Greencast has the formula to make what is greener and more efficient

Greencast Pte Ltd is an exclusive club of new companies that have turned profitable within two years. The maker of hollow core, non-weight bearing walls used by the construction industry here has shown that it is possible when its business idea is greener and more efficient than what is available in the market.

At least half its product, GC ecoWall, is made from recycled aggregates – debris which is crushed, filtered, mixed and squeezed – the by-products of other industries that were supposed to have been disposed of anyway. Walls made of this material are thus light but strong, good at dampening sound and efficient to build with to boot.

The construction industry has for a long time, preferred brick for walls because it is the gold standard for its high-compressive strength, fire-resistance and sound-insulation properties.

The situation wasn't so mirthful when the company introduced its precast wall panels to the market; it came up against the industry's resistance to change, and has to work hard to convince contractors that the GC ecoWall was a superior alternative to the available options.

The other worry for the company was that it had incurred significant costs in machinery and technology to come up with its product – although these costs had been financed entirely out of paid-up capital, not bank loans.

The market has since come to recognize the advantages of the GC ecoWall.

First, it has great compressive strength than traditional brick walls. This means the wall can withstand more pressure than brick.

The GC ecoWall is also better than other hollow core walls in soundproofing. Third, it can be installed more quickly than brick walls, a property which translate into significant cost savings by contractors.

Here is why: Bricklaying is time consuming. It entails lifting large amounts of brick and handling a messy mix of sand and cement. And because of concerns about stability, work on putting up a brick wall has to be stopped after every three metres and continued only the next day. After the wall is up, plastering also entails waiting a day after the plaster is applied.

Installing a precast GC ecoWall, on the other hand involves hoisting it and applying an easy skim coat. Expensive plastering is unnecessary,

Beginnings

In September 2002, the Building and Construction Authority awarded a $1.2million research and development grant to a research team in the Department of Civil Engineering of the National University of Singapore (NUS) to encourage development of technology that would make construction, faster, cheaper and greener.

The mission laid before NUS took on a more urgent cast in light of the bans on sand exports by neighbouring countries, which had driven up sand prices and the cost of construction.

NUS's Department of Civil Engineering, then led by Professor Wee Tiong Huan, came up with an eco-friendly way to build walls, which led to the birth of the GC ecoWall.

The technology was patented by NUS in 2006. Professor Wee, as lead inventor, saw the potential in the product if it were to be accepted by the industry. NUS exclusively licensed the technology to the company under an arrangement in which the company pays the university royalties; NUS on its part, continues to develop the technology pipeline and monitor market demand. Prof Wee got a foot in the industry's door through his discussions with GuocoLand, which led to the GC ecoWall being used in two of GuocoLand's residential developments.

Thus began the process of seeking out contacts in the construction industry and convincing them of the benefits of the GC ecoWall. To date, these precast wall panels have been used in about 30 sites here – a mix of residential, commercial and industrial building projects.

First, the company keeps communication channels open among all those involved in the installation of the walls – from the laborer right up to customers and suppliers. This gives the company all the feedback it needs to be responsive to the market.

Second, the company is cash-rich, which enables it to fund its operation out of its cash flow without the need to rely on bank loans.

Third, it manages this cash flow prudently, which goes some way to ensure that the company is able to surmount difficult times. This prudence is seen in the company's premises and office space being modestly fitted out.