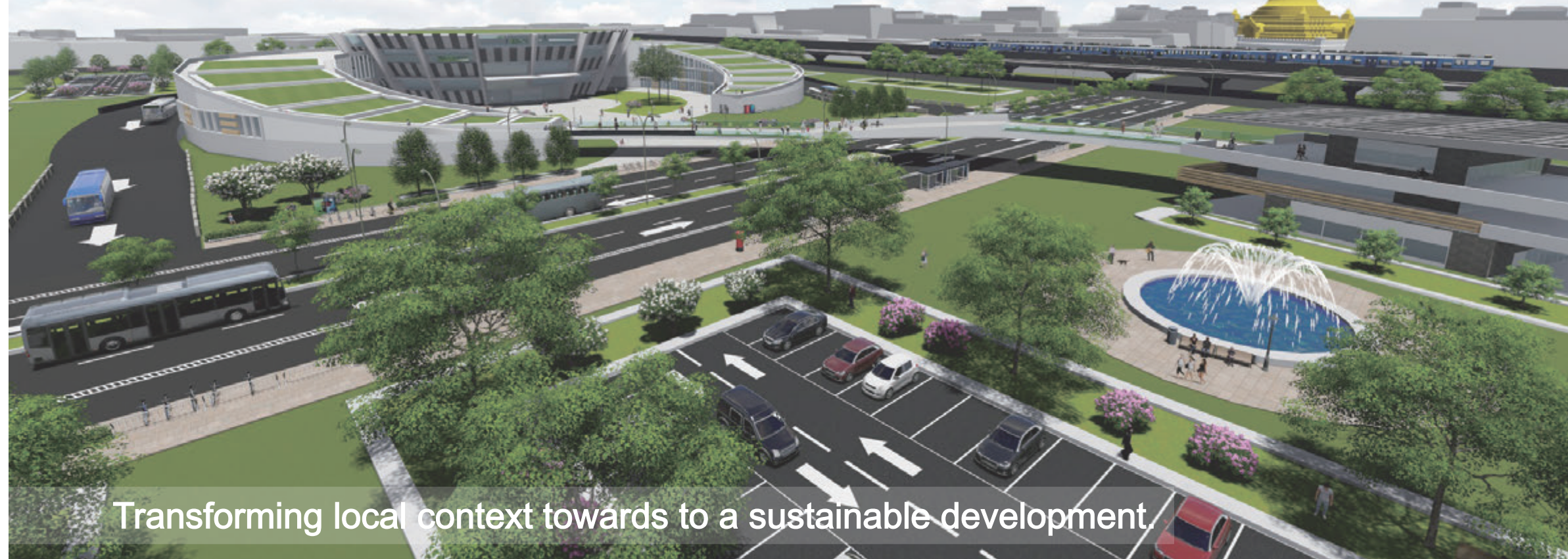


YANGON GREEN LABS

The 7th Virtual Design World Cup



Transforming local context towards to a sustainable development



INTRODUCTION

Yangon situates in the tropical monsoon climate, and known as a garden city. The green finger system allows the "green" spread into the streets, and combines the concept of "sponge city" to improve the local flood problem. For the aspect of transportation, we will engage the traffic diversion system (partially underground) to improve the urban overcrowding problem. We use xp-swim simulation for improving flood situations and use UC-win/Road analysis and simulation to study the traffic diversion process, we hope to improve the quality of local life and to conduct Yangon become an ecological and sustainable city.

DESIGN CONCEPT

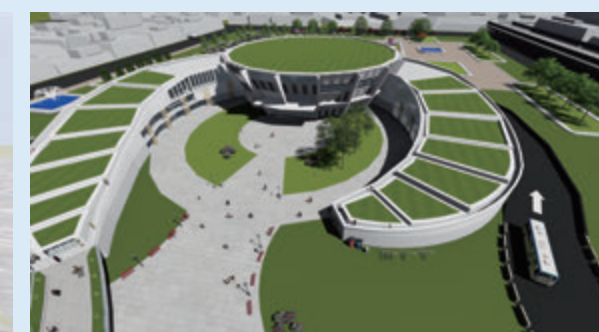
The design concept using green fingers is inspired from Myanmar Buddhist gesture. The green fingers penetrate into the studied site from the local landmark building Shwedagon pagoda. Thus the Yangon original green space and new urban green can be connected into a new green corridor.



FACILITIES PLANNING



Transit station



The main function of the transit station is the bus interchange. Use open architectural style and green roof to achieve the aims to and blend into the local culture and create a sustainable environment.

Bus station



Continuation of the local ring train way, around the central station set up a circular bus system to enhance the local public transport utilization and resolve the traffic congestion.

Skywalk



Skywalk connection transit station and complexes, perked up pedestrian line used to increase safety and wide vision.

Bike station



Set up a bikeway will become one of the main transporting in green city, further reducing the damage to the sustainable environment, while reducing the danger of driving parallel with the bus.

Complexes



The Multipurpose Complex comprises a state-of-the-art office tower, an international hotel, and a shopping mall.

Detention pond



Detention pond is the flood control system for city, use ecological engineering to landscape match with the park surroundings. Both of the flood control system and recreation can solve the flood in Yangon City.

Parking lot



In order to relieve the serious problems about parking in downtown Yangon, we not only set up lot of flat parking place but also provide a temporary refuge space when natural disaster occur.

TRAFFIC ANALYSIS

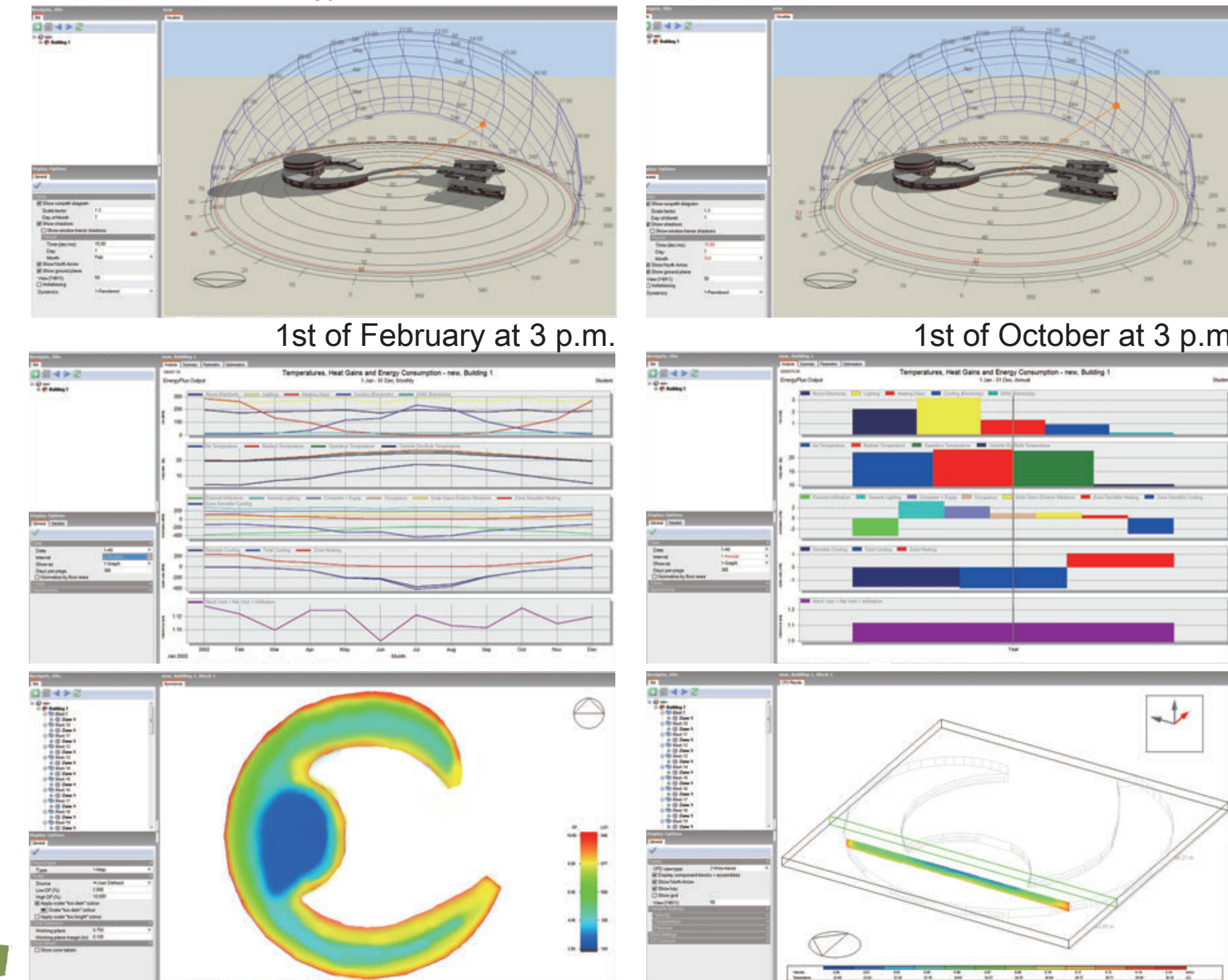
Continuation of the local ring train way, around the central station set up a circular bus system to enhance the local public transport utilization, and the car underground, set the pedestrian, bicycles, bus lanes, to reduce the local traffic congestion Problem, while improving the safety of pedestrians and bicycles. Through UC simulation traffic can effectively improve the traffic jam for the traffic jam, and effective shunt, while analyzing the improved situation.



• Vehicle Tracks System Ver.3 (SS)

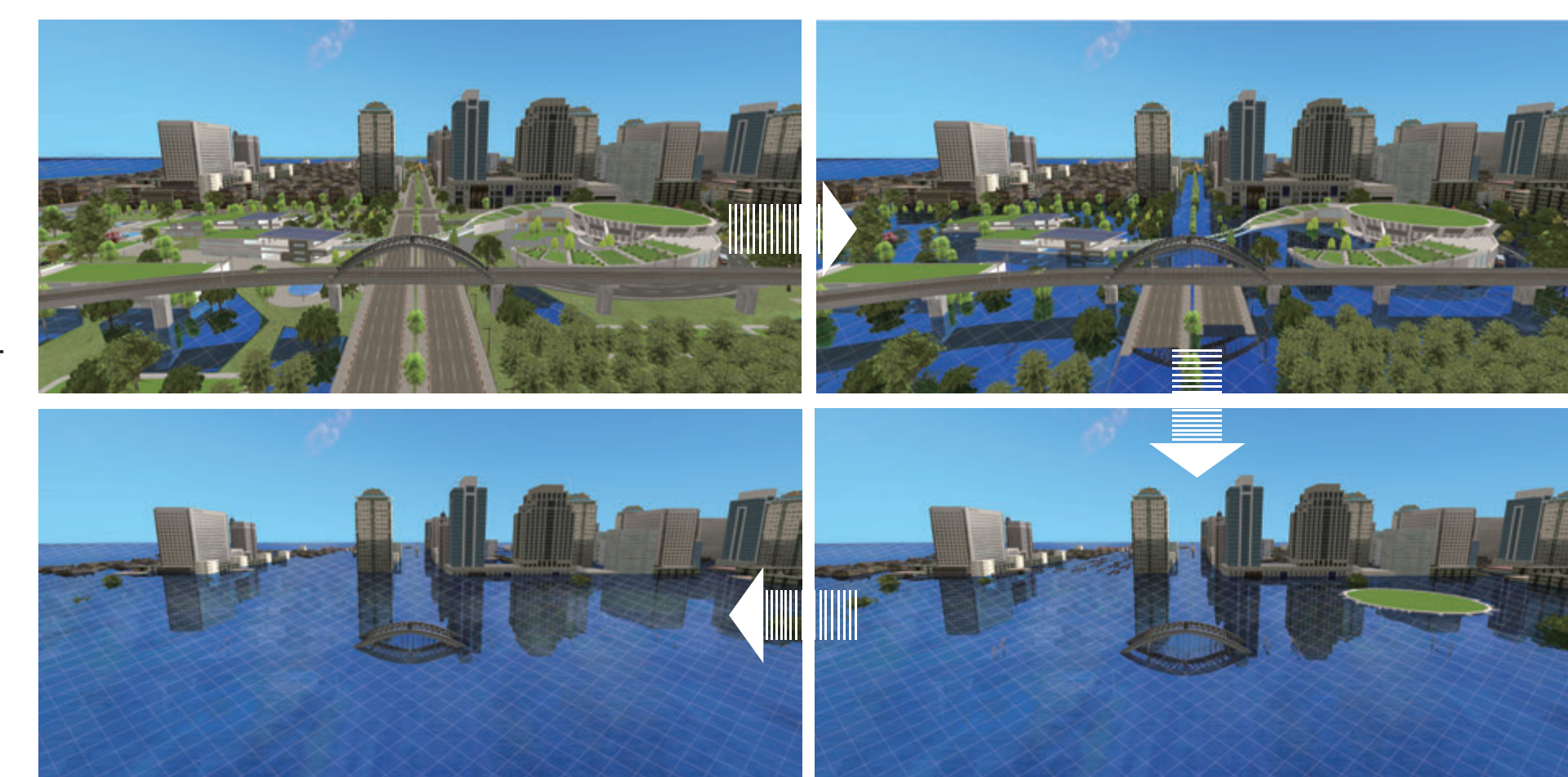
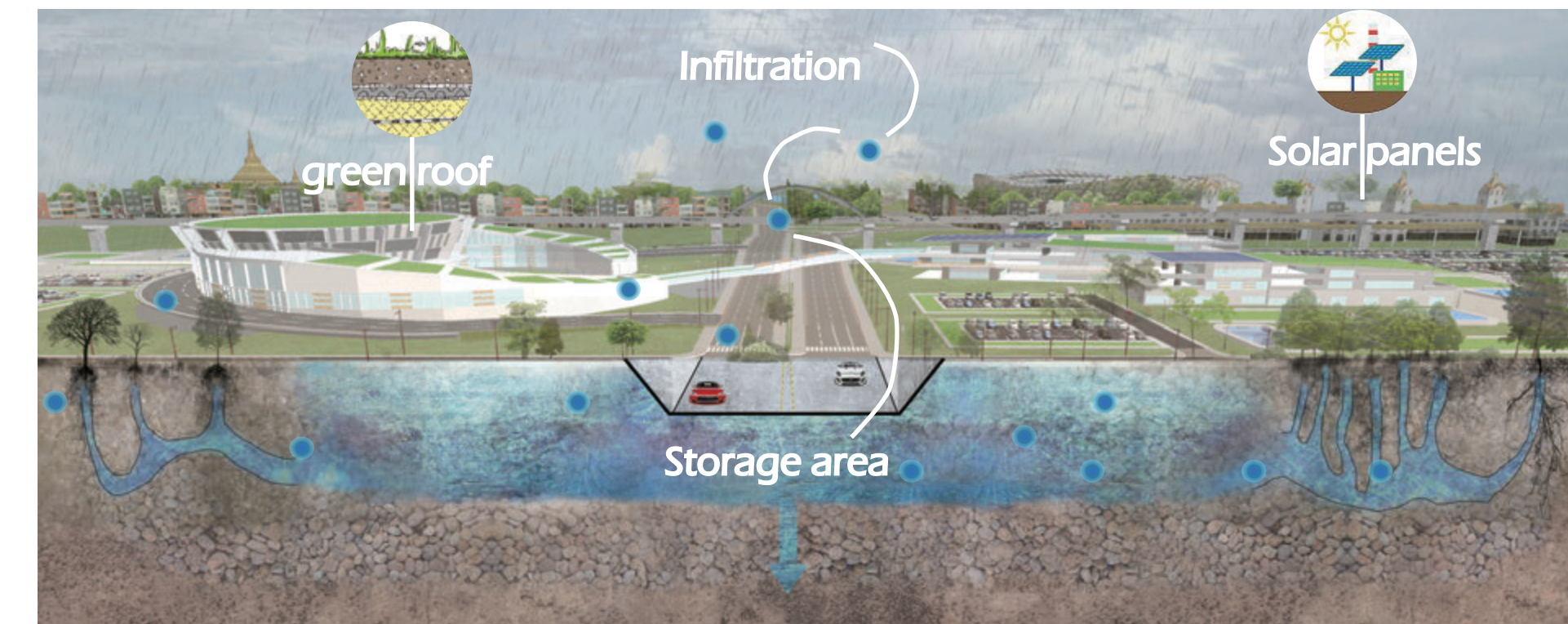
ECO ANALYSIS

DesignBuilder is applied to simulate and resolve the problem about energy-conscious technology. The application includes the sunlight factors and illuminance. This is instrumental in conserve energy and reduce carbon emissions.



DISASTER PREVENTION

For disaster prevention, we design "the sponge city" as one of the main solutions. Since the seasons change explicitly wet and dry season, it is necessary to establish the water resource management system by using water storage in the city, which can also reduce the flood risk as well. By the way, the solar photovoltaic systems are involved on the top of the roof for residential houses to compensate the lack of electric power. The greening roof can also reduce the hot island effect and can create the real garden city for Yangon.



• EXODUS and UC-win/Road with EXODUS

During collecting the data, one of the important strategies of urban development plan of Greater Yangon is that the city shall be responsive to fires. Thus the large central transfer station should provide not only the commercial functions such as hotel and shopping malls, but also take into account the disaster prevention facilities and evacuation route.

