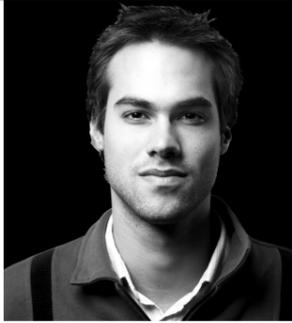


**“Next Generation” 3<sup>rd</sup> prize Latin America**

**Densification and upgrade of university buildings, Rio de Janeiro, Brazil**

**Project data**

<b>Project group</b>	Building and civil engineering works
<b>Project background</b>	Research project
<b>Estimated start of construction</b>	Not applicable



**Main author**

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

The jury found the general approach of the project convincing, densifying the campus on the one hand and creating new public spaces on the other. The necessity of handling existing structures is a theme of high value, particularly because the project dares to deal with well-designed buildings. The claim of promoting simplicity is well presented in the strategy, yet certain appropriate technical proposals are made. The design also responds successfully in terms of the site's context with a strong architectural language.

**Project description by author**

The Pontifícia Universidade Católica do Rio de Janeiro (PUC-Rio), is one of the most important national institutions, holding the first positions of teaching quality in Brazil. With a campus of over 120,000m<sup>2</sup> and 20 buildings, it is located in the noblest neighborhood of Rio and is inserted inside dense and native vegetation. Today the university suffers from a serious problem of lack of space and the existing spaces organization. The lack of a strategy of growth and investment on the requalification of this existing space is very harm to PUC and has deployed in a politics of temporary solutions. PUC-Rio needs to invest intelligently on its growth, be freed from all its trinkets, and optimize and enrich its space to achieve a higher quality of social integration, search for knowledge and satisfaction of its users.

*Binding Infrastructure: expanding the university's capacity* reorganizes PUC's urban space while building a solid image for the campus. On one hand the project aims at physical aspects: on the built and used space, on the campus infrastructure, on the flux of people and vehicles – and on the other hand on logistics: on its organization, on program and uses, and on the spatial optimization for teaching purposes.

The first image one gets in entering the campus is of disorder and disorientation. Punctuated by the arid esplanade of the parking, the approximation of the university entry is disputed by the modern valuable buildings and an ocean of cars. As a first step of project, the parking is relocated for the unused and partially unknown roof top of the neighboring tunnel which is a concrete slab that extends longitudinally parallel to the campus. A perfect spot for cars: out of vision and engulfed by the forest.

The Minhocão, built with the same philosophy and belief on the modern movement seen on PUC's buildings shares the arrival perspective with Leme building. By their proximity and typological affinity, the second project step incorporates the Minhocão into the campus, where 50% of the residences would serve for students and the other 50% would be utilized by the private sector. This second act works as a strategy to blur the borders and limits between the campus and the city. The connection is made through a new building in a loop shape stitching the existing infrastructure: Leme, Minhocão, the parking on the tunnel top, and the small research lab Van Der Graff. While rebuilding the entry an access to Leme's vault top is open in order to give back to the campus a space completely lost. Now a new direction is created one that uses and looks to the hill, a place once known as the leftover behind the building.

Within this idea the project is developed to achieve more than a built mass but an efficient organism. The five bodies are united in one with the intention of transcending the limits of their individual functions, the whole becomes more than the sum of its parts. The behavior of this complex optimizes and integrates the possibilities of the system and energy demands of PUC, it deals efficiently with the water and sun regime of the region. The project creates a space to enhance the teaching machine, and a step into the future of this institution.

**Relevance to target issues by author**

**Innovation and transferability – Progress**

This is not a project to be seen alone, it was born from the idea of renewing all the existing infrastructure of the site. By a form and a programmatic logistic that connects the surrounding buildings, it creates a new kind of built cluster where the whole is more than the sum of the parts. This new configuration enables the old buildings to work better and differently from their original intention 30 years ago. The insertion of this new building is a turning point for all the spatial organization that was there before, now there is no separated parts, the new reactivates the old and depends upon it at the same time. Their structure, for instance, is together, there is no need to build all over from zero when it is possible to use what exists on the site.

**Ethical standards and social equity – People**

This is a building inside a university what is from its first beginning an inclusive place, where the search for knowledge and mental evolution are defining principles. Moreover this is a site close to the favela of Rocinha and PUC-Rio has always been involved with social programs of interaction in this community, therefore this should be a building built by a cooperation of different social level workers, a kind of laboratory and teaching school of construction.

**Environmental quality and resource efficiency – Planet**

Extremely efficient in its functioning, the project deals with a wide range of sustainable solutions for the building's maintenance. It creates a "field" of energy generation through solar panels, recycles water, brings biodiversity through green roof, almost doesn't touch the land, appropriates the existing structures of the surrounding buildings for its use, and renews those old building by inserting new methods of use and programs. It enlarges the time of uses of the university by bringing new functions to the campus, like residences and a conference auditorium. It is inserted in the nature in a way to minimize the damage to it while embraces the green to put its users in contact with it.

**Economic performance and compatibility – Prosperity**

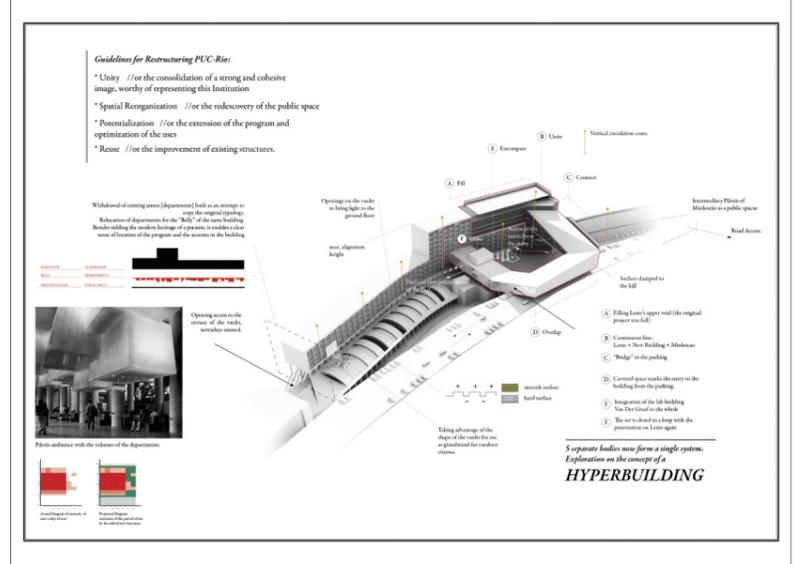
The idea is to maximize uses in order to exploit everything each building has to offer, it proposes new ways of using the existing space, bringing to the surrounding buildings the program necessary for them to work fully extending their performance. The complex will be energy-sufficient and in a long term the initial building cost will be funded by the rental of houses proposed with the annexed building (Minhocão) and the rental of the conference center.

**Contextual and aesthetic impact – Proficiency**

The project is dedicated to renew the image of the PUC therefore all its steps are of building a better environment. It unites the existing buildings in one complex and builds a solid and coherent image for the university. By joining the buildings, a new sense of direction is created and the hill that before was considered behind the building is now part of it and integrates the university campus with the existing forest.



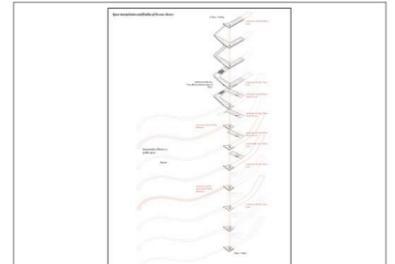
Front view.



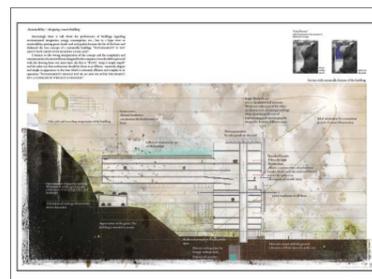
Project overview – hyperbuilding.



Guidelines.



Axonometric of the cluster.



Sustainability.