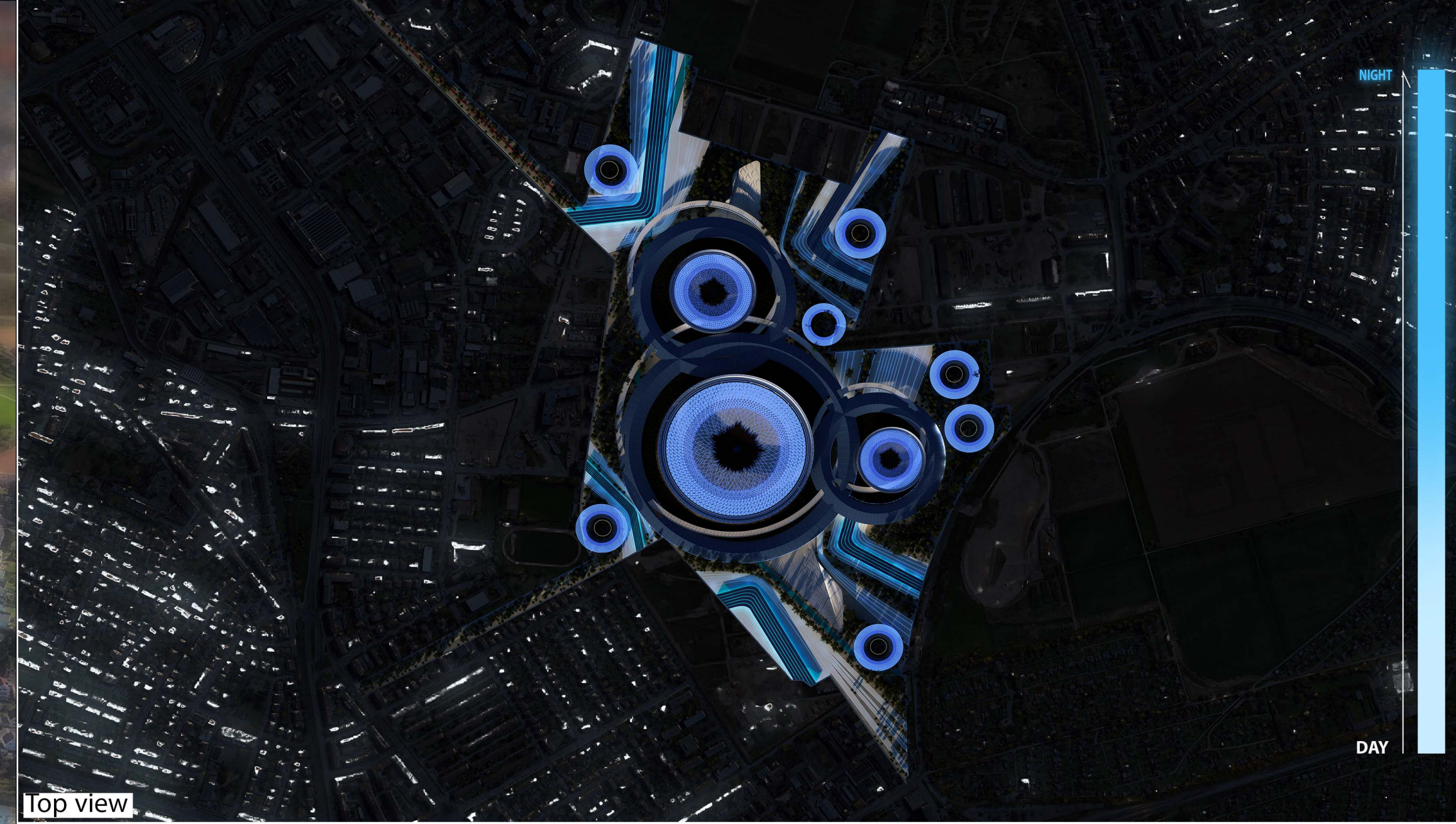




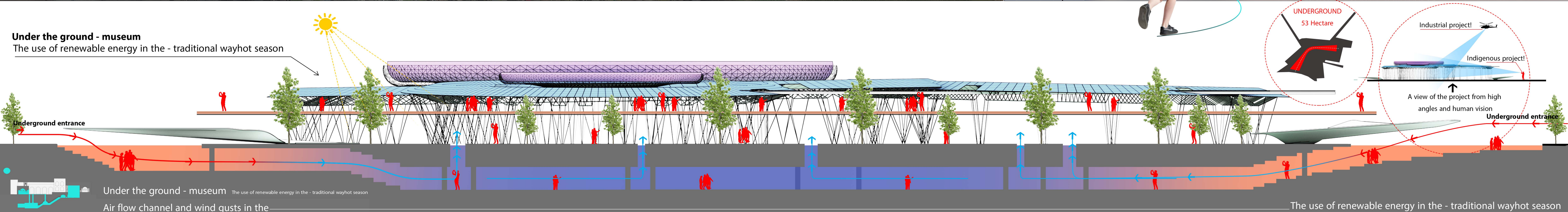
GENERAL VIEW



Top view



Interaction space



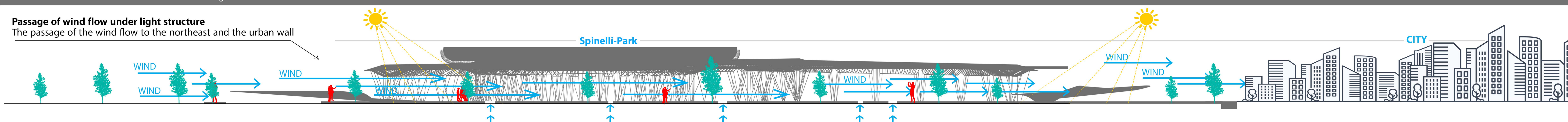
Under the ground - museum
The use of renewable energy in the - traditional wayhot season

Underground entrance

Under the ground - museum The use of renewable energy in the - traditional wayhot season

Air flow channel and wind gusts in the

The use of renewable energy in the - traditional wayhot season



Passage of wind flow under light structure
The passage of the wind flow to the northeast and the urban wall

Spinelli-Park

CITY

ENVIRONMENTAL SUSTAINABILITY

Environmental sustainability is defined as the responsibility to preserve and even improve the earth for future generations. It is the responsible interaction with the environment to avoid depletion of natural resources or degradation of the quality of the environment. Mannheim project is an attempt to maintain the environmental conditions of the region by preserving or even improving the vegetation and minimize human intervention and contribute to animal survival by placing the structure on a heightened ground level. It is a good idea to pay close attention to termite mounds when considering the underground architecture. Termites are extraordinary experimental architects of nature. The little creatures have lived on earth for fifty million years and gained invaluable experience in ventilation and optimal use of resources. Termites have developed a stable ventilation system by using thermal siphons and thermal air tunnels, building cellars in the heart of their mound, and using natural ventilation and chimneys in the colony. Regarding the materials, efforts were made to use materials that cause the least damage according to traditional architects and history of architecture. I tried to make the most of recycled and/or recyclable plastic to realize this objective.

RECYCLED PLASTIC

Within the last few years, plastic has become the poster boy for environmental degradation. Images of plastic littering shorelines and entangling marine wildlife has rightfully caused public outrage. As a result, the question of how to resolve this issue has permeated society, with some consumers and companies choosing to move away from plastic entirely. While there is no doubt that our consumption patterns must change and industries need to clean up their act, plastic still has a role to play when it comes to addressing an overarching issue of climate warming. The fact that plastic has a much lower carbon footprint than glass has been illustrated repeatedly. In 2008 a study by WRAP indicated that PET (plastic) bottles emitted less carbon emissions in the manufacturing phase than glass, which decreased even further when recycled at the end of life. A much more recently published lifecycle study which took into account local management practices, infrastructure and recycling behaviour in Cornwall (UK), also found that substituting PET with glass for beverage bottling would have adverse effects on climate warming and nine other environmental indicators such as ozone layer depletion and marine aquatic toxicity. Another recent study demonstrated that glass emits more than three times as much carbon emissions than PET.