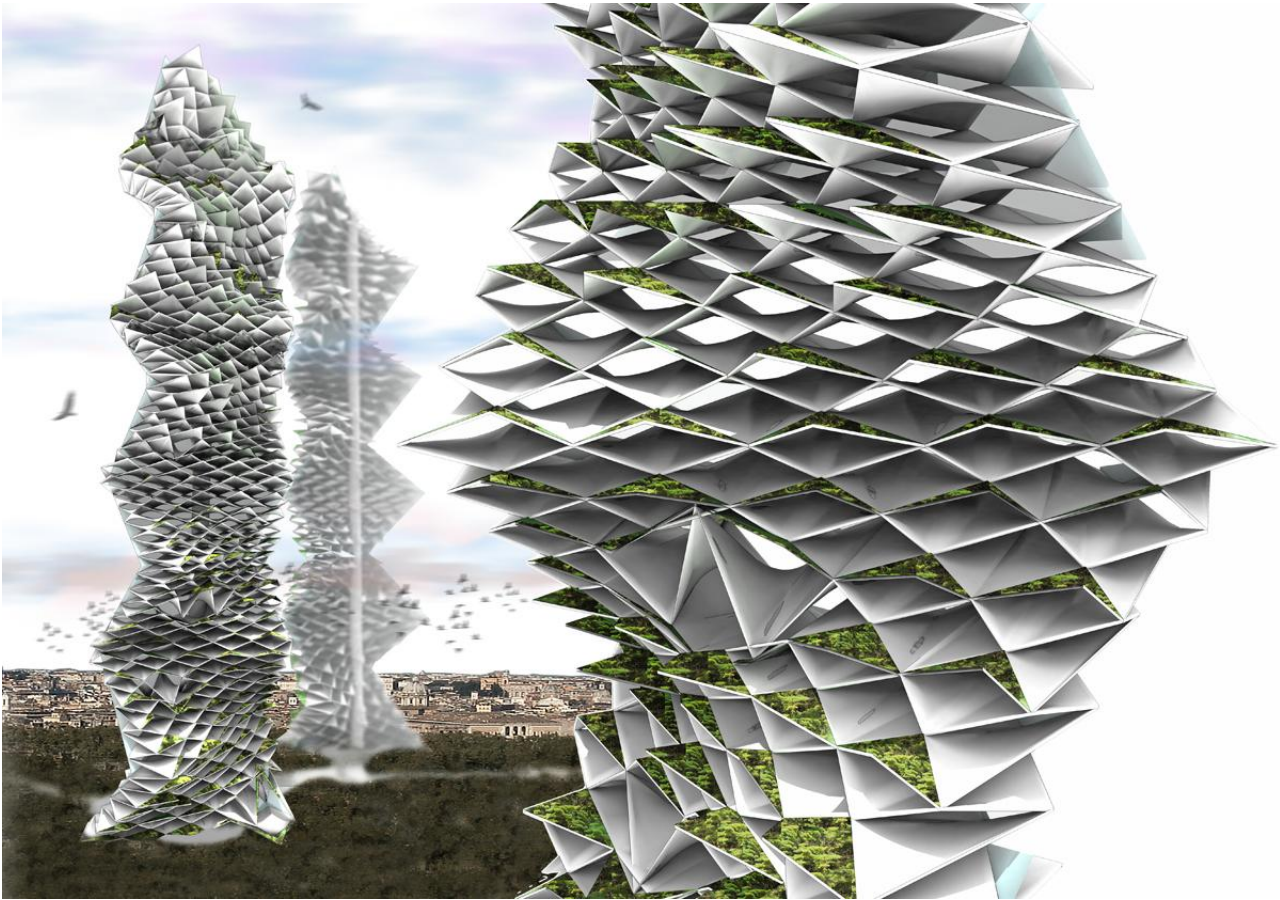


FOLDSC(R)APE: GOMMAdesign's conceptual skyscraper in Rome for eVolo 2011 competition reinterprets the "Oblique Function"



*Rome - Italy
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FOLDSC(R)APE, [GOMMAdesign](#)'s conceptual skyscraper for [eVolo 2011 competition](#), explores the geometrical results of applying the "Oblique Function" to the verticalization of the city. The most important challenge of the project was to avoid losing, during this process, the most special aspect of Rome's urban life system: the vivid community life and the town-like neighborhoods.

To design a skyscraper for such a peculiar city like Rome is a very challenging and fascinating task indeed, as it gives the chance to investigate the most innovative and unconventional possibilities for this kind of building. Rome, because of its huge historical heritage, never really considered a vertical development. On one hand, in new neighborhoods, speculative urbanization led to million cubic meters of low quality buildings without an efficient planning of services and public spaces. On the other hand, in historical and central neighborhoods, the quality of life instead is very high and animated by a **vivid social community**. By examining some example of different urban fabrics in Rome, the main parameters which led the design strategy and influenced the morphology of the system were derived.

The project is located on a disused lot in the former Fair Area. The proposal aims to provide an exaggerated amount of available square meters, while at the same time ideally preserving the neighbourhood-lifestyle basic features: the solution of this contrast was the biggest conceptual challenge.

Starting from Claude Parent and Paul Virilio's theories, a territorial formation based on the "**Oblique Function**" is proposed. The variation of horizontality of the ground plane facilitates less regular movements of the users and multiplies the opportunities for meeting and socialization. The practical strategy applied consists in making a two-dimensional surface three-dimensional, in order to achieve continuous interconnections between different levels, and to turn the flat functional mix (distributed on the original surface) into a three-dimensional complex space, where functions may re-colonize the most suitable areas with a certain degree of adaptability of spaces and routes.

The **morphogenetical process** which generates the building is **recursive**. The geometrical operations defined in the system are applied iteratively, first to the whole building, then to each single strip that constitutes the structural and morphological fabric of the tower. Indeed, the tower has the same morphology and the same geometry of its base components. Theoretically this iterative process could also be extended to higher dimensions (buildings' aggregations) or to lower ones (architectural components, such as brise-soleil or structural elements). The whole building and the single folded plate act and look the same, they are self-similar, as they share the same five topological operations (defined in the "**genome**" of the architectural organism) which generate the morphology of the system. These genes occur in different combinations and with different intensities, generating a series of phenotypes influenced by the different conditions which the system adapts to.

These topological and geometrical strategies are used in order to address specific **functional needs**.

The base surface is first divided into smaller platforms, then folded to achieve inclination. A diagonal continuous space is obtained. This tilting (25°) also allows a 10% increment of the available area, while keeping the same footprint.

Then, through a process of **folding**, the surface becomes a threedimensional fabric. The basic units that constitute this honeycomb structure are the residential units, regularly distributed on the base surface. Moreover, by adding topic distortions to the regular fabric, it becomes differentiated and larger spaces (public functions and green areas) open up.

Leaning terraces and diagonal paths, which run on our threedimensionally folded structure, allow a continuous accessibility all over the building. All the cells are interconnected and all the spaces are fully accessible and interrelated with each other.

PROJECT INFO

TITLE: Foldsc(r)ape

TYPE: skyscraper

LOCATION: former Fair Area – Rome, Italy

YEAR: 2011

STATUS: competition entry

CREDITS

GOMMAdesign

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GOMMAdesign is an architecture and design studio based in Rome, mainly focused on the investigation of new design strategies, advanced and at the same time sustainable, through the strict integration between cutting-edge digital tools, technologies, processes, materials and ecologic strategies for environmentally-aware design. (www.gommadesign.com)

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