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# Samwoh finds niche in green construction

The company is banking on recycled concrete aggregates to grow its business. It is also working on more new R&D projects in a bid to stay ahead of the industry curve, reports **UMA SHANKARI**

CIVIL engineering and building materials company Samwoh Corporation is banking on green construction as it looks to grow its presence in Singapore and abroad.

The company came in first in this year's E50 awards—the second year in a row—after placing ninth in 2008 when it first competed for the award.

The ranking of the top 50 companies for the awards is based mainly on a weighted-average computation of a set of performance indicators (such as turnover and operating profit before tax) over a three-year period. Despite the economic crisis, Samwoh did well in 2008, 2009 and 2010, Samwoh managing director Elvin Koh says.

And he hopes that the firm's research activities signal the approach of a green revolution that could transform Singapore's building and construction sector.

The company recently scored an industry

first with its Eco-Green Building at Kranji Crescent, which is the first building in Singapore and South-east Asia to use recycled concrete aggregates (RCA) in its structural concrete elements.

The three-storey building cost about \$4 million to construct and the flooring of the top storey is composed entirely of RCA. The building is now being used by Samwoh to test and showcase new construction recycling technology.

## Sustainable construction

Samwoh has always been spurred by the lack of natural resources in Singapore to seek more sustainable methods in construction, Mr Koh says.

"Since Singapore is a small country without much natural resources, the drive towards sustainable construction is a very important thing," he says.

In 2005, the company invested in a plant that recycles concrete waste. And to overcome Indonesia's ban on the export of sand, Samwoh has been actively involved in the development of new green technologies.

Samwoh subscribes to the strategy of allocating a significant chunk of its budget to come up with innovative products in order to achieve steady returns at all points of the economic cycle.

One such product is Samphalit—a flexible pavement system comprising a blend of asphalt premix and cement grout to create pavements for use in heavy usage road sections.

And now, Samwoh is banking on "green" RCA. The firm was awarded a research grant of \$750,000 from a fund that was jointly set up by the Building and Construction Authority and the Ministry of National Development.

Samwoh used the grant to study the effective usage of RCA for the construction of commercial buildings. The RCA was then used to

build Samwoh Eco-Green Park, which was officially opened by Senior Minister of State for National Development and Education Grace Fu in March this year.

Samwoh's investment in RCA has yet to pay off, but Mr Koh remains confident that it will in the long run as RCA becomes more accepted in the industry and more contractors start to build with it.

Building a development with RCA now costs about 10-20 per cent more than using regular ready-mixed concrete, according to Mr Koh. But he believes that the cost will go down as more companies invest in RCA, leading to cost savings brought on by economies of scale.

"We believe that Singapore needs to do more recycling in construction because everywhere in the world, for the last 30-40 years, they have been using a lot of recycled materials for construction," he says.

The industry seems to be progressing towards this. Singapore's government-led push from the infamous sand ban in January 2007, when Indonesia cut off sand exports to Singapore.

In March this year, the Land Transport Authority (LTA) relaxed its requirements to allow material such as recycled asphalt-pavement waste to be used in road construction. This means that companies that win road construction tenders can now use RCA.

But Samwoh is not sitting still; the company is already working on more new R&D projects in a bid to stay ahead of the industry curve. Among other things, Samwoh is looking at recycling waste from incinerators and processing it into an engineered aggregate, which can then be used for construction structures such as the base of roads.

## Humble roots

Samwoh has come a long way from its humble roots. The company, which was incorporated more than 30 years ago as a transport and logistics firm, now has a range of businesses that spans civil engineering, recycling of construction wastes, and even consultancy.

Business started picking up in the 1980s when it secured several infrastructure projects from government agencies such as the Housing and Development Board (HDB) and the then Public Works Department (PWD).

## Milestones

Samwoh Corporation

### 1970s

Samwoh was started in the mid-1970s as a partnership of three like-minded lorry drivers to provide transportation and logistics services.

### 1980s

The company's business grew significantly as it secured several key projects including a HDB project to transport granite materials and sand.

### 1990s

Samwoh Asphalt Premix attained L5 registration grade with BCA which qualified the company to tender for projects up to \$10 million. The company upgraded its asphalt plant to increase production capacity.

### 2000s

From year 2000, a new generation (consisting of the three founders' children) took over the company as its board of directors.

The company started to diversify into various industries including civil engineering construction; quarrying activities; offshore products; precast concrete; ready-mixed concrete; blasting works; research and consultancy; supplying of sea sand; and recycling.

Following this, the company decided to diversify on the back of a larger capital base and more shareholders. It moved into civil and infrastructure engineering construction and built flyovers, bridges and sewage and drainage works.

But the bulk of its growth came from 2000 onwards, when Mr Koh and other directors decided to increase spending on research & development (R&D) and make a push into sustainable construction.

The company spends more than \$1 million a year on its R&D activities and employs a team of about 13-14 professionals and technicians at any one time in its R&D division.

Right now, Samwoh has five business divisions: civil engineering; building materials and construction; recycling (including producing materials for green building); consultancy; and the manufacture of special products.

But Samwoh is looking at diversifying its business even further to ensure that it is not overly reliant on any single sector or market for growth and revenue.

In one such move to diversify, Samwoh in 2008 ventured into the sea sand extraction business for the purpose of land reclamation.

And the group is also looking to diversify geographically. Samwoh already sources for raw materials in Indonesia and Myanmar but it also wants to win contracts in neighbouring countries and is now exploring bidding for civil engineering and construction tenders in countries such as Malaysia, Taiwan, China and Vietnam.

But Singapore will continue to be the company's focus, Mr Koh says.



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— Samwoh managing director Elvin Koh. Seen here is the company's asphalt recycling plant in its Eco-Green Park