

## **Green buildings are unfeasible**

This is true from the standpoint of most Brazilian real estate developers, as there is a major obstacle in the economic equation for this type of construction to be attractive.

In the Brazilian system of production and real estate sales, governed by Law 4591/64, projects are designed and produced by the developer, who then sells the units as soon as the projects are licensed, well before construction starts. After completion, they transfer the units to the owners, who live there or rent to others.

Buildings certified as sustainable must be verified by a third party, which authenticates compliance with the requirements set forth in their rating systems. Sustainable buildings require an additional investment between 3% and 8%. In a typical snapshot regarding the feasibility of a residential project, implemented in mid-sized Brazilian cities, the construction represents 55% of the project's total potential sales value with other expenses totaling 28% (land 5%, taxes 6.75%, interests 5%, marketing 3.5%, brokerage 3.25%, administration 2.5%, legal 1% and projects 1%). This amounts to a margin of 17%. If sustainable building features fail to increase the amount of building sales, a 4% increase in the cost of construction would reduce margins to a level that could bring the project's financial attractiveness below the minimum acceptable by the shareholder, i.e. 15%.

Through the developer's vision, especially in the planning stage, projects can become fully sustainable. It isn't until the construction stage that the additional expenditures come to task.

Understandably, the entrepreneur aims to avoid any additional costs, unless they bring equivalent returns. And in the case of sustainable buildings, these returns are not clear enough for him to justify seeking the green certification of a project.

On the other side of the equation are those who get all the benefits. The building's occupants, for example, enjoy better indoor air quality, lighting, and ventilation as well as improved olfactory, thermal and acoustic comfort and lower toxicity of the materials used. Companies using this type of property reduce absenteeism and have higher productivity from their employees. The government reduces investments on water, energy, health and waste disposal sites, in addition to reductions in emissions of greenhouse gases and pollutants.

Gregory Kats, in the book "Greening our Built World. Costs, Benefits and Strategies" presents the financial costs and benefits, based on statistics from 170 certified green buildings, the majority of which are located in the U.S. (This book will soon be available in Portuguese for free download at [www.secovi.com.br](http://www.secovi.com.br) ) The author found that the financial benefits (between \$ 49.90 and \$ 66.30) brought to present value (in U.S.\$ / ft<sup>2</sup>), in a 20 year life cycle of the buildings, regarding water savings (\$ 0.50), energy (\$ 5.80), maintenance and operation (\$ 8.50), health and productivity (between \$ 36.90 and \$ 55.30) and emissions reduction (\$ 1.20) exceed by more than ten times the extra cost (between \$ 3 and \$ 5).

Also, according to the publication, the sale values for the certified offices are, on average, 9% higher than their non-green equivalents. This fact takes into account the buildings' ages, locations, sizes and other factors that affect their evaluations. The certified green buildings also have an increase of 9.9% in the return on investment, 6.4% in occupancy rates and 6.1% in rent values. Residential buyers are willing to pay 5.8% more for a green real estate. Governments are expected to save up to 11% in infrastructure costs when the concepts of sustainable urban land development are also aggregated, a savings that could represent over US\$ 50 billion for Brazil, if we consider the Brazilian related investments budget of near US\$500 billion for the period between 2011 and 2014.

So if we expand the focus of the economic analysis for the entire life cycle of the buildings, we find that the application of the concepts of sustainable construction makes a lot of sense.

How then can we solve the serious conflict of economic interests between the initial investors and those who actually see benefits, within the predominant model in Brazil?

1 -) Businessmen should be aware of all positive economic aspects related to sustainable production through the existing national and international research. Still, a lot more research needs to be done, especially investigations that consider the specific characteristics of our country.

2 -) It is in the hands of governments to provide tax incentive programs to companies and homeowners, for the adoption of good sustainable practices, as well as regulation through measures that are economically and technically feasible, with sufficient time for them to be adopted, after extensive debate among all stakeholders. This was well done in the formulation and adoption of ISO (NBR) 15575 - Standard Performance of Buildings, which will be mandatory from March 2013, when all projects will have to specify a minimum lifespan for all major systems that make up a building. As a result, designers and developers will have to think about the overall cost of the project throughout its life cycle and not just the cost of construction.

3 -) Various materials, systems, equipment and technologies that require no additional expenditures should be used to make projects more sustainable, even if it is not possible to certify them as green buildings.

4 -) Thoroughly inform the buyer about all the advantages of a product with green characteristics, so that he can fairly value them.

The broad application of any sustainable development, adopted voluntarily by companies, only occurs when we are able to transform the economic obstacles into to positive outcomes, because these are the main driving forces for the advancement of any for-profit organization.

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