptian villages ,there had been a lack of healthcare awareness among people in addition to the environmental pollution and the spread of diseases. So , The project had the concept of a healthcare station , it consists of the station building and the health unites. Those health unites could move to the required places to spread health awareness and provide healthcare facilities to more people

The conceptual design is to make the building like a small station , with a group of movable smart health units to deliver health around the area. Each health unit has an envelope surrounding it with all its components, this envelope is like the membrane in the human cells which saves and contains it, and then the units are put next to each other like a group of cells. The patterns and colors on the building envelope are inspired from Egyptian vernacular architecture







Technology
Low Cost & minimize Area
Health culture
Treatment
Identity

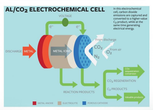
sustainability → Clean Enviroment → Awareness → Clean Energy → Health

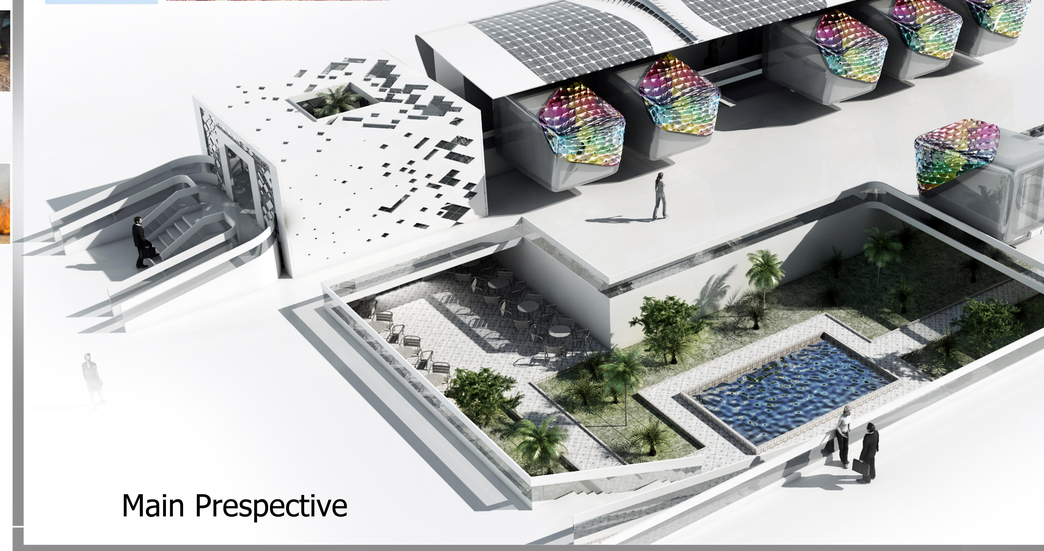
Building materials

The station building will use recycled materials from other old healthcare buildings like bricks ,wood ,steel ,etc .

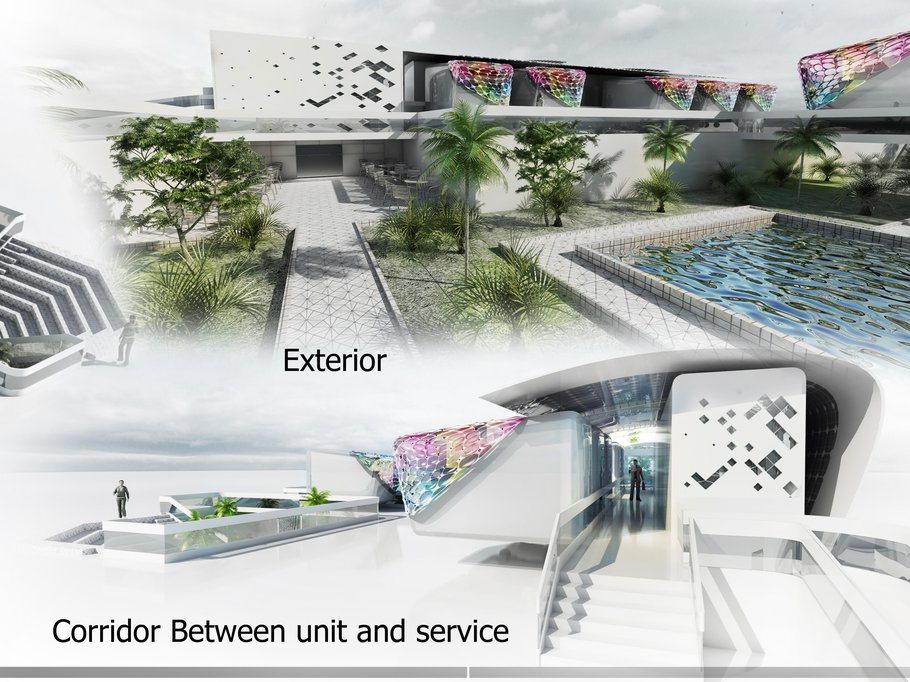
The health unites will use high tech material. The inner box uses a nano plastic material which is water repellent ,self cleaning ,anti bacterial ,low weight and stands up to extreme changes in temperature, pressure and humidity. The outer envelope uses a nano material called graphene which is transparent ,thin ,strong, self cleaning , flexible and conducts electricity . The frame on the envelope is made of nano plastic material and had electromechanical cells to extract co_2 from the air.





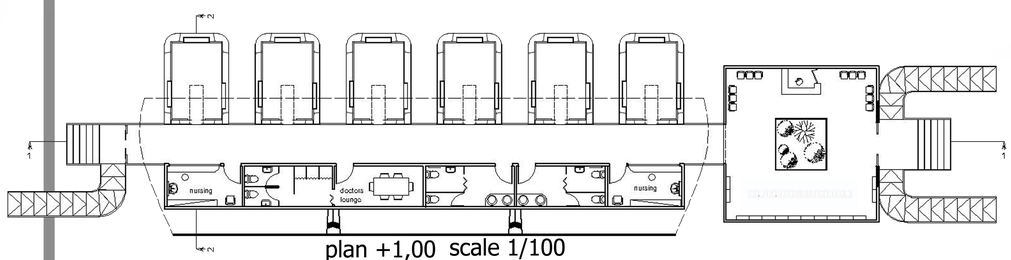


Main Prespective

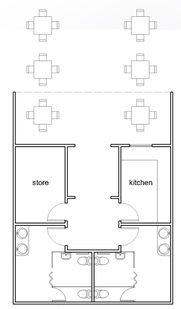


Exterior

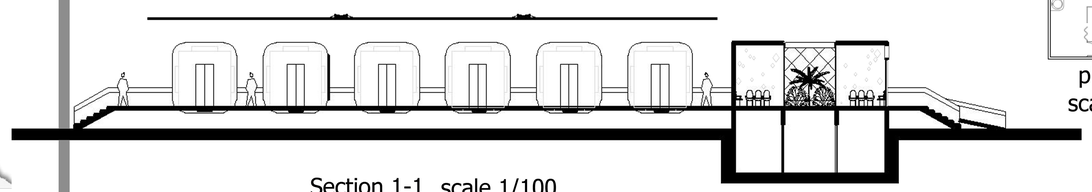
Corridor Between unit and service



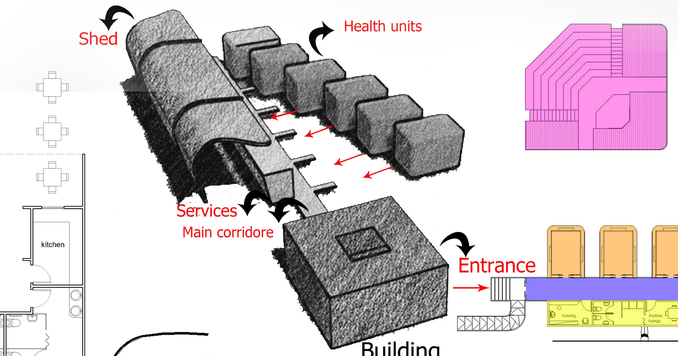
plan +1,00 scale 1/100

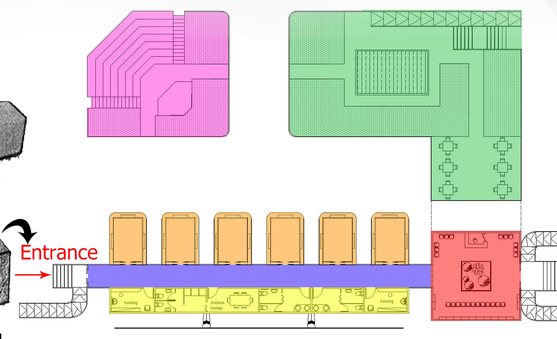


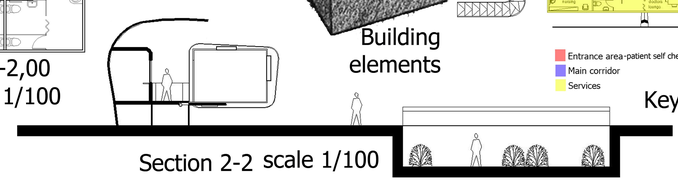
plan-2,00
scale 1/100



Section 1-1 scale 1/100







Section 2-2 scale 1/100

Smart Health Unites

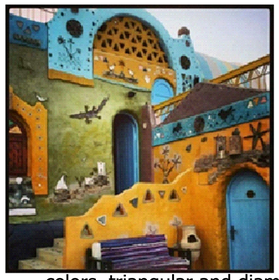
- Graphene transparent skin
- Nano electomechanical cells to produce energy from co_2
- Self driving
- Multiuse unit
- Remote control for all the health system inside
- Folding tools and equipments
- Nano materials self cleaning - non bacterial -water repellent -light weight
- Smart examination screen
- waste management

Those unites are like an integrated healthcare multiuse unites as they provide examination ,treatment, x-rays , medical analysis, medication ,small operations, etc in many medical specialties. Each unit contains some equipments and tools which combined in the unit 's walls and roof of the inner box. Those equipments and tools are designed by a dynamic folding system which allows them to come out or not according to the use of the health unit by using a remote control . There is also a thin screen on the right wall to help patient and doctor to see the examination data and required treatments. Those units also contains a space for waste separation and management, the waste goes from the under floor waste box in the unit to the suction pipe under the main corridor until they arrive to the waste truck .The unit has a sterilization system for the tools and air purifying system. Thanks to graphene material the envelope will be able to work as touch screens so it can be interactive with the people . The frame on the envelope of the units has some electromechanical cells which can extract CO_2 from the air and convert it into electrical energy , which is enough to operate the whole unit system , and those electromechanical cells are oriented to the north to be in the direction of the prevailing wind which is polluted .

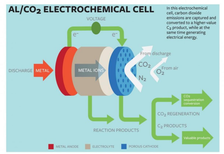




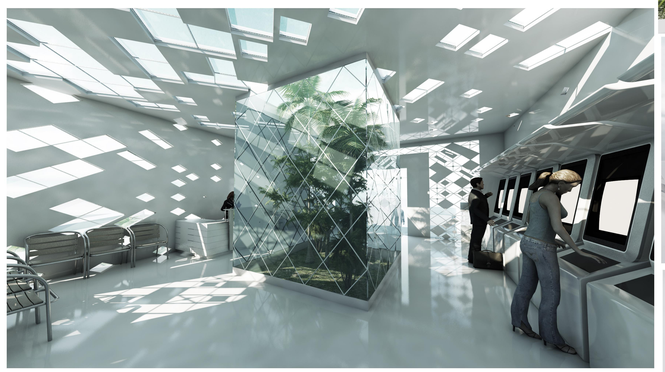




colors ,triangular and diamond shapes inspired from traditional architecture

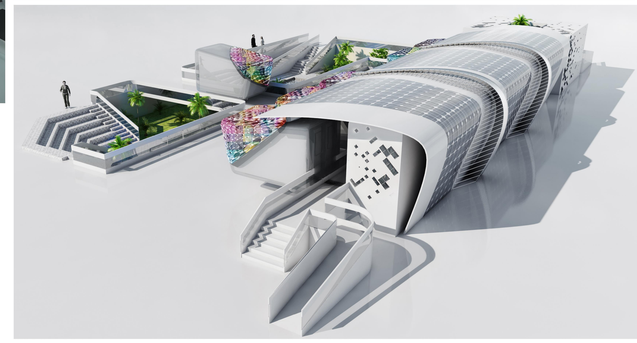


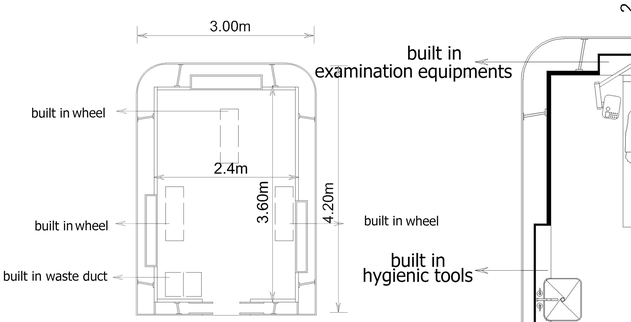
Nano electromechanical cells to produce eletricity from CO2



Patient self check in space

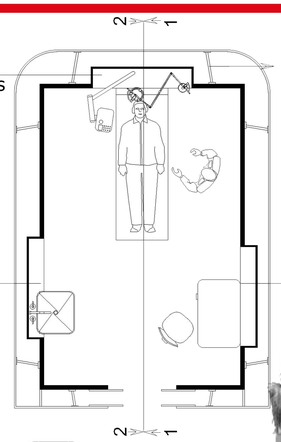






Health unit plan

built in examination equipments



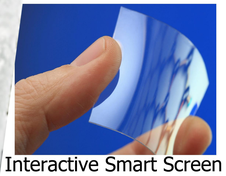
hanging cabels

built in hygienic tools

built in workstation tools







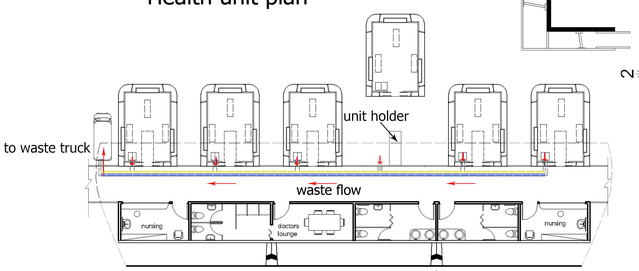
Interactive Smart Screen Graphien Skin

movable, self driving

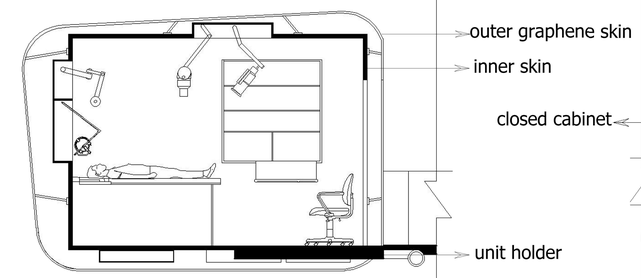


In the outer spaces there has been a lot of concern to landscape elements like green spaces and water fountains , in order to limit the effect of hot climate and to improve the mental health of the users and to encourage them to interact with the building. There is also a cafeteria and an open .theatre to raise awareness about healthcare

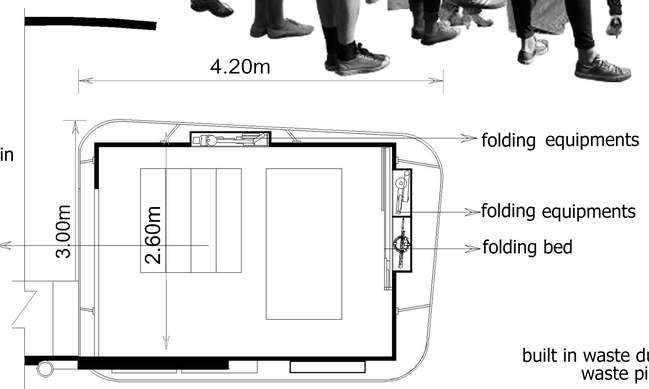




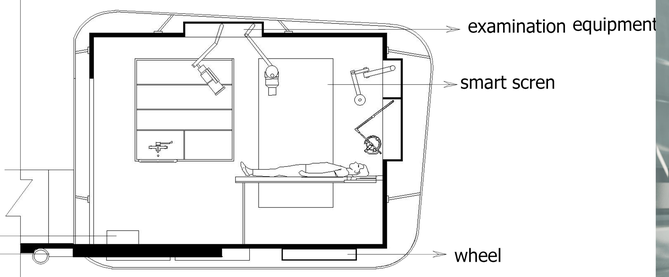
Waste mangement system



Section 2-2



Section 1-1 (vacant)



Section 1-1 (occupied)