



After working in BIG, I started working for Ecosistema Urbano to have more knowledge and skills of social and ecological aspects of architecture. Starting with the design of Exhibition in Louisiana Museum, I have done many different types of projects and I am quite happy that the constructions of Rivas (kindergarten in Madrid) and Air Tree (Climate control building for public space) in Shanghai Expo will be finished very soon!!

2009-2010

What If...? Cities

Time: May 2009

Eca

Type: Exhibition

Program: Green Architecture Exhibition

Location: Copenhagen, Denmark

Status: Realized

Architecture

Madrid
ES



230,000 mi

122,151 Days
15,564 days
8 million hectare

80% of people
will live

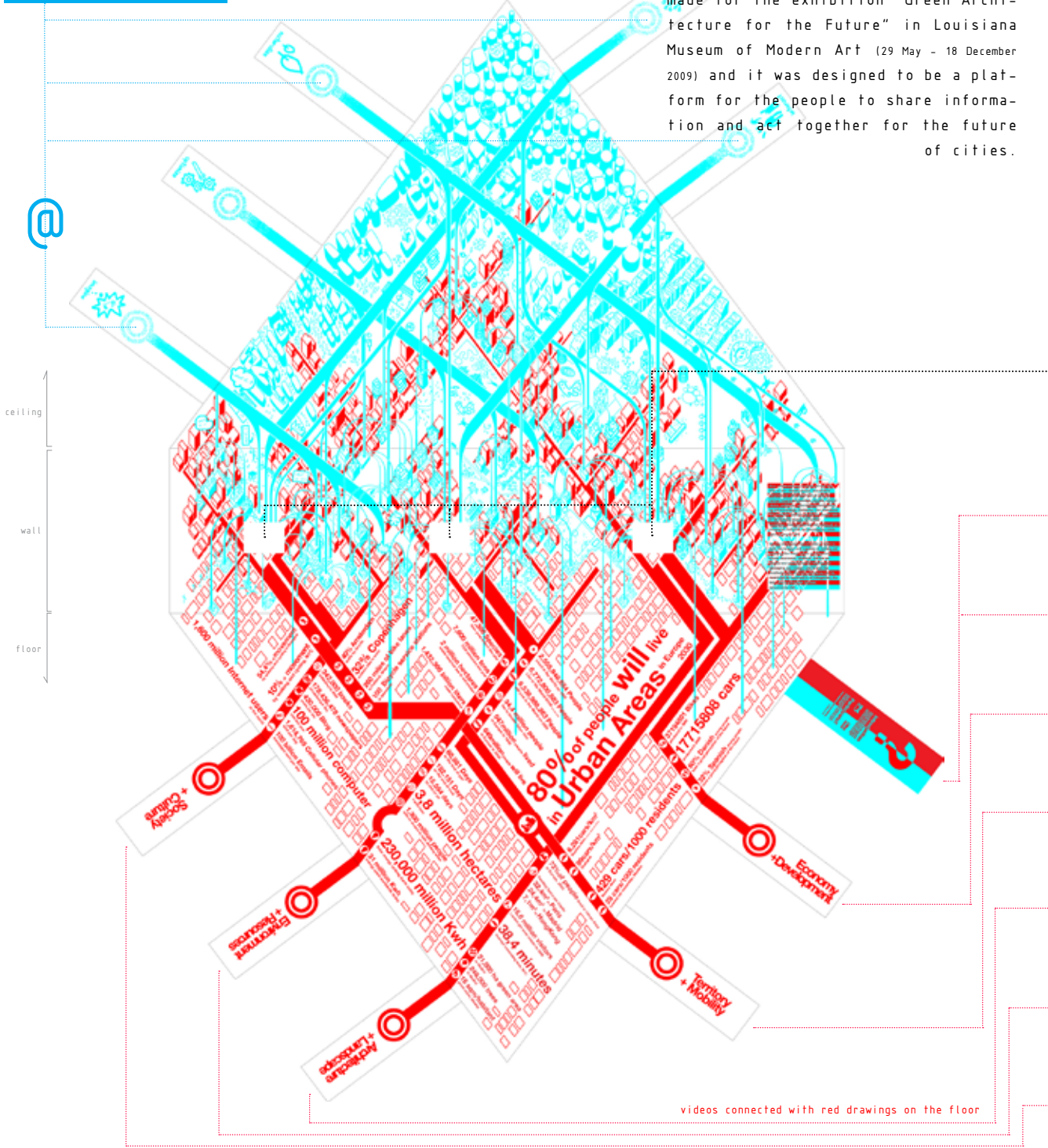
in Urban Area
6-281 cars/km²
99 cars/km²
73% of pe
dwelling
32
in Europe, 200



ideas through internet

updated ideas from all over the world through internet
(the devices are wifi digital picture frames)

"What if...? Cities" is an installation made for the exhibition "Green Architecture for the Future" in Louisiana Museum of Modern Art (29 May - 18 December 2009) and it was designed to be a platform for the people to share information and act together for the future of cities.





As you can see from pictures, all drawings and videos are in **RED** or **BLUE**, and these colors represent, **Current Condition** (Red) and **Ideas for the future** (Blue). Red drawings of current situation start growing from the floor to the wall and blue drawings of new ideas extend from the ceiling to the same wall; 2 colors, current situation and ideas, meet on the main wall. The wall represents possible future of cities, and videos of projects by Ecosistema Urbano were placed on the wall as examples.

Including these 3 videos of projects, **13 screens** are installed in the exhibition space to show introduction, current situation (red animations below), ideas from the world (live updated ideas through internet, <http://www.flickr.com/photos/38081051@N04/>) and examples of idea from Ecosistema Urbano.

If you are interested in these 13 videos all made by me, please visit whatifcities.com



"What if..." Ideas from Ecosistema Urbano

Videos of ideas and realized projects from Ecosistema Urbano

Current Conditions

Animation illustrate current situation of cities by data visualization and the numbers on the animations keep changing according to the statistics.

introduction01

introduction02

Economy&Development

Territory & Mobility

Landscape & Architecture

Environment & Resources

Society & Culture

The main content area consists of a grid of 13 red-themed screens. Each screen displays data visualizations such as world maps, bar charts, and icons representing various urban metrics. Some screens include numerical data points, such as '27018878' for mobile phones, '3685055' for cars produced, and '52220' for cars produced in a specific context. The screens are organized into categories: introduction, economy and development, territory and mobility, landscape and architecture, environment and resources, and society and culture.

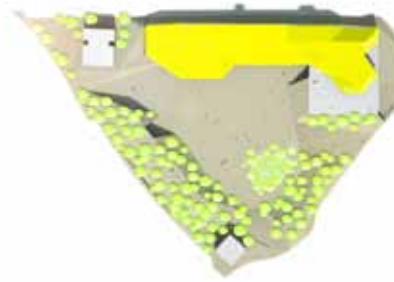
The installation has been successful with many visitors and supporting comments on various media, and now, we are invited for new exhibitions and workshops of "what if...? Cities" from some cities in Europe. The project "what if...? Cities" will be continued.



2009-2010 **Plaza Ecopolis**
Time: Since May 2009
Type: Competition
Program: Kindergarten
Size: 9400m²
Location: Rivas, Spain
Status: Under Construction
Eco
Architecture
Madrid
ES

under Construction

Plaza Ecopolis is a Pilot Project of sustainable building in Madrid, and there will be a kindergarten with community space for the neighborhood. Ecosistema Urbano won the competition in 2009, and the construction will be completed in May 2010.



valley for kids and adults

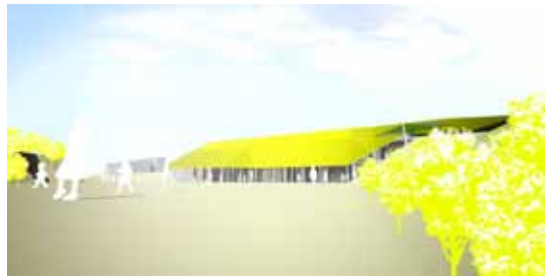
Although the main function of the project is Kindergarten and it needs to have a big playground for the kids to play, the site, which is in the former industrial area, has contaminated soil and busy traffic of trucks. For serving these problems of the site, replacement of the soil is not enough and existing soil will be dig out and it will be used for creating small hills around the site to protect kids from traffic and to create playful landscape for kids.

covered public space

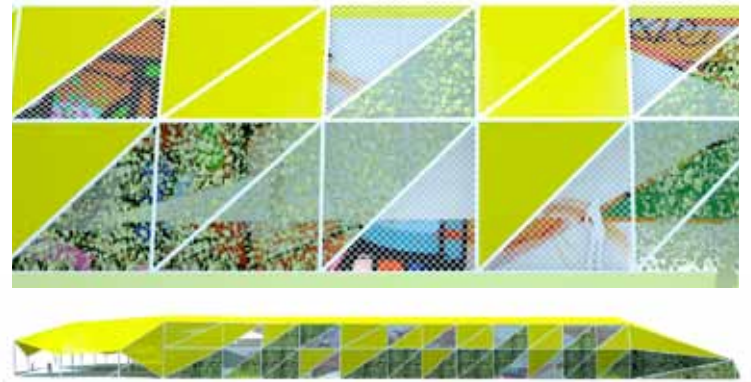
As a pilot project of sustainable architecture, the kindergarten has natural climate control and it will be covered with mobile texture. Tent and steel structure start from the solid part of the roof and it continues to create covered exterior space which will be used for comfortable public space for both adults and children.

Together with the landscape design of the site, my main work in this project was 3 dimensional design of the tent, and now we can see the part of them constructed. Tents start naturally from the roof and ending with more organic shape which looks like a wave, and the space under the tents already looks like comfortable relaxing area.





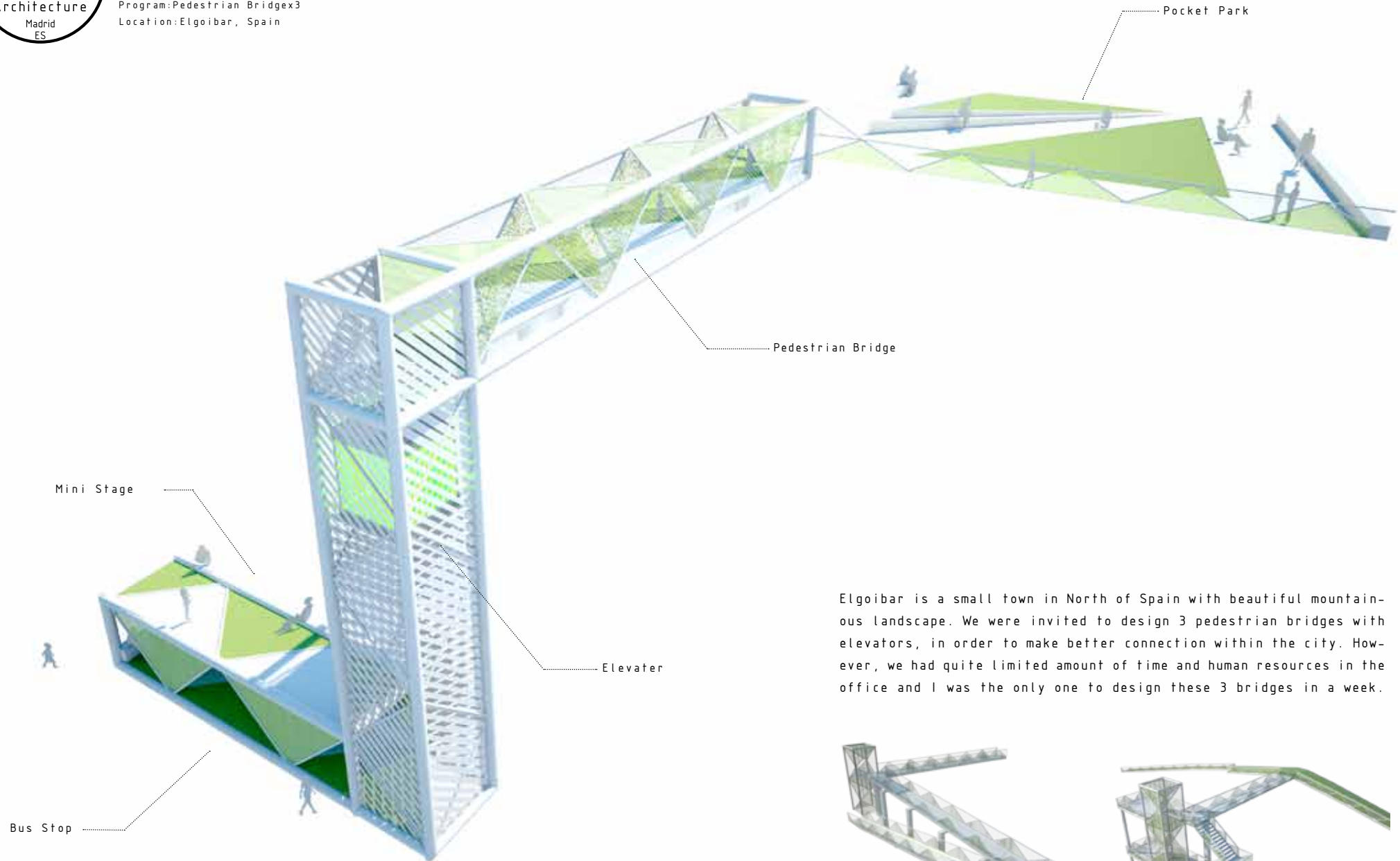
The North Facade will be covered with metal mesh, texture and plants, and we can see the paintings on the wall through these half transparent layers





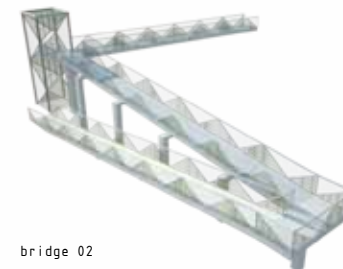
Elgoibar

Time: November 2009
Duration: 4 days
Type: Proposal
Program: Pedestrian Bridgex3
Location: Elgoibar, Spain

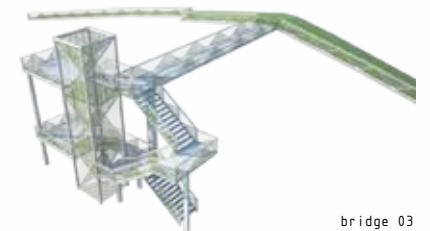


bridge 01

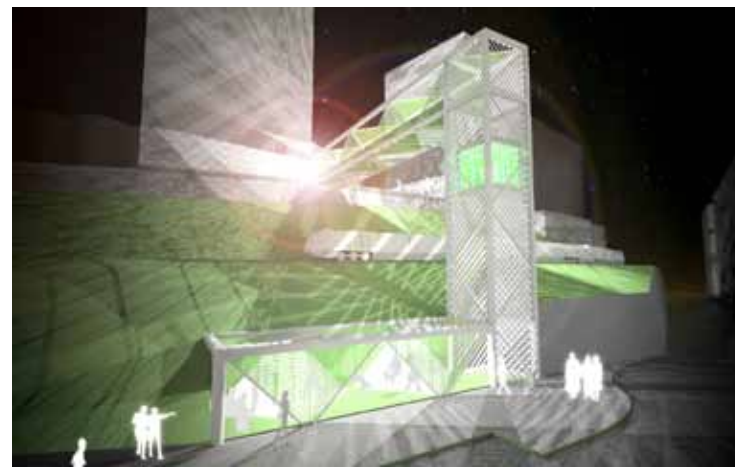
Elgoibar is a small town in North of Spain with beautiful mountainous landscape. We were invited to design 3 pedestrian bridges with elevators, in order to make better connection within the city. However, we had quite limited amount of time and human resources in the office and I was the only one to design these 3 bridges in a week.



bridge 02

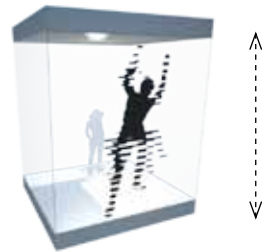
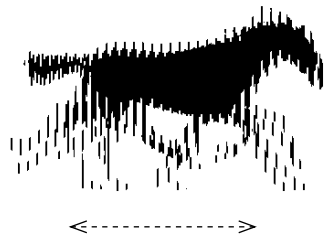
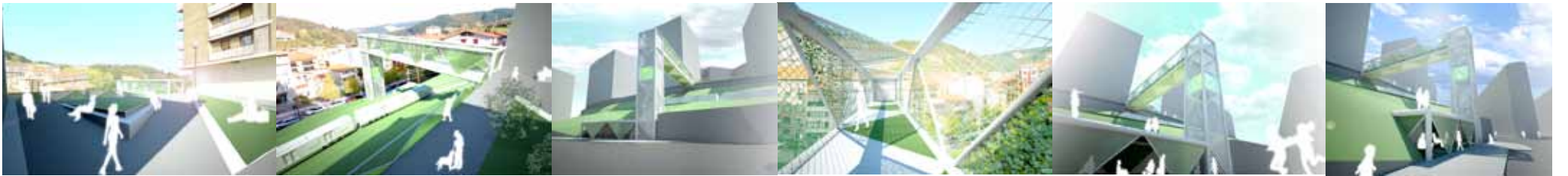


bridge 03



Bridge01 = small square
 + bridge above train truck
 + 20 m elevator
 + bus stop
 + new attraction, symbol

The most interesting bridge will be located in the city center (bridge 01) and it needs to have 20 m of height difference to go over a train truck. Since the project need to be affordable for the small town, I tried to make 3 parts of the bridge (pedestrian bridge, elevator and bus stop) with same components, and it looks as if a tube changes direction depending on the function.



slit animation on elevator

Surface of the tube is covered with truss structure and grids of sub structures follow the direction of the truss. The substructures are used also for the hand rail and the fence of the small square and 4 different parts of the bridge can be recognized as one.

Apart from the functionality, I tried to make the elevator as a symbol of the area. To make the movement of elevator more dramatic, I tried to use slit animation technique on the elevator; as the elevator move, a silhouette changes the shape (or the color of elevator changes as elevator moves). Celebration of everyday movement.





MHN

Time: November 2009

Duration: 1 week

Type: Proposal

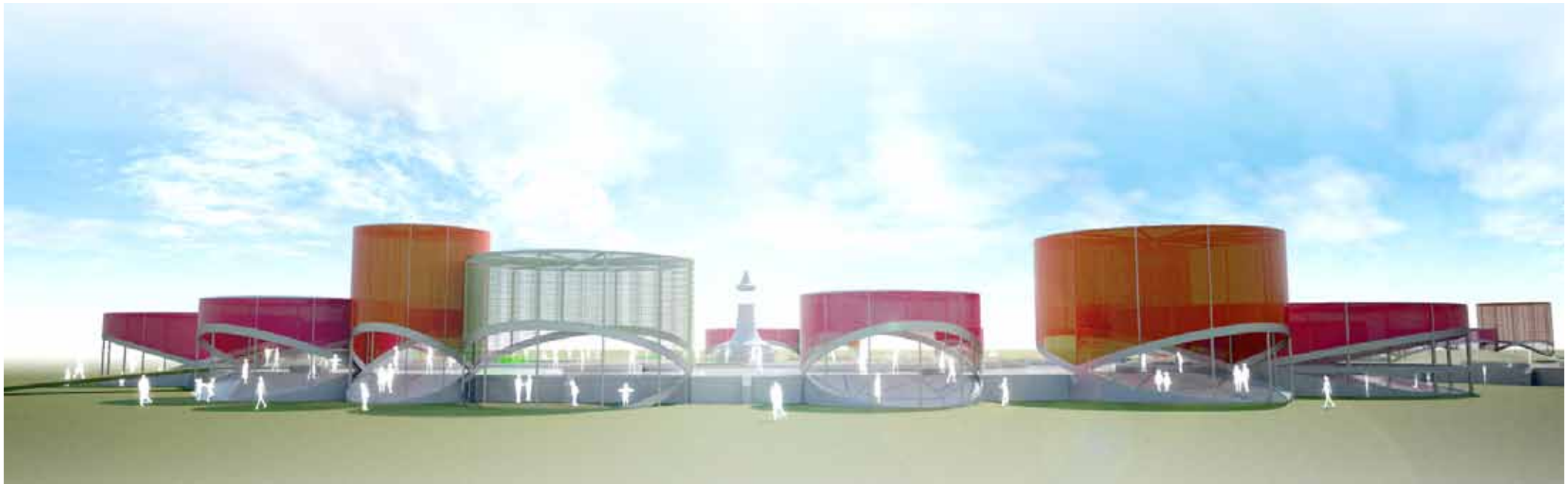
Program: Reuse of Water Storage

Size: 34000m²

Location: Mexico City, Mexico

Status: On Going





on Water Tanks

MHN is designed to activate the space above the water tanks "Tanques de Dolores" as a part of the Mexico City's principal park; **CHAPULTAPEC PARK**. Although the water tanks are surrounded by new Natural History Museum, the Papalote Children Museum, La Feria amusement park and centuries old forest, the water tanks have no use on the vast concrete surfaces (100m diameter x 3) and activities around the tanks are kept disconnected.



On the Edge

Since the water tanks are in use, and it is impossible to make foundation for buildings on them, the design effort was concentrated on the edge of the tanks, in order to

connect green and concrete surface 2m above the ground level

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provide qualities for both side (climate control, media, sheets, meeting room, vertical garden, observatory and butterfly nest).

Plug-in

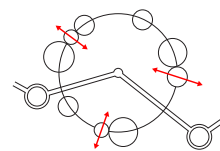
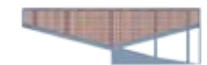
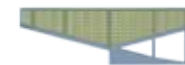
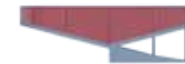
To have flexibility of programs and to lower the construction cost, the edge buildings are designed with same unit system which consists of light metal structure. However, each unit can have variety of function by using different surface materials; tents, plants, vertical garden for butterfly (flower fields next to the site used to be famous for the West Coast Lady butterfly, however, it was not well taken care and there is a need of new flower fields)



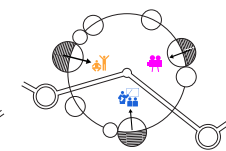
Climate Control for Resting and Activities

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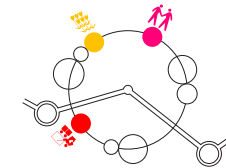
CONNECTION to the park
ROOM for meeting and education
SEATS for sports and events
MEDIA projection of movie, information
OBSERVATION DECK for the entire park



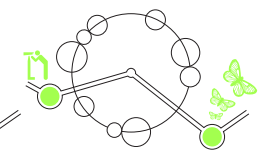
CONNECTION to the park



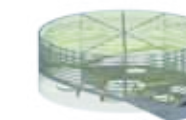
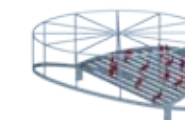
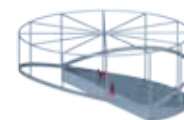
SEATS for sports, events and education

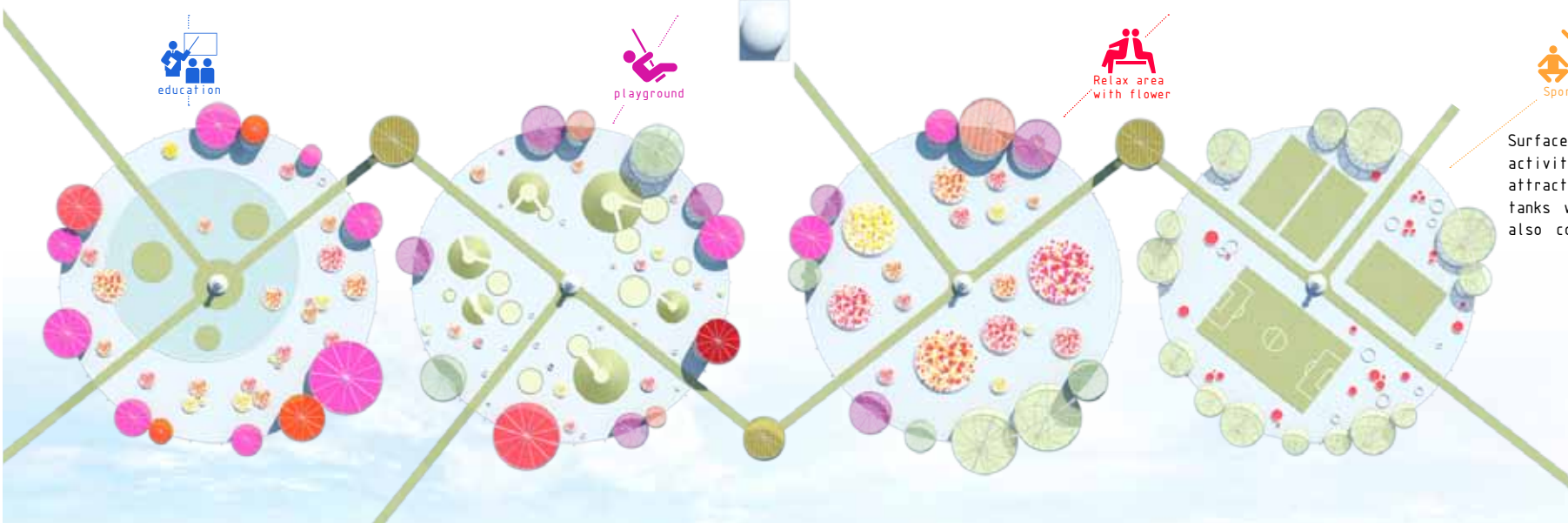
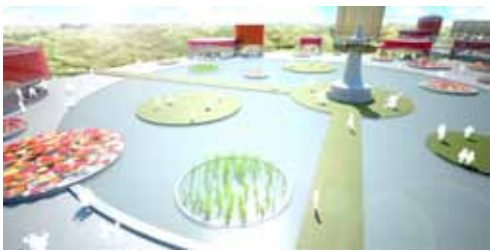
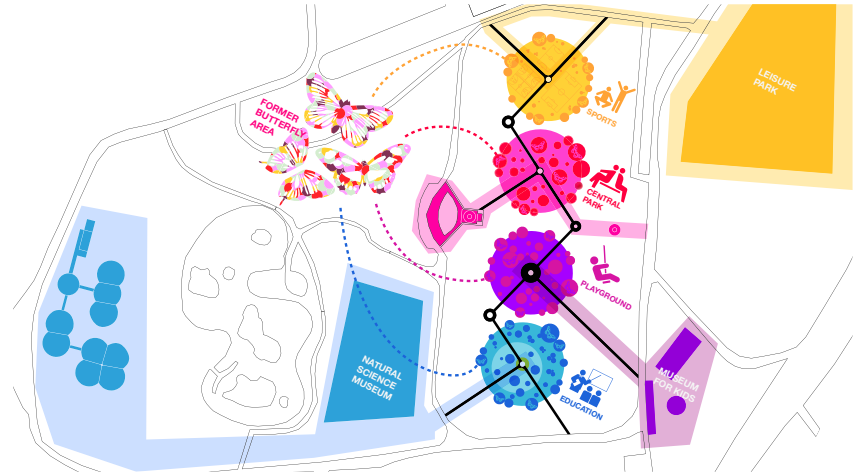


ROOMS for meeting and education



OBSERVATION DECK for the entire park

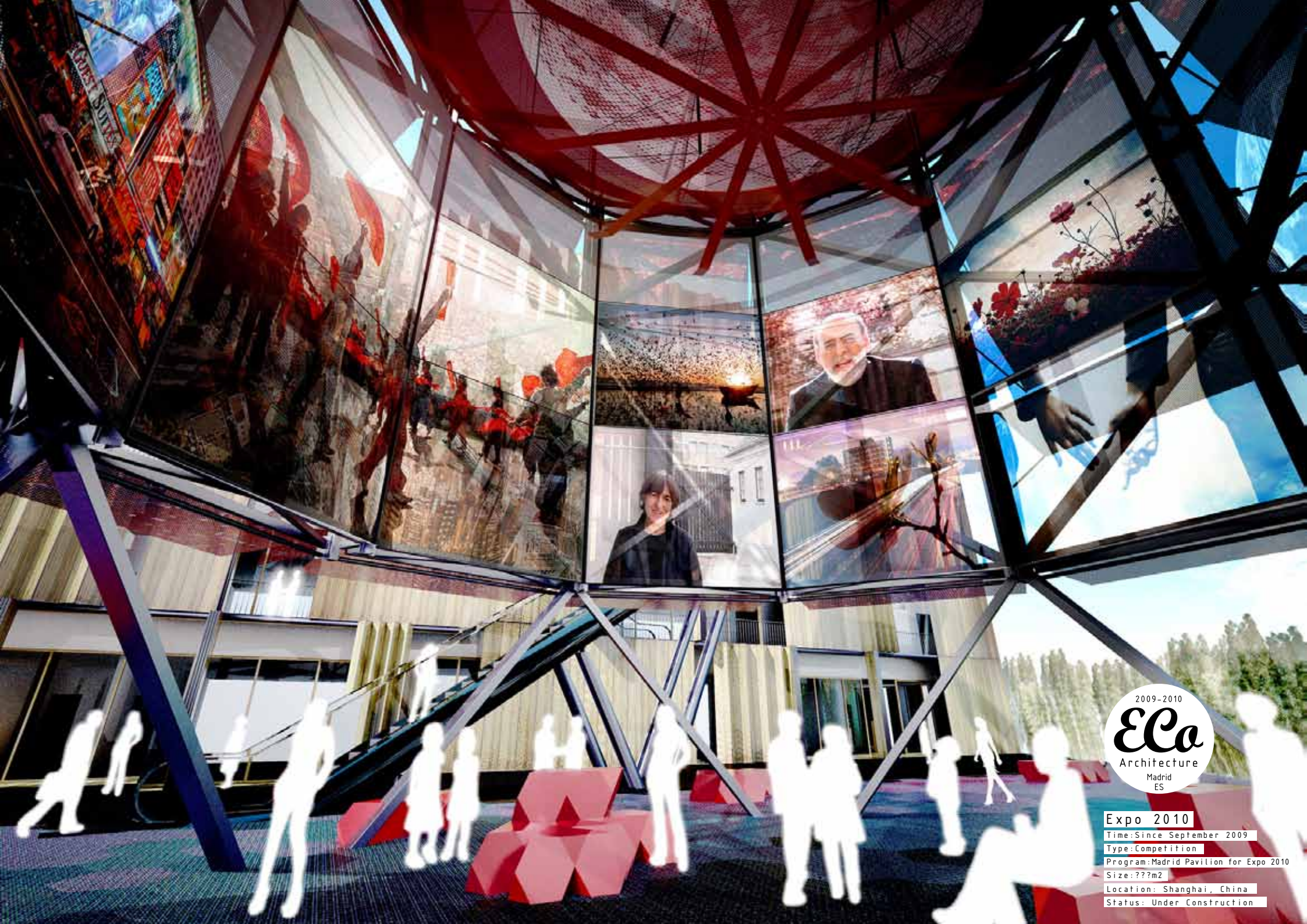




Connector of activities
 Surfaces on 4 tanks will have different activities related with the nearest major attraction in the park, and the water tanks will become new attractions and also connector of different activities around the site.

- Natural History Museum
 > Educational
- Museum for Kids
 > Play Ground
- Former Butterfly area
 > Relax area with flowers
- Theme Park
 > Sports





2009-2010
Eca
Architecture
Madrid
ES

Expo 2010

Time: Since September 2009

Type: Competition

Program: Madrid Pavilion for Expo 2010

Size: ???m2

Location: Shanghai, China

Status: Under Construction

Air Tree

Shanghai Expo 2010 will have Pavilions of Cities to show good example of buildings which have been built in each selected cities, and The Project "Air Tree" by Ecosistema Urbano was selected for the Madrid Pavilion. "Air Tree" is an artificial tree for new urban public spaces and it provides climate controlled open space till trees grow up.

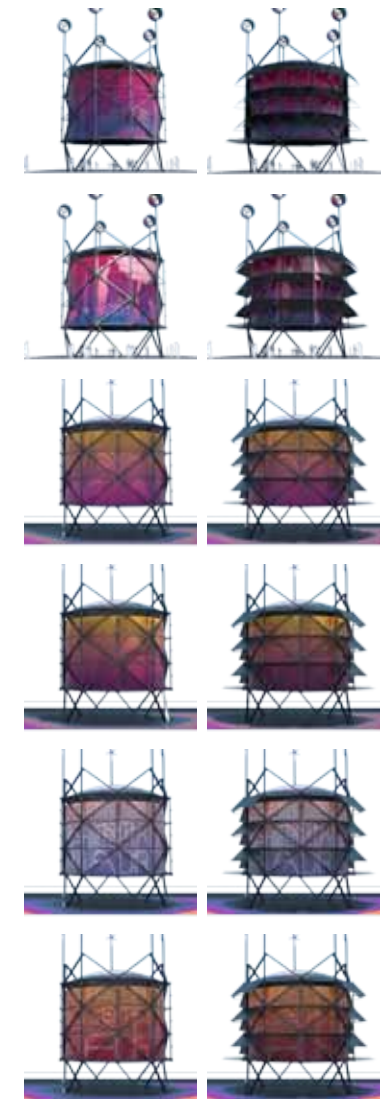
Of course, Air Tree provides not only comfortable climate but also activities; playground, information center and auditorium with media projection on the inner wall. Therefore, even after real trees grow up, Air Trees will be able to be used for special activities or the Air Trees can be reused in other places because of the light structure and replaceable ceiling and wall, which can be adapted to the climate of new sites.



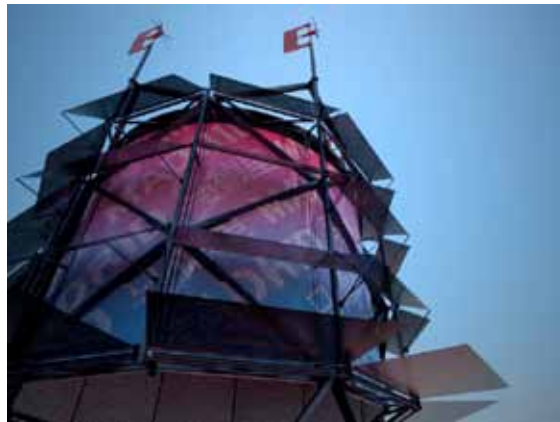
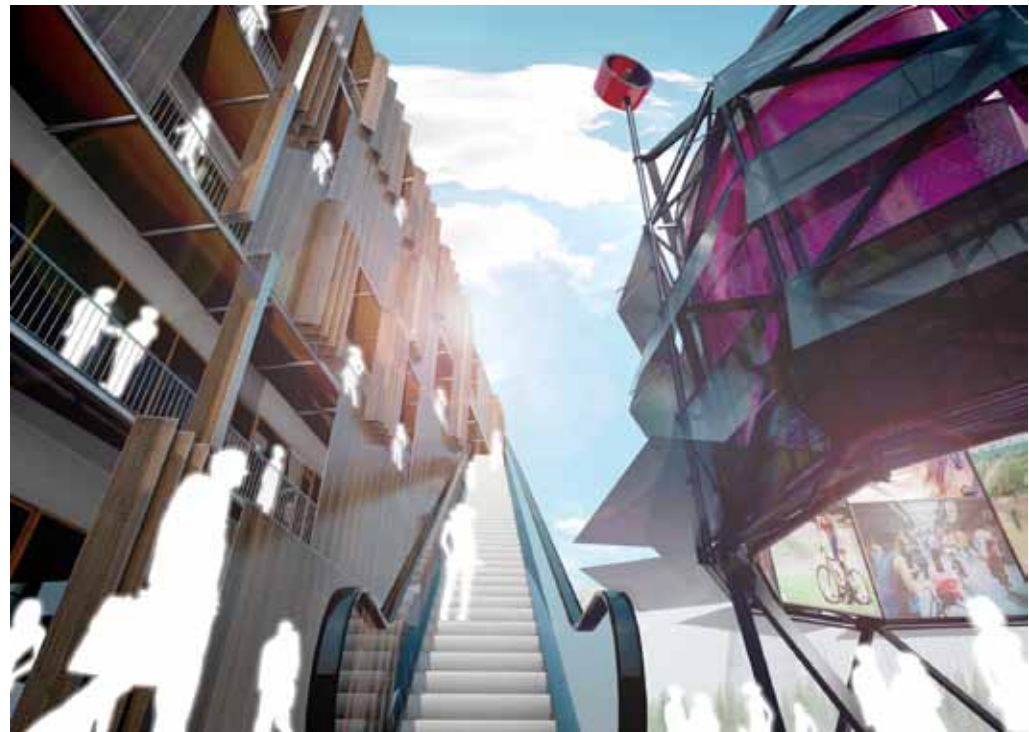
adapt to Shanghai Weather

Compare with Madrid, Shanghai has more humid climate and the Air Tree in Shanghai needs to have stronger character as a representative of Madrid. Therefore, the Expo Air tree has totally different climate control system and media features. Instead of using moist air for cooling, awnings, which cover the whole building, will be controlled for 24 hours to provide best climate condition in the building by sensors of temperature, wind speed, humidity and angle of sunshine. Huge wind generators are placed not only for icons of the pavilion but also for the energy supply for the ventilator and media projection.

texture design of main wall in process



Printing on Roof



Hexagon

The parts I was responsible were the design of pavement (which has different colors for controlling the amount of sun reflection towards the pavilion), printings of the textiles (ceiling, wall and awnings) and the design of wind generator.

Since more than half of the black awnings are closed on day time, the textile of the wall behind the awning has to be understandable only by looking at a small part. Therefore, the wall was decided to be wrapped by medium size letters of "Madrid" with shiny colors. As the furniture of the pavilion is decided to have hexagonal shape, the graphic of all textiles consists of hexagon and the air tree will be covered with same hexagon pattern as if all the parts have same DNA.