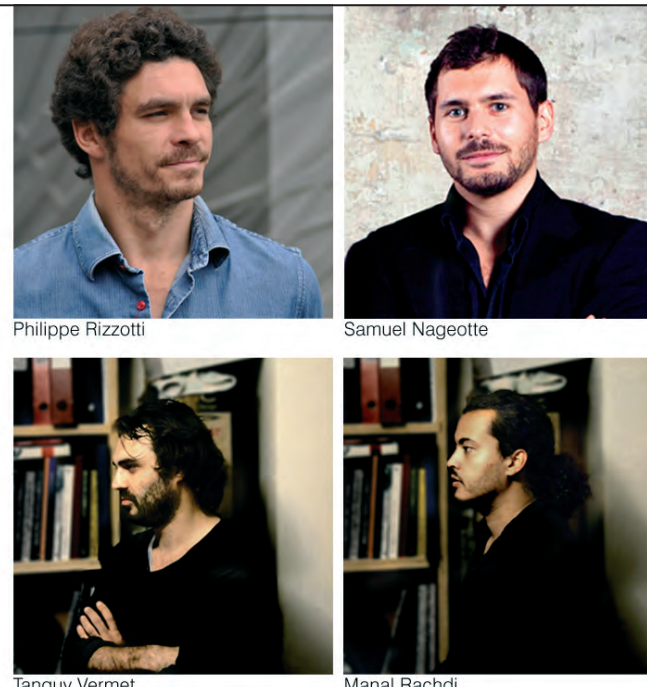


**Bronze Award Europe**

**Lifestyle apartments and infrastructure recycled from former freeway viaducts, near Scilla, Italy**

**Project data**

**Project group** Landscape, urban design and infrastructure projects  
**Client** Regione Calabria  
**Project background** Public commission  
**Estimated start of construction** July 2012



**Main author**

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**Profession** Architect  
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**Comment of the Holcim Awards jury Europe**

The jury endorsed this project as an excellent example of the smart transformation of an existing structure into a completely different use offering new economic chances to an up until now neglected region. Remarkable is the minimal footprint and the way the scheme efficiently makes use of the bridge's supporting structure that is to accommodate the infrastructure and technical utilities. The fact that the bridge will not be demolished results in a positive material balance and reduces the overall expenses.

**Project description by author**

**Parco Solare Sud – Nests for (European) Snowbirds**  
 The municipalities of Scilla and Bagnara are crossed by some ten kilometers of Italian Autostrada del Sole (A3 Salerno - Reggio Calabria Highway), constructed for the most part, in the 1960/70s and featuring numerous imposing and, for their time, audacious infrastructures (viaducts and tunnels). This stretch of highway is set to be decommissioned following the construction of a new highway. Rather than completely demolishing the old route, with its extraordinary reinforced concrete viaducts, now fully integrated within the landscape and the collective imagination, the reuse and redevelopment of certain by-passed sections is proposed as a means of boosting the production of renewable energy; experimenting with new eco-friendly technologies; favoring connections between villages and access to the valuable crops on mountain crests; and, finally, developing new forms of environmental and land art and urbanism capable of stimulating responsible tourism.

**REPORT-** The bridges allow a limited impact on the landscape. The local production of Bergamot orange demonstrates the region's favorable temperatures (8-30°C), and the volcanic area reveals a high energy potential.

**PROGRAM-** The climate and the site inspire vertical villages for "European snowbirds" (housing/medical equipment/entertainment/shops) that are connected by walkways to the sea and highways to the cities. The system is autonomous regarding the water and energy thanks to the rainwater and the geothermal power.

**CONCEPT-** This contemporary archeology (the bridge over the bridge) results in a process where urban falls meet the climbing nature. The vertical privacy of the inhabited piles supports the horizontal sociability of the public equipped decks, while providing a unique view for each one, at every level. The combination between the infrastructure and the environment is efficient enough to establish a new responsible high quality way of living.

**STRUCTURE-** The concept consists in volumizing the bridge. In order to colonize the piles we improve their structural capacity and horizontal structures surrounding the pile create aerial plots to welcome the housing program. The decks are thickened to support three levels of public spaces, landscape and technical flows.

**WATER-** Rainwater represents 45,000cu m/year. It is stocked in tanks situated in the tunnels for energy production and domestic consumption. Greywater is treated by phytoremediation, and highly polluted water by methanisation.

**ENERGY-** Domestic gas is produced by the organic waste methanisation. Electricity production is produced by a geothermal power based on hot dry rock technology.

**Relevance to target issues by author**

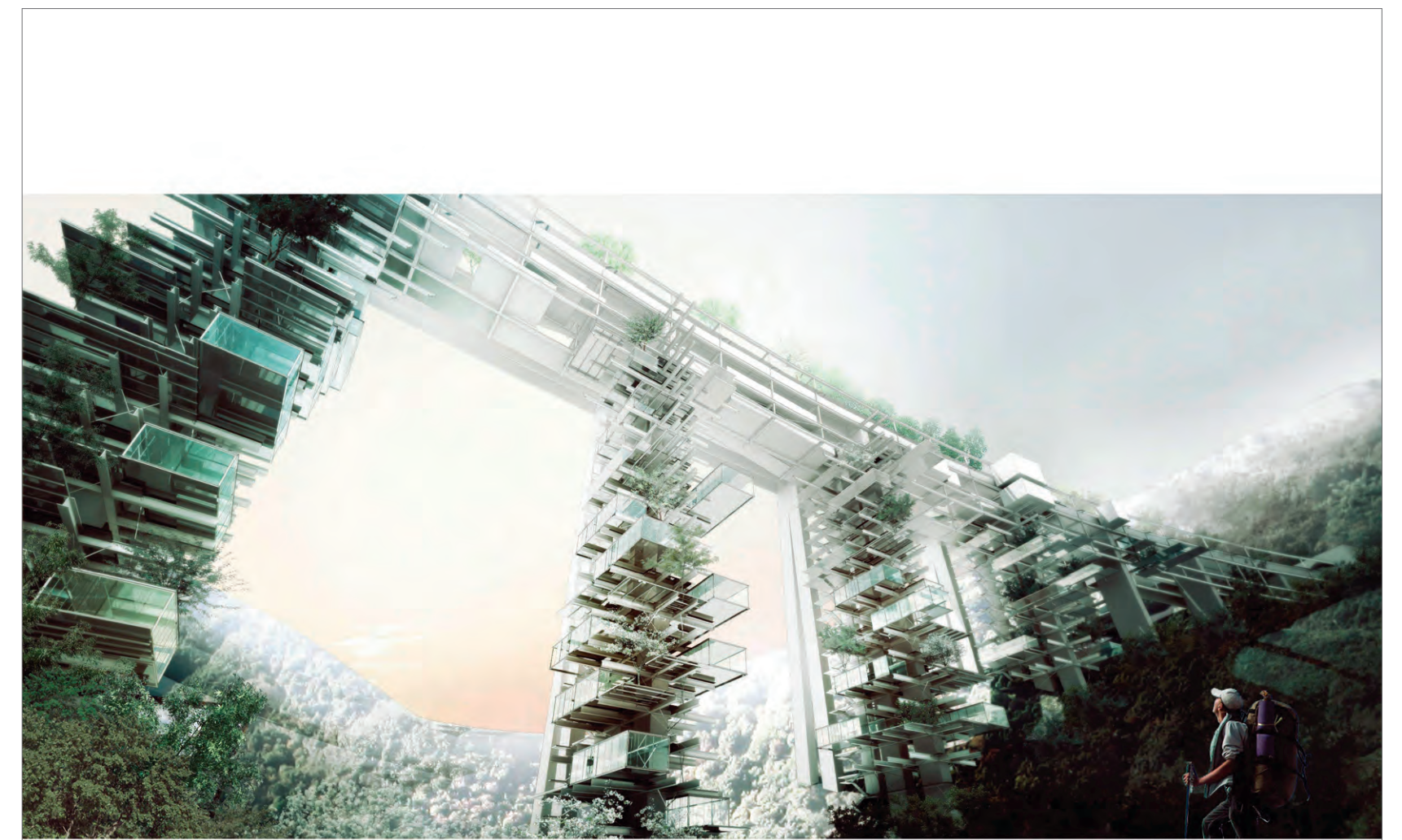
**Innovation and transferability – Progress**  
 The objective of the *Solar Park South* competition was to stimulate concrete ideas and revolutionary proposals for the reuse of the decommissioned highway sections. 20th Century hyper-urbanism becomes an adapted solution in order to convert existing unused megastructure into eco-friendly vertical villages. This idea can be easily applicable and transferable to many similar abandoned structures and megastructures all over the world. This project makes Utopian urbanism as "Spatial Cities" feasible.

**Ethical standards and social equity – People**  
 The reuse and redevelopment of certain bypassed sections is proposed as a means of boosting the production of renewable energy; experimenting with new eco-friendly technologies; favouring connections between villages and access to the valuable crops on mountain crests; and, finally, developing new forms of environmental, urbanism and art life capable of stimulating responsible lifestyle. Although Italy's Calabria region is one of the most comfortable areas to live in, with a mild climate and amazing landscapes overlooking the sea towards Sicily, there is growing economic uncertainty with economic and social implications. This project is commissioned by the government and will be mandatory for investors to involve locals in the development of the new city.

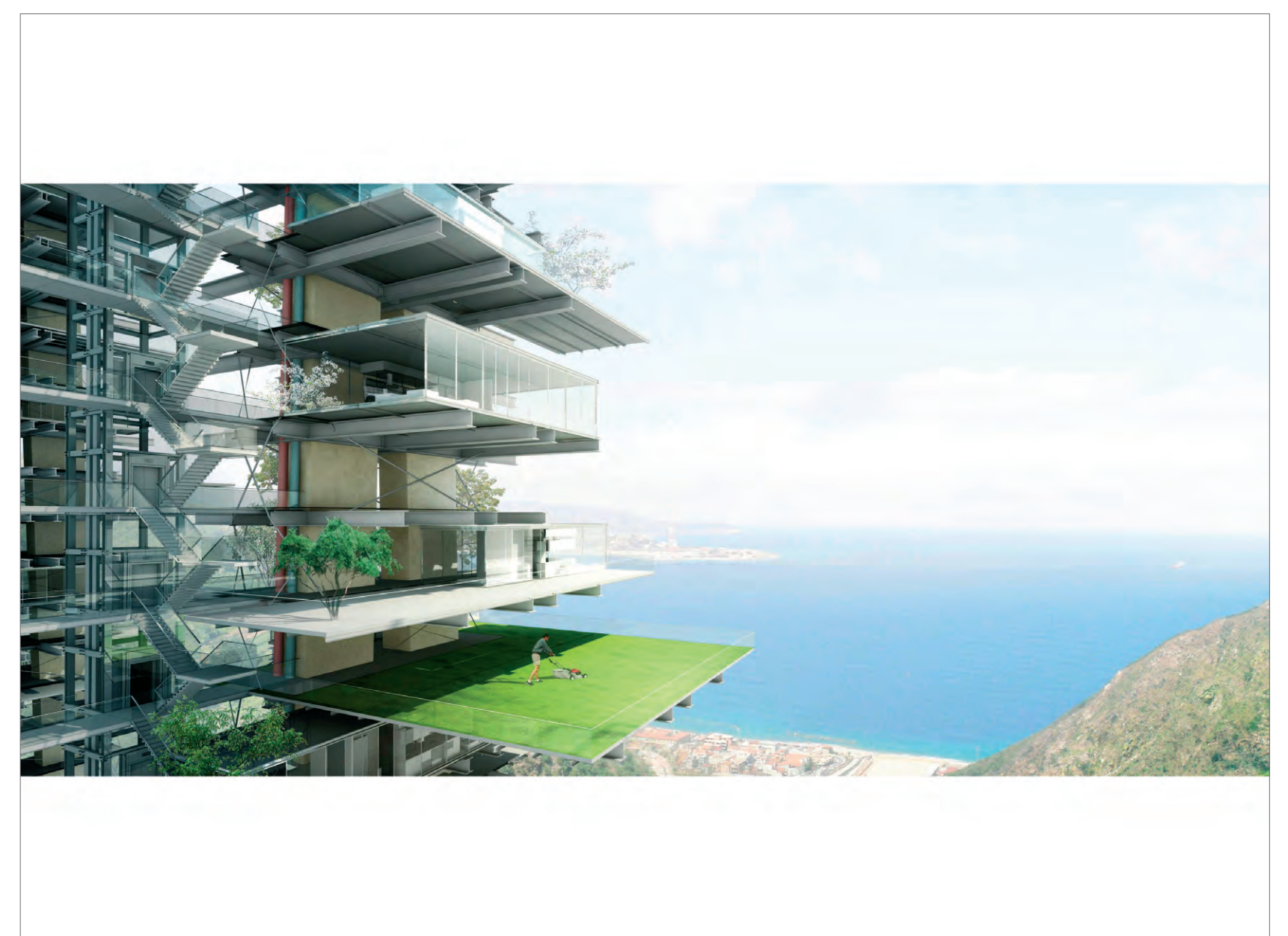
**Environmental quality and resource efficiency – Planet**  
*Solar Park South* adopts a conceptually opposite approach of environmental acupuncture, promoting the reuse of the existing before consuming new land, pursuing landscape integration, micro energy generation and economic self-sustainability. By beginning with renewable energies, the idea is that of developing a new virtuous cycle founded on the green economy, capable of bringing research, experimentation, technologies, production, employment and tourism to the whole of Calabria. The city is completely autonomous regarding resources thanks to rainwater storage and high energy geothermal power. Water is injected deep underground to be heated, and its temperature climbs to 200°C, which provides steam to generate electricity via turbines. The system doesn't create any waste. Part of the hot and cold water is used for sanitary purposes, and polluted water is treated by phytoremediation and methanisation.

**Economic performance and compatibility – Prosperity**  
 Instead of spending 40 million to demolish the highway the same money can be employed in productive investment. Furthermore, considering that the financial and environmental cost of transforming the 10km of roadway will be considerably lower than that of its fruitless environmental refurbishment, the creation of the park and vertical villages optimises public expenditure and brings value to the potentials of the site, energy production, agriculture, scientific research, manufacturing.

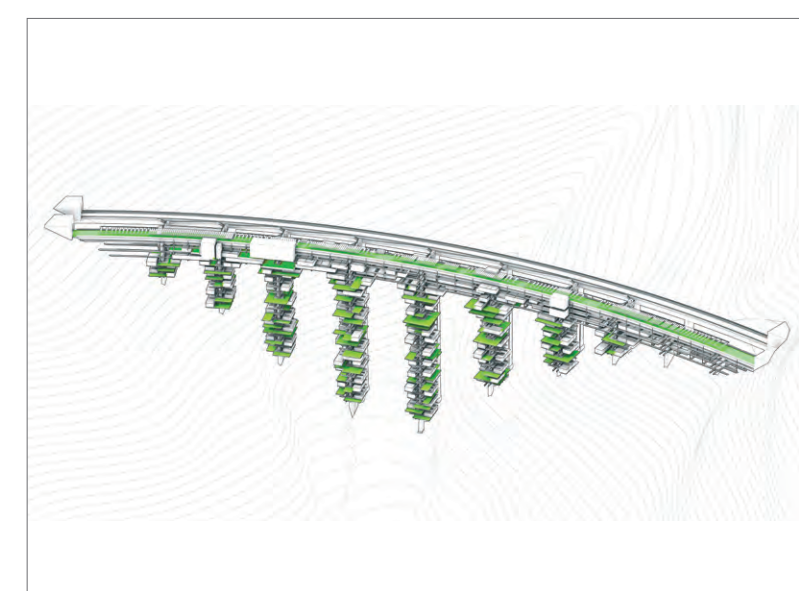
**Contextual and aesthetic impact – Proficiency**  
 The project provides design and technological solutions in relation to the local landscape and the application or enhancement of renewable energies. It is economically, energetically and culturally sustainable. It explores applications in alternative energies, promoting a strong social message focused on the widespread diffusion of a culture of sustainability, aimed at demonstrating that energy habits and lifestyles can be changed to better confront pressing post-Kyoto issues.



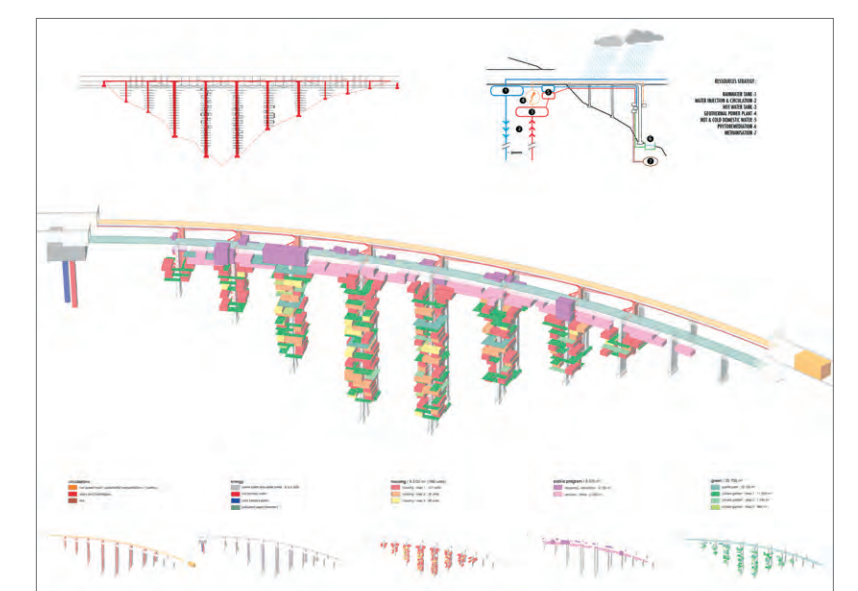
Discovering the vertical villages.



Inside the nests, a new way of high quality life.



General axonometry.



Strategy and program.



Existing viaduct pile.



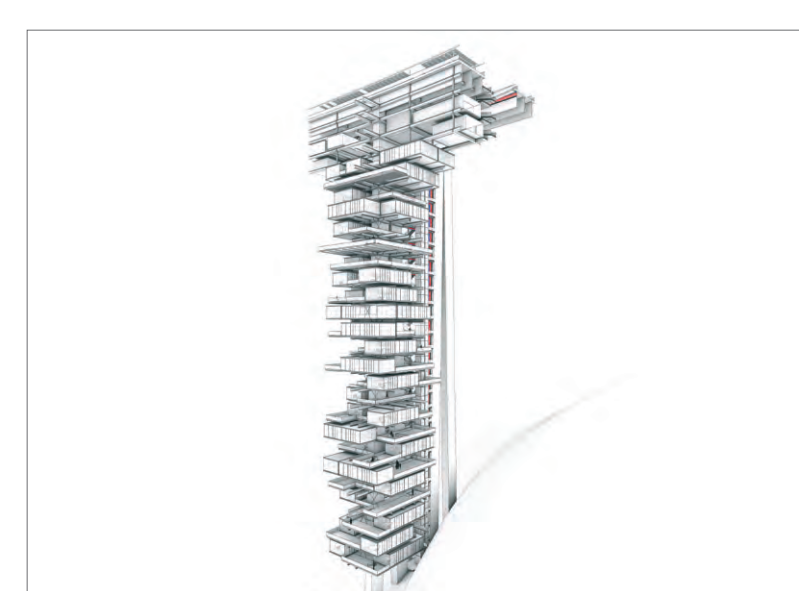
Reinforcement of the structure.



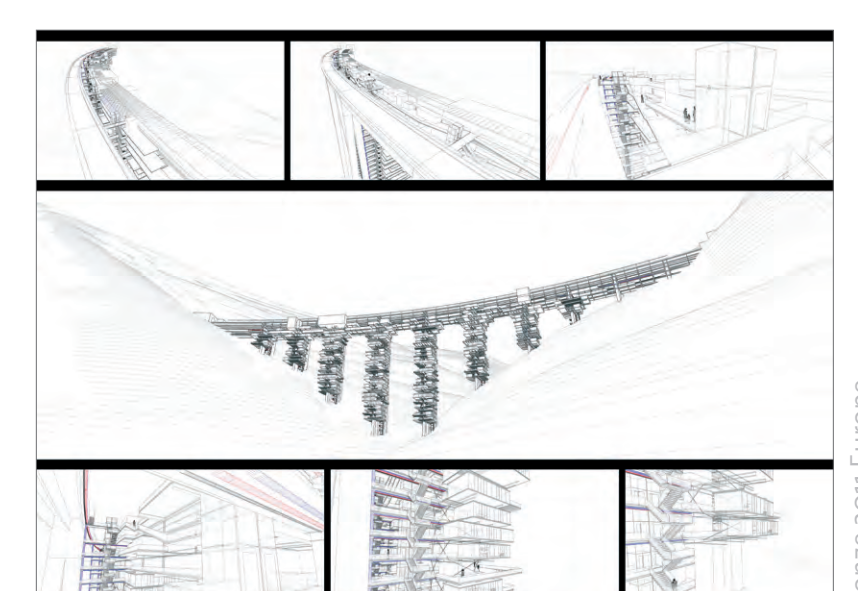
Circulations and fluids.



Creation of land plots.



Progressive colonization.



Living in a vertical village.