

Bringing innovation to civil engineering

Hocklim Engineering is committed to cutting-edge research and development, with a focus on sustainability

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FROM contemplating closure about a decade ago, Hocklim Engineering has since transformed and thrived, thanks to innovative solutions.

The family business was founded in 1988, with a focus on civil engineering works. Some 20 years later, in the face of tough competition, founder Chua Chiang Hock considered winding down the company.

But Chua Yuan Shen was unwilling to let his father's hard work go to waste. He decided to continue the family legacy – and now heads it as chief executive officer.

When the younger Chua joined the business in 2012, the company had fewer than 10 employees. Today, it has around 50. In the past three years, revenue has grown at a compound annual rate of 18 per cent.

The award-winning company was the main contractor for various public and private-sector projects, with government clients including the national water agency PUB, Singapore Land Authority, Housing and Development Board (HDB) and National Parks Board.

Hocklim is committed to cutting-edge research and innovation, said Chua.

To that end, the company is engaged in research and development projects with institutes of



Some members of the Hocklim Engineering team with awards won: (Front row, from left) Administrative assistant Yap Jia Yi, quantity surveyor Aye Myint Mar, chief executive officer Chua Yuan Shen and senior engineer Kyaw Wunna. (Back row, from left) Quantity surveyor Shaun Kok, contract manager Benny Neo, operation manager Pei Cao and project engineer Mariyappan Gowrisankar. PHOTO: HOCKLIM ENGINEERING

higher learning and local universities.

Tackling climate change

Mitigating the effects of climate change – such as greater rainfall – is an important focus for Hocklim.

One solution that Hocklim de-

signed is an enhanced “geobarrier” system, which it developed in collaboration with HDB and Nanyang Technological University. This tackles one of Singapore's climate change risks: increased “slope failure”, or landslides, due to rain.

The geobarrier consists of bags

that are filled with aggregate material – sand and gravel, for instance – and attached to a grid that is placed on the slope.

Plants can be grown in the bags, improving the look of the barrier. Furthermore, with the planting of greenery, the system can help cli-

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ents accrue carbon avoidance credits and tax offsets.

This system has won various awards and is increasingly being used as an alternative to reinforced concrete walls in HDB estates, as well as other developments.

Another solution that Hocklim developed is a remote-controlled system which controls stoplogs – floodgates in canals and drains – when water levels get too high, thus mitigating floods.

The system uses Internet of Things technology, with water levels being monitored by cameras and remote controllers being used to activate the floodgates.

Going further

In general, Hocklim focuses on using advanced technologies and developing solutions in-house for a first-mover advantage, said Chua.

Chua himself conducted research in urban sustainability for his PhD, and learnt about the technology behind many modern engi-

neering solutions, which he has applied at Hocklim. For instance, 3D scanning is used for the geobarrier system.

The company is dedicated to sustainability, global expansion and continual innovation.

The latter includes making enhancements to existing solutions. With the geobarrier system, for example, technology can be developed to detect slope failures before they happen.

As for going overseas, Hocklim is exploring opportunities to export its solutions, with the support of Enterprise Singapore. In this, it hopes to leverage the reputation that Singapore companies have for pioneering innovative engineering solutions.

