

SMESpotlight

Infineon finds Hope in local firm's robot

While small and medium-sized enterprises (SMEs) may often view multinationals as unrelenting heavyweight competitors, collaborations between the two may well benefit both companies. In the third of a four-part series, Yasmine Yahya speaks to global semiconductor firm Infineon Technologies' senior staff engineer Jeffrey Tan and home-grown Hope Technik's senior sales engineer Stanley Wee about their award-winning collaboration.

Q What was the project that your firms collaborated on?

Mr Tan The main purpose of this project was to use technology to help us to manage a lot of non-value-added activities in our factory. Things like pushing around materials, transporting devices from one end of the production floor to the other.

Singapore is a high-cost country with a rapidly ageing population, and our operators are getting old. So we wanted to find a way to improve our situation – not just to lower costs but also in terms of ergonomics and safety.

At the same time, we wanted to create an opportunity for our workers to upgrade their skills and do more complex tasks. So ultimately we wanted to be able to produce more with the same number of people or fewer, as our workers retire.

And so Hope came up with an Automated Guided Vehicle (AGV), a robot, to suit our needs.

Q What made you turn to Hope?

Mr Tan Typically when we want to do a project like this, we would do an intensive benchmarking to assess the technologies and solutions available locally or overseas.

We came across Hope, and after doing more research about the company and knowing that it had done a lot of work for the Singapore de-

fence industry, we felt it was a company with a lot of engineering expertise.

Its presence in Singapore was a plus – its entire engineering team is here, which is an advantage. At most, it is only half an hour's drive away from us if there is a need for us to meet and troubleshoot or resolve any issues, as compared with having to deal with someone far away in a different time zone.

Q Did the specifications of this project pose new challenges for Hope?

Mr Wee Yes, working with Infineon expanded our knowledge. It allowed us to further refine and strengthen our technology and we gained from learning how to make these robots work seamlessly inside a manufacturing plant.

One major difference between a manufacturing environment and what our defence clients need is the fact that manufacturing is 24-hour operations, non-stop. Not 24-hour standby.

So our robots had to be able to fulfil that need. I won't lie; it wasn't easy. A lot of effort went into ensuring the reliability and robustness of the robots.

Q This joint project was named the most disruptive collaboration between an SME and a multinational



Infineon's Mr Jeffrey Tan (left) and Hope Technik's Mr Stanley Wee with the robot that the home-grown firm built for the semiconductor company. The robot does non-value-added activities such as transporting devices from one end of the factory floor to the other. PHOTO: MARCUS TAN FOR THE STRAITS TIMES

at this year's Singapore International Chamber of Commerce awards. What was disruptive about it?

Mr Tan Our staff had to learn how to work with robots moving among them.

When we introduced them at the end of December last year, people were a bit apprehensive. It took a while for them to adapt.

Training was provided and we communicated with the shop-floor staff to tell them about the safety features built into the robots to prevent accidents and collisions.

Once they were aware and after having observed the robots for a

while, they were a lot more comfortable.

Knowledge-wise, it was also disruptive to Infineon as we had to build up our own understanding of the robots to enhance our usage of them.

Q How has the collaboration benefited Hope's business?

Mr Wee We gained domain knowledge – the semiconductor environment was new to us and this helped us improve and strengthen not just our robots' hardware but also the backend software.

It has also helped us to learn what

to look out for in providing automation services to other industries. We're talking about businesses that might not have huge plans in automation yet. So we can share this experience with them.

After all, AGVs can be used in any environment requiring the transportation of goods, so a lot of businesses could benefit.

We're looking at targeting other semiconductor firms and logistics companies.

Q What's next?

Mr Tan Right now, what we really want to look into is to work closely

with Hope, making use of the data that we are able to obtain from this robot to see how else we can further enhance its functionality and performance.

Mr Wee At any one time, the robot has information on its location, what it's picking up, its traffic control system and transport log history, so all this data can be fed back to the master control, which can be integrated with other automated solutions. So, from analysing the data, we can make predictions and do more advanced planning.

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