

POLITECNICO DI TORINO
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Master of Science in Architecture (Construction)
Honors theses

OLYMPEKED, BEIJING-TORINO DESIGN STUDIO 2008

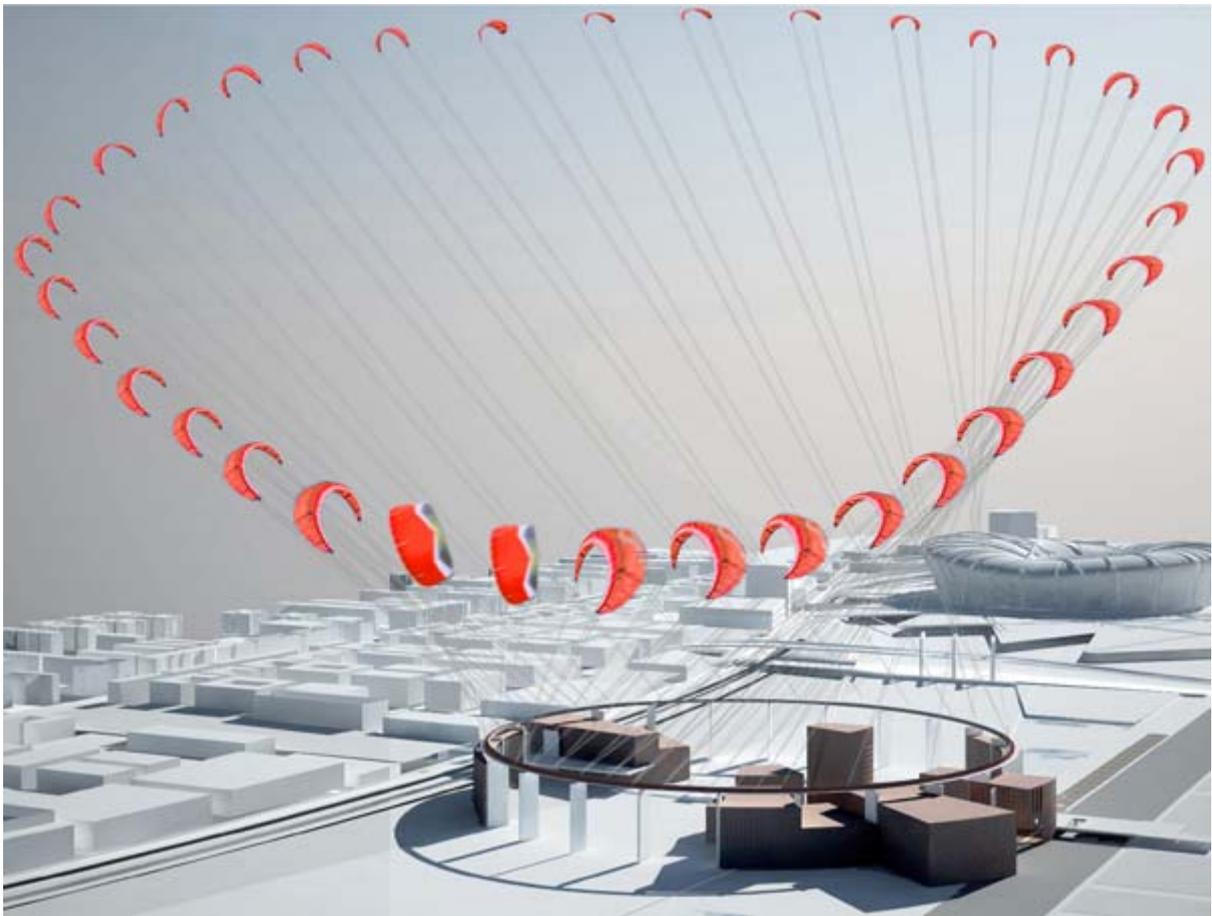
Architectural and Urban Design of Aeolian Generator KiteGen in Olympic Park

建筑与城市设计项目：风力发电机KITEGEN

by Alberto Lessan

Tutor: Pierre-Alain Croset

Co-tutors: Gustavo Ambrosini, Michele Bonino and Mario Milanese



Beijing KiteGen – Kites Trajectory

Beijing. Every interactions, every praxis, every physical movement, today, is controlled by the Web.

With this term, I'm not going to point at the "www net", but at the global management which the world is submitted now.

The actual dealings are no more under a local domain, but are controlled by wider connections who cross political and geographical borders and influence every part of the globe.

The Society of Consumption who we are progressively nourished and the developing economic neo-liberism of the country on progress (see India and China), established a general increasing of well-being and collective quality of life but the deriving antropic influence originated dealings more serious and alarming.

First of all is surely the exponential environmental disbalance who our planet suffers.

Pointing on the **GREEN ECONOMY** at this juncture is a profitable and i would dare unique possibility of evolution.

Nourish research and new system for save, re-use and sane supplying of energy and matter, help to move away worries and produce new spheres of trades with a consequential growth of economic attraction, export-import and occupation.

Where does Architecture deal inside this scene?

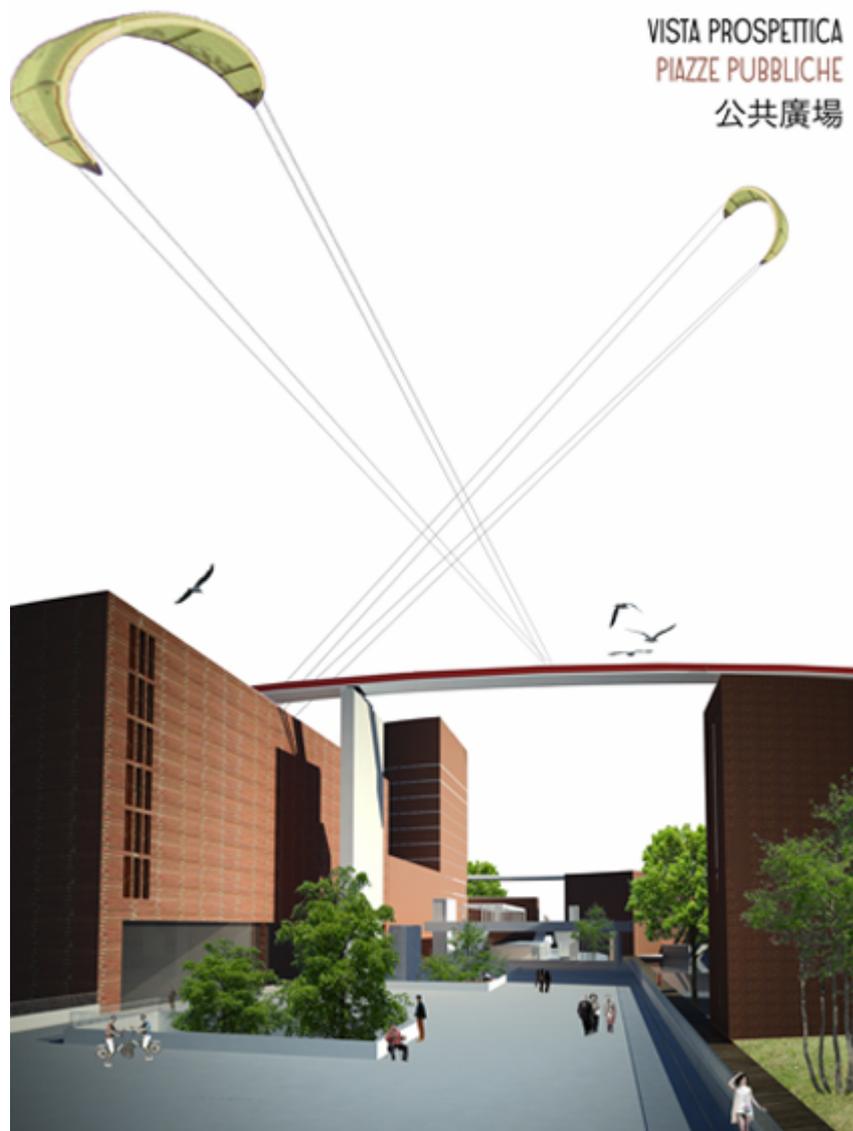
Architecture has the role of Tool.



Beijing KiteGen Materplan

This Thesis Work is the editing of an Architectural and Urban Project of a new energy technology under way of experimentation: **an High Altitude Aeolian Generator KiteGen.**

In the Case Study a planning for a Ring of 350 sqm inside the Beijing Olympic Park 2008, produces electric energy for the annual supply of 33.160 chinese people. The technology, developed by the Italian Company KiteGen, is to capture High altitude Winds who offer amounts definitely more efficient than the ones at lower levels.



Perspective View Public Squares

Several Kites similar to the ones used for kite-surf and paragliding are launched on flight and the traction of the wind power on the lines is transformed in electric energy on earth.

Positioning the singles kites on a ring, we can reach a secondary type of production thank to the turning movement on the vertical axis.

The economic feasibility analysis and the anemological analysis of the site, permitted a Project of a new area positioned on the artificial river of the Olympic Park with functiond of commercial, residential and offices.

The structure is based on carrying pillar/walls positioned radially at a distance of 30m to each others.

In all the cases these pillar/walls are a pure element who is not hidden by any other element. In the water and on earth they have same dimensions.

The kites are launched on the roof of one of the buildings on project, and make a complete turn. The produced energy is instantaneously introduced on the collettive net.

A pedestrian walkway on different levels begins in the west just before the end of the central and east beyond the Parkway project, adjacent to the lake.

The levels and different heights are reached by stairs, ramps and lifts, ensuring accessibility and use to everybody. There are "shortcuts" and short routes to ensure more fluid and direct mobility.

The squares have holes at certain points to allow filtering of light at the lower levels and in some cases leave the place for trees.

Important step in Beijing for a large-scale collective awareness of the potential energy present, this project aims to use the demonstration of a new power generation, nested within an urban core important from a social point of view, economic and politics, not only for the city but throughout all China.

For further information, e-mail:

Alberto Lessan: albertolessan.info@gmail.com