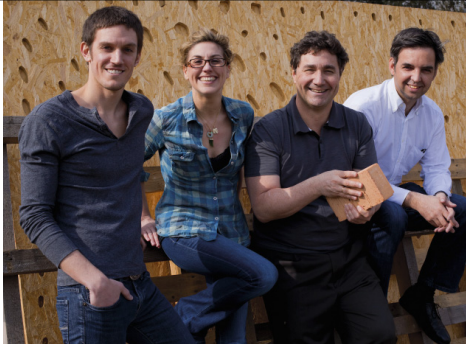


**Gold Award Latin America**

**Urban remediation and civic infrastructure hub, São Paulo, Brazil**

**Project data**

<b>Project group</b>	Building and civil engineering works
<b>Client</b>	City of São Paulo Secretaria da Habitação
<b>Project background</b>	Private commission
<b>Estimated start of construction</b>	June 2011



**Main author**

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**Further author(s)**

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**Comment of the Holcim Awards jury Latin America**

The jury appreciated the holistic approach, integrating all dimensions of sustainability on macro and micro scales. The urban approach of creating a vertical density within the low-rise sprawl of the favela, and allowing public spaces around, under and within the building, is of high quality. Through its integrative concept and introduction of cultural “high end” facilities with architectural quality, the project has the potential to contribute to an enrichment of social awareness and cohesion in the area. Furthermore, the appropriate application of technical features is of an exemplary and educative character. *Grotão - Fábrica de Música* was commended for its highly integrated involvement of the local community in a “bottom-up” planning and management approach.

**Project description by author**

Despite its central urban location, the marginalized area of Grotão within the Paraisópolis favela is effectively separated from the formal city. Within this isolated zone, increased erosion and dangerous mudslides have designated the site as one of many high-risk zones in the city – a primarily inaccessible void in the otherwise dense fabric.

The *Grotão - Fábrica de Música* (music factory) project fundamentally transforms this void into a productive zone and dynamic public space through social design, a process of analyzing the local effects of rapid growth and improving marginalized settlements through social infrastructure. In addition to stabilizing the challenging topography and eliminating further erosion damage, the new terraced landscape transforms Grotão into a natural arena that encourages diverse community participation. The intervention opens the edges of the void to re-establish connections within the isolated urban fabric and to introduce social programs where they were once categorically neglected. Localized elements of this program, which includes sports facilities, urban agricultural, public space, transportation infrastructure, replacement housing, and the *Fábrica de Música*, are simultaneously connected to all boundaries of the area by the landscape of activated terraces.

The lower zone of the site contains the *Fábrica de Música*, which vertically stacks diverse programs to maximize site potential. These include public transportation, sports facilities, and the music school, which contains practice and rehearsal spaces, studios, a performance hall, and auxiliary classrooms. This is a vital catalyst in the area, expanding music and cultural programs into the favela while forming a new network that serves the youth from all levels of society. The upper zone contains new replacement housing for those displaced from high-risk zones. Commercial spaces are introduced on the first level as an economic vehicle that activates the street level and stimulates the micro-economy of the urban agriculture on site.

The project proposes that architects eschew their conventional role in traditional hierarchies to serve as an enabling connection between the opposing forces of top-down planning and bottom-up initiatives. By creating common ground for these two forces, we can eliminate divisiveness and generate productive interactions. Here the priority becomes equipping this peripheral neighborhood with infrastructure, water, sewage networks, lighting and services in addition to social infrastructure in the areas of education, safety, culture, public space, and sports. The proposed urban model aims to translate a society's need for equal access to housing, employment, technology, services, education, and resources – fundamental rights of all city dwellers – into spatial solutions.

**Relevance to target issues by author**

**Innovation and transferability – Progress**

This comprehensive system of social infrastructure, public space, active and passive building technologies, and productivity is a conceptual framework that can be utilized to address other high risk zones and similarly challenging spaces, both within São Paulo and globally. It is a conceptual prototype and adaptable framework that encourages flexibility and a critical re-thinking of new design approaches and processes in these spaces.

**Ethical standards and social equity – People**

The project expands the definition of sustainability beyond ecological terms into the area of social sustainability. Improvement of this and other marginalized zones depends on the provision of basic services, equal resource distribution, and adequate social infrastructure and programs where they all have been conventionally ignored. The terraces provide necessary public space in the overly dense fabric in the form of a dynamic and productive zone available to all residents. They provide a framework to integrate previously fragmented areas with new social infrastructure and diverse programs to strengthen collective identity and ensure positive growth for the future. The design process is built on community participation in both the initial design phase and in the end use of the space.

**Environmental quality and resource efficiency – Planet**

The project utilizes site orientation to provide a combination of both passive and active systems for maximum efficiency and low cost. The buildings and landscape work as one system that can effectively handle the varying conditions of the wet/dry season cycle. Prevailing winds in combination with an in-floor cooling system provide efficient tempering; the waste heat is stored in the terraces (as heat sink) during the day and emitted through hybrid-PV panels at night. Excess heat is vented through a solar and wind supported chimney. Water is reused on site; what was once a danger is now a resource. Wetlands filter the water through the site, which can be used for irrigation (in urban agriculture) and gray-water applications or further filtered through rapid sand filtration. An on-site water tank distributes excess water to the sewage system during the wet season and stores it for later use during the dry season.

**Economic performance and compatibility – Prosperity**

This urban intervention fits into a larger network of upgrading projects for informal settlements financed by the city. However, it is a new typology and prototypical conceptual framework that re-defines what can be done within this budget. The urban agriculture encourages a new micro-economy in an otherwise unusable space and a productive zone that feeds directly back into the neighborhood.

**Contextual and aesthetic impact – Proficiency**

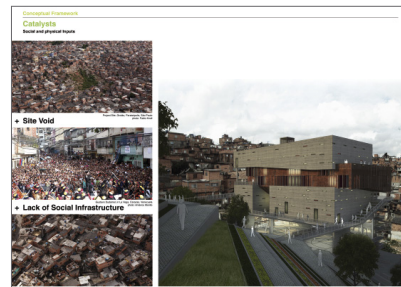
The site is fundamentally transformed from an inaccessible high-risk zone into a desirable and productive space. In order to handle the challenging topography, new section profiles were necessary to retain the hill and stop further erosion/damage. This practical infrastructural solution was embedded with important social infrastructure and re-establishes connections to the existing but fragmented neighborhood context. It is a dynamic node of public space with both fixed and flexible programs.



Project is embedded in the challenging situation of a high risk zone.



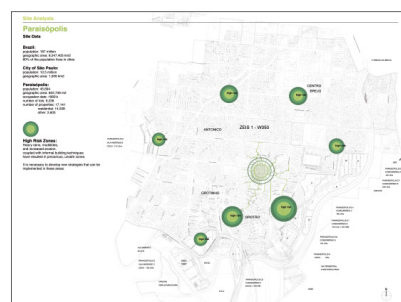
Building and landscape work as one, a node of social infrastructure and exchange.



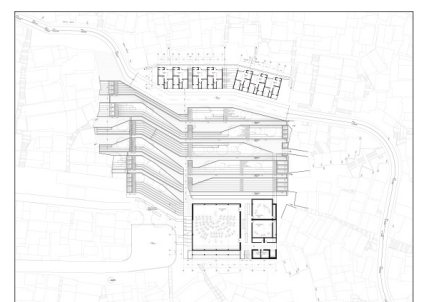
Project catalysts.



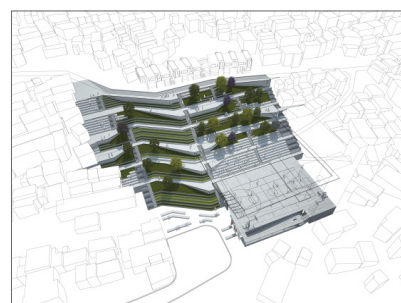
Outdoor night performance.



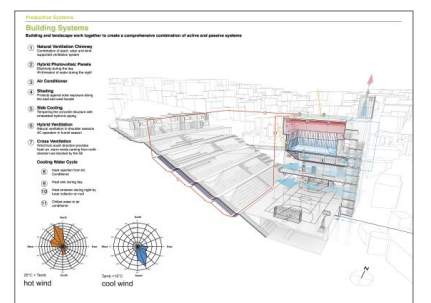
Paraisópolis high risk zones.



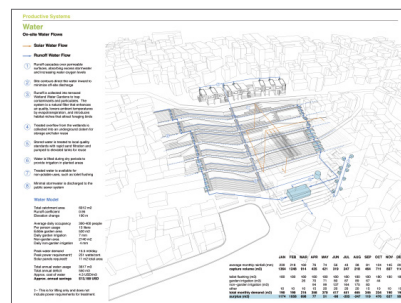
Plan.



Landscape.



Building systems.



Water systems and reuse.



Landscape elements.