

By Zeng Zhiwei

In a brightly lit, renovated warehouse on Jinxian Road in Luwan district, Alessandro Bisagni, wearing a suit and tie, sorts papers into two boxes in his new office. "Sorry, it's a bit messy here," he said, smiling. As the owner of a consulting company on sustainable buildings in Shanghai, Bisagni moved his office to the new building about a month ago to keep up with the expanding Chinese market for green buildings.

Take Leadership in Energy & Environmental Design (LEED), an internationally recognized green building certification system, as an example. Since 2005, 370 construction projects have applied for LEED certification in China as of October 2010. And LEED is only one of the recognized green building standards in China.

Although the market is growing, the number of green buildings is small when compared with the overall number of construction projects currently underway in China. Although the green building promises big benefits in terms of carbon emissions, construction material and energy efficiency, and even employee health, there remains a general lack of knowledge about green building and its costs, both among developers and the public.

According to an online survey conducted by Sina.com, one of China's biggest web portals, 69.6 percent of respondents believed green buildings cost significantly more than non-green buildings, which Bisagni seeks to clarify. "Green buildings in general cost a bit more, but this is not always the case," he said.



Hotels in Qufu, Shandong Province (above) and Hong Kong (right) that Alessandro Bisagni's company is helping make green.

Still, Bisagni, who has a bachelor's degree in environmental economic and urban planning, believes the general lack of knowledge about green building is currently one of the biggest challenges the industry has to overcome.

The purpose of building 'green'

According to the US Environmental Protection Agency, green building is "the practice of creating healthier and more resource-efficient models of construction, renovation, operation, maintenance and demolition in an effort to more efficiently use energy, water, and other resources; protect the health of the occupants; and improve employee productivity."

Many countries nowadays use different systems to certify green buildings.

The US, Mexico and Brazil use the LEED system,



which was created by the US Green Building Council, an advocacy group for sustainable building.

There are many different ways to make a building "green," from improving the quality of windows and insulation to actually changing a building's design. For China, Bisagni has several suggestions. It starts with smart design, which means a developer ought to think about ways to make the building more sustainable from the project's inception. Examples include adding solar shading devices, designing facades that take advantage of natural air currents to maximize ventilation and interior design that improves the comfort of its occupants. Putting high-efficiency windows and insulation in walls, ceilings and floors can greatly reduce a building's energy consumption, along

with installing efficient lighting, heating and cooling systems.

Build fast, sell faster

When it comes to actually implementing these measures, China's advantage is actually a disadvantage. Most buildings in China are built to sell, like many other places in the world. But the problem with China is the speed in which buildings are built and sold. It all happens too fast, according to Bisagni.

The benefits of green building, such as lower electricity bills, are not apparent in the short term. And because developers aim to sell their buildings as soon as possible, there isn't much of an incentive for them to seriously consider green building practices. "If a developer only pays (the bills) for less than three years, they don't see much of a difference. It is difficult for us to convince developers to pay for something that they don't see much benefit from," Bisagni said.

According to Bisagni, employing green building practices generally increases the cost of construction. And particularly in China, the cost of green buildings is generally higher than in the US. Meanwhile, developers are trying to cut costs wherever possible. Green materials sometimes cost more, further dissuading developers from using them. "It is our job to prove to them why using green materials will benefit the project and the people living within the space," Bisagni said.

If there is no immediate economic benefit, it is more difficult to convince developers unfamiliar with sustainability to use green products, especially if they cost more.

A lack of foresight

One of the biggest challenges green building faces in China is a dearth of planning ahead. Bisagni has had experiences with clients, both Chinese and foreigners, who came to him with a finished blueprint of their buildings (some had even started construction). They wanted Bisagni's company to help them generate more interest in the project in the market by adding green building elements.

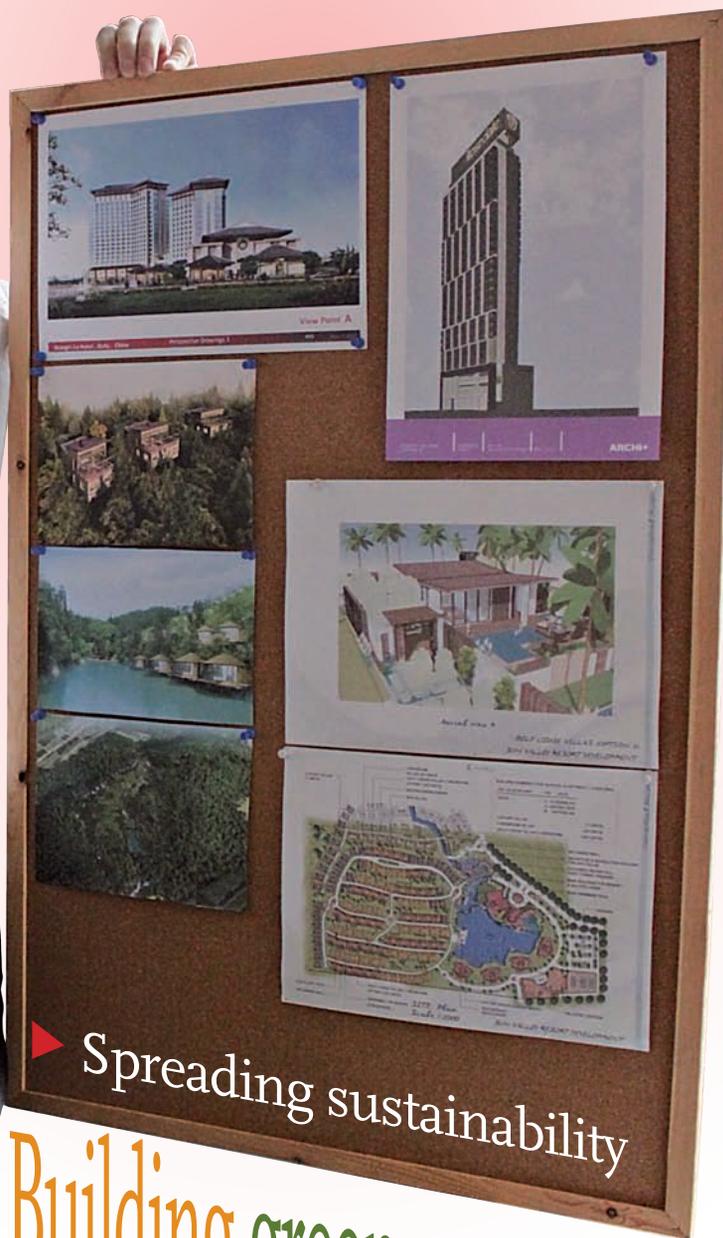
For Bisagni, this is putting the cart before the horse. "This can only add to the cost. The only way to build a green building and get a real certificate and still keep the cost down is doing it from an early stage," Bisagni said.

According to Bisagni, adding green building elements in the later stages of design will cost more than if it were planned from the beginning. "Green building is not at all about the latest green technologies. You can have a huge impact on sustainability by building in a smarter way," he said.

Bisagni hopes the Chinese government can do more.

"It is not just about economic returns, they need to see the whole picture about what green buildings can bring to the world. It is a conceptual matter. Unfortunately, this takes time for people to understand."

However, with the rate at which China's is developing and consuming energy, there isn't a lot of time. "China cannot afford to be slow on this anymore," Bisagni said.



Spreading sustainability
Building green awareness