

● Faced with a difficult business environment, SMEs in Singapore must ramp up their efforts to innovate to stay competitive. This month, we profile some companies that are banking on research and development to boost their bottom line.

MACHINE DOCTORS

Putting it all on research

Equipment testing firm Hoestar takes high-risk gamble on research at time of crisis and comes out a winner

FRANCIS KAN
todaysme@mediacorp.com.sg

SINGAPORE – It was about a decade ago that Mr Leong Weng Hoe, founder of equipment testing firm Hoestar PD Technology, faced a major crisis. The company's key product, a device that gauged the health of high-voltage machinery, was producing unreliable readings.

Back against the wall, Mr Leong turned to a high-risk option that he knew would take years and potentially yield nothing: Developing the company's own proprietary product by working with researchers from the Nanyang Technological University (NTU).

After six years and numerous setbacks, Hoestar finally unveiled the PD PAC, a device that provides accurate predictions on whether — and when — a piece of machinery was likely to fail, helping customers to reduce their operating expenses.

The product is now on the way to becoming the company's biggest revenue generator and has spawned mobile and online versions. More significantly, the experience has convinced Mr Leong and his two fellow shareholders of the benefits of research and development (R&D).

"We must have been nuts to do research, because you could spend years on it and come up with nothing at the end. And if you are a small company, that is an even bigger risk," said Mr Leong, 54, who is also Hoestar's Managing Director. "But we needed a product that was reliable for our customers."

The company has since worked with units within government agency A*STAR, such as the Institute of Materials Research and Engineering (IMRE), to come up with other solutions for its customers. Its latest collaboration with IMRE resulted in wireless sensors that track vibrations

“We still have to be wary when it comes to research ... There is no guarantee of success, but for SMEs looking to survive, it is very important to innovate.”

Mr Leong Weng Hoe
FOUNDER AND
MANAGING DIRECTOR
OF HOESTAR PD
TECHNOLOGY



Mr Leong Weng Hoe, Managing Director of Hoestar PD Technology, worked with NTU researchers to come up with the firm's own proprietary product. PHOTO: DON WONG

and stresses, which affect the health of machinery such as motors, pumps and generators. Hoestar either licenses these technologies or co-owns them with its research partner.

Mr Leong, an engineer by training, founded the company with two other partners 20 years ago as a general engineering company before moving into the business of "non-invasive" testing services for electrical and mechanical systems.

In 1997, he split with his co-founders over "differences". Two years later, a new opportunity presented itself when SP PowerGrid, the operator of Singapore's electricity transmission network, introduced to companies like Hoestar a technology for testing high-voltage machinery at a seminar.

The technology opened the door to new business for the company but, unfortunately, there were issues with reliability.

"There were accuracy problems that led to misleading results. It's not good when you have to tell your customers you don't know what's going on," he said.

That was when he decided to approach an NTU professor who had presented at the SP PowerGrid seminar. As luck would have it, the professor was already working on a solution to the problem that Hoestar was facing.

Over the next three years, the two parties worked together — the NTU team researching the issue with feedback from Hoestar — to produce a solution. But it took another three years of testing in live situations before the product was ready for commercial use.

"It took some years to perfect the methodology. We had to test in different environments until we got it right. Sometimes, it was like the blind leading the blind," he said. "There were many times when we felt like giving up, but we just persisted."

The arduous trial-and-error process eventually paid off and, by 2009, the company was ready to sell the PD PAC. Even then, it took some more time to convince customers of the benefits of the new system, but after gaining the confidence of a few key clients, business soon picked up.

* BUSINESS ADVISER

Mr Leong Weng Hoe, Managing Director of Hoestar PD Technology, shares his thoughts on how to survive in a competitive business environment.

● **Be different**
You have got to be different from others. If not, there will be a price war, which is not sustainable. If we didn't develop our own product, the only thing we could do to survive is to reduce costs, but that doesn't add value for the customer.

● **Stay interested**
Of course, having passion for what you do is important, especially in our industry, which is very technical and requires specialised skills. We need people with the passion and interest in what we do, because it takes about six months to a year to develop the expertise. If you don't have the interest, you won't stay.

● **Keep good company**
Finding the right partner is very important, people who share your vision. If you can get the right partner, you can move much faster, maybe at double the pace compared to doing it on your own.

"We had some very good customers who believed in us, and they became like a reference for us to convince others," he said.

Hoestar's customers come from a range of industries, including the marine and petrochemical sectors; any business, in fact, that utilises a high-voltage system.

The company, which raked in about S\$1 million in revenue last year and is profitable, is looking to expand its operations overseas. It already operates in Malaysia, where it has a subsidiary, as well as Macau, Thailand, Vietnam and, soon, Indonesia, through either distributorships or joint-venture agreements.

And, having been bitten by the R&D bug, the company will continue to look for opportunities to grow its business through innovation.

"We still have to be wary when it comes to research. What happens in the lab and what happens outside the lab isn't always the same. There is no guarantee of success, but for SMEs looking to survive, it is very important to innovate."