

THE 8TH VIRTUAL DESIGN WORLD CUP

Theme 2018 "Sharable urban system of future Shanghai"

SHINE OF THE PEARL



INTRODUCTION

The infrastructure in Pudong is the combination of modernization, IoT penetration and sharing economy development. With the aim of turning Pudong into the center of "The sharing urban system of the future Shanghai", the UTC-EAST team brings to you the "Shine of The Pearl" project being multifunctional sharing system to meet the needs of people here in traffic, energy and living environment. So, we hope to help Pudong to become a smart, sharing and sustainable city.



DESIGN CONCEPT

Because of desiring to bring endless green energy for Pudong, my team design The Shine Complex project as a center of convergence, regeneration and sharing. The Sun - The Shine Complex - The Oriental Pearl TV Tower - The Huangpu River associate together like a shine flow to create sharing energy, sharing space and sharing facilities,....

TRAFFIC ANALYSIS



Traffic analysis: We create a green traffic network that is spider web shape by basing on the old road. It is only for public vehicles such as electric buses, trams...and organic fuel vehicles.

Designing Dragon Bridge to connect with the neighboring areas (Puxi) in order to decrease the aggregation of means for metro lines.

Using different traffic levels to avoid conflict of flows. This measure aims to limit congestion and accident.

The continual journey is occupied by arranging Ebike, bike at each bus, train station.

The development of science and technology and IoT intrusion are reason to create smart vehicles. Therefore, passengers'd check information journey through smartphone.



TOOL COOPERATION

UC-win/Road PARKING LOT DRAW LUMION

Google DesignBuilder SOFTWARE 3 AUTODESK 3DS MAX Allplan SketchUp Pro 2018



THE SHINE COMPLEX

The intersection of Dungfang Rd, Zhangyang Rd and Century Ave creates a roundabout. Because of being the main roads, the traffic jam is regularly during peak hours, reducing the capacity of the route. So, we have the idea of redesigning that. "The shine complex" likes as a community sharing center. It includes amusement park, eco area, car rental region and parking lot. It connects Pudong to other areas and relieves pressure on commercial area.

Air conditioning system: It utilizes water recycled from "circle water" to create artificial fog that protects the space out of dust and temperature change.



We engage underground transportation to improve the overcrowding problem.



The roundabout is designed with 8 lanes. The islands and the line marking are set up at the intersection of the roundabout and the roads to ensure smooth traffic.



People will experience completely natural life. There are self-regulating buildings by plant cover; using wind and solar energy and having community activities.



With using car as the main vehicle at Pudong, it is necessary to focus on building smart underground parking to meet the demand and save on ground area.

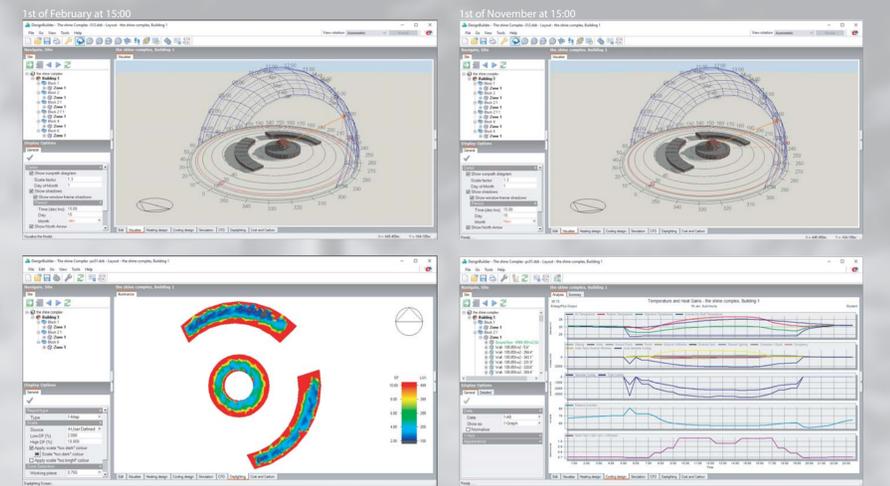


Thanks to the management of IOT technology, we'd share the means by renting, borrowing or exchanging.



ECO ANALYSIS

We apply Design builder software to simulate and analyze temperature, heat and luminance at the locations of building. Accordingly, solar panels and plants be the most reasonable placed to conserve energy.

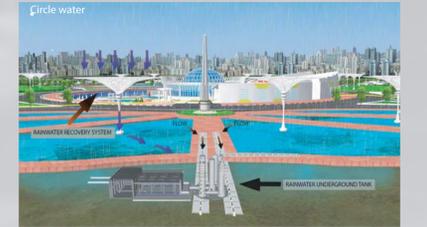


SHARING ENERGY

Solar energy: Natural energy sources such as solar energy, wind energy, water energy ... are endless. Recognizing this, we research and apply them to the field of transport. Specifically, we replace asphalt pavement with a special pavement that is capable of absorbing light and generating electrical energy. The power is shared to charge electric buses, ebikes and other systems.



Water energy: In parallel with sharing solar energy, we think of sharing water resources. Our work is called "Circle water". It consists of a drainage pipe system that connects and leads water to the reservoir. Here, the water is processed and supplied to Pudong's air conditioning and temperature system.



Utilizing natural energy vehicles and public transportation is a trend in modern countries around the world, including Shanghai. We place parking lot for bicycle, electric bus, Tram, Metro, ...

