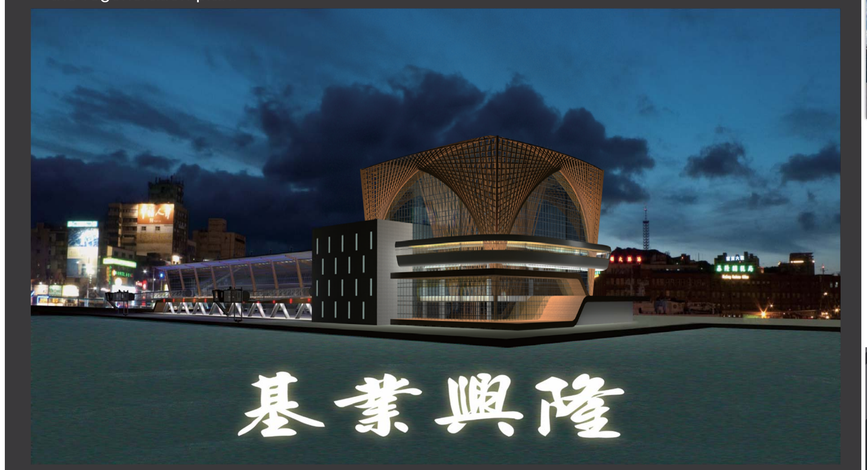
--The 5th Virtual Design World Cup--

Flourishing Keelung

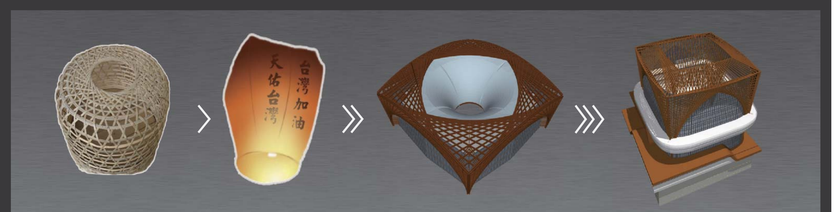
INTRODUCTION

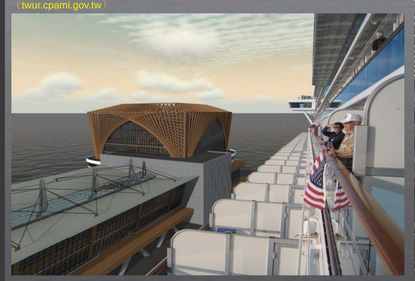
"Flourishing Keelung" is planned for the redevelopment of Keelung city to change the image and industry. In this plan, the current station building and station front will turn into a major access point to the city with a good coordination of various functions. Therefore, this plan attempts to create the building form that represents the local culture by the image of hencoop and sky lantern. In addition, this plan will apply the functions of BIM and VR in the design processes to analysis and simulate the usability, energy conservation, and disaster prevention of the regeneration plan.

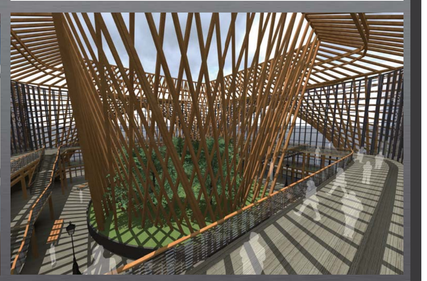


DESIGN CONCEPT

In order to represent the local culture of Keelung city. The design concept of the major transportation center is inspired by the image of hencoop and sky lantern. Situated in the northern part of Taiwan island, Keelung used to be called Jilong, which means hencoop. The name was later changed to Keelung which means "rich and prosperous land". In addition, "sky lantern" means the best regards to Keelung, since at the beginning of the spring planting season, people would release "sky lanterns" into the air as a prayer for the coming year in Taiwan.

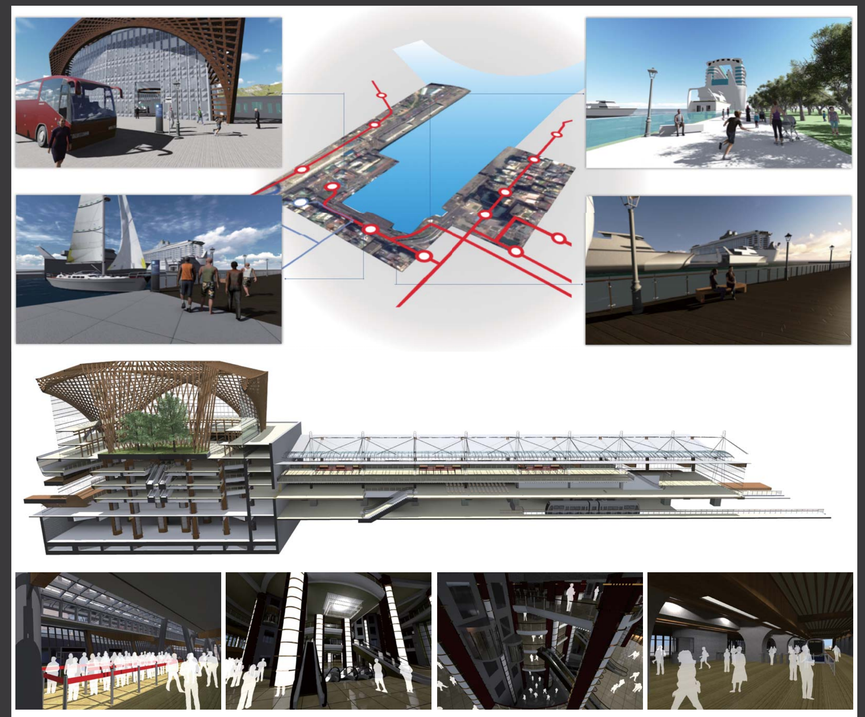


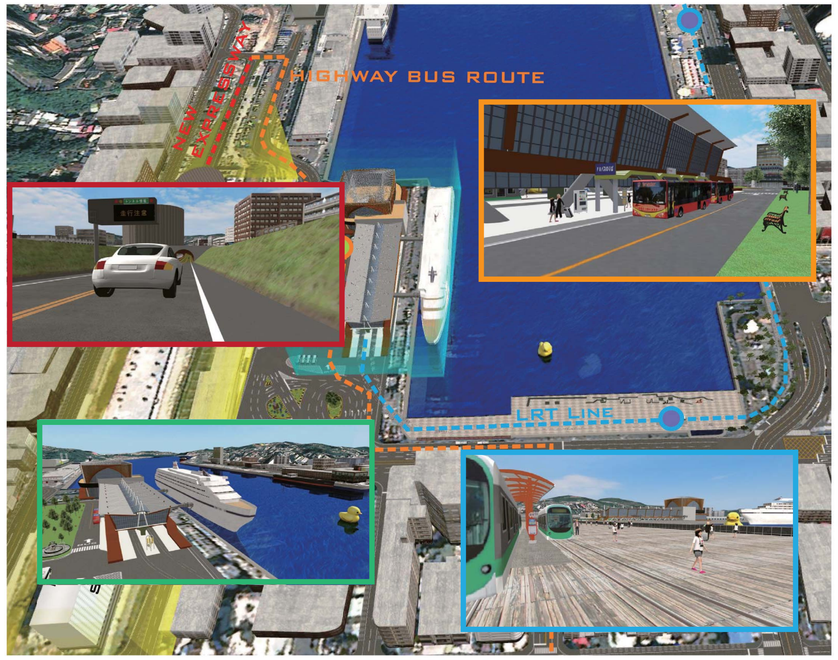


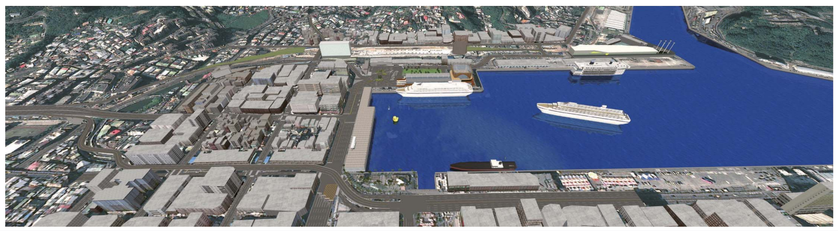


USABILITY

In this plan, the current station building and station front will turn into a major access point to the city with a good coordination of various functions. The design process applied "UC-win/Road" as the major software to simulate and present with BIM and VR functions. The traffic networks analysis and simulation include the railway, MRT, LRT, and bus transit.

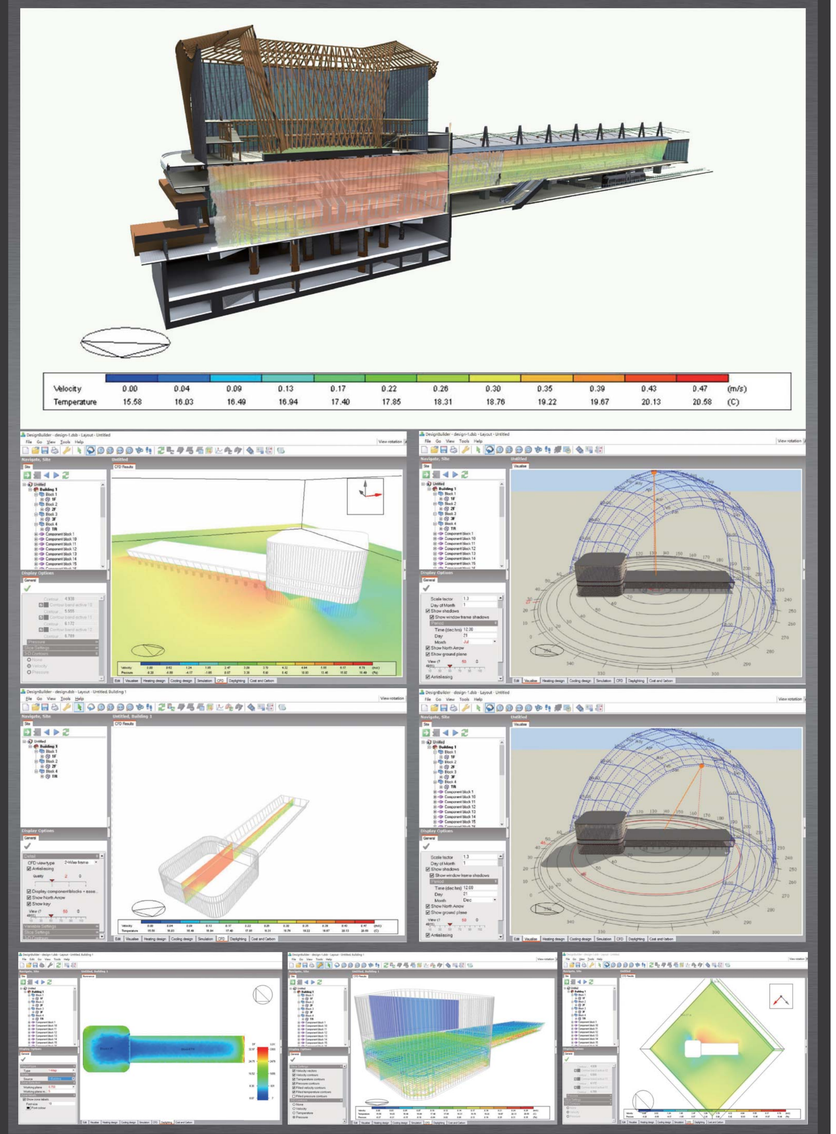






ECO ANALYSIS

The ECO design applied "DesignBuilder" to simulate and analysis the energy conservation. The implementation includes the simulations of daylight factors and illuminance. In addition, the CFD analysis calculates the distribution of air properties of design alternatives.



DISASTER PREVENTION

This plan applied "UC-win/Road" and "XPSWMM" to predict inundation area and its water depth caused by possible tsunami. This simulation will assist the activity of disaster prevention.