

V3 adds its smarts for a smart nation

The company is a local provider of mobility and automation solutions. Its focus is on providing fleet and workforce management solutions, as well as intelligent transportation systems for different industries. BY ETHAN PANG ZHI HUI, KHENG LIN CHUN, KOSHAE TAN

V3 Smart Technologies may not be a household name yet, but you may have either come across its unmanned mechanised cleaners at office buildings or at neighbourhood malls.

The robotic cleaner was designed, retrofitted and patented by the home-grown company in collaboration with German cleaning machine manufacturer, Kärcher.

It was rolled-out commercially last year as part of a project under the Infocomm Development Authority's Enhanced iSprint programme. The programme supports SMEs' use of technology to boost productivity and growth.

The newly rebranded V3 Smart Technologies (formerly known as V3 Teletech), was founded in 2002 by Wong Shih Jon. Together with his founding team – consisting of individuals with engineering, logistics and IT skills – he decided to start the company by pursuing an opportunity in the geospatial wireless space.

This led to the creation of V3 Smart Technologies, which Temasek-linked Angel Technology Fund Investment Company funded. It subsequently became associated with digital security company Gemalto in 2005.

The company is a local provider of mobility and automation solutions in Singapore and is now embarking on a regional expansion footprint. Its focus is on providing fleet and workforce management solutions, as well as intelligent transportation systems for different industries.

Its customers are wide-ranging and include companies from the logistics, transportation, construction and waste industries, as well as municipal government agencies.

"V3 represents Visibility, Velocity, and Variability," says Adrian Long, general manager and one of the co-founders.

"Back then, there were not many local providers of technology and automation services for local SMEs. Coming from engineering and computing backgrounds, we understood how they could benefit by automating their processes."

THE EARLY YEARS

V3's flagship product is its Fleet Management System (FMS). Its first project as a company was to develop and launch a FMS solution for a logistics company using Global Positioning System (GPS) technology to track its trucks.

Since then, V3's fleet management solution has gone beyond providing simple track and trace capabilities. From optimising routes to vehicle maintenance reminders, fleet managers have enhanced capabilities through telematics.

Clients of the company's FMS solutions range from SMEs with several delivery vans, to large corporations with fleets of hundreds of vehicles in the construction and transportation industries.

The Workforce Assignment and Mobility (WAM) solution is a modular feature that can either be purchased separately or bundled with the FMS system. The WAM solution allows employers to track the workflow and performance of their employees through a mobile app.

In the cleaning and transportation industries, for example, validation of work done has often been by the traditional manual worksheet. It is tedious for employers to review



Adrian Long, general manager of V3 Smart Technologies, with an autonomous maintenance machine. You may have come across one of its unmanned mechanised cleaners at either office buildings or at neighbourhood malls. FILE PHOTO

these worksheets, which may not even reflect the actual work done.

With WAM, employers can validate on-site work through handheld devices via barcode scanning and electronic-signatories, while image records for each job completed are time and location stamped. This improves efficiency, eliminates lapses and increases operational effectiveness.

"Each client has different milestones and requirements. At the heart of our solutions is our core technology platform, V3NITY, which allows us to seamlessly customise and integrate our solutions to each client's current systems," says Mr Long.

As today's technology landscape becomes increasingly complex, more companies are seeking new solutions such as cloud robotics to cope with ever-changing business demands.

V3 has stayed ahead of industry trends to meet client needs. Three years ago, it adopted robotics and industrial sensor automation to complement its cloud-based software system. It's called V3 Technovation.

"We remain relevant and are able to provide valuable solutions to our customers by continually innovating and adapting," says Mr Long. "Working with various agencies and partners, we look at how we can optimise certain processes through smart algorithms and help our customers, especially with the manpower crunch in sectors like the cleaning industry in Singapore."

The company has been working with the National Environmental Agency (NEA) and other private refuse collection contractors such as Veolia to deploy its Waste and Utility Management (WUM) system.

Through smart algorithms and installation of fill-detection sensors on compactors, V3's

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WUM solution develops optimised routes and schedules, as well as directs waste-removal truck operators to complete their job assignments. As a result, operators can collect more waste in the same time, increasing productivity and reducing costs.

Complementing the WUM solutions is the Bin Belly, a smart device retrofitted to ordinary rubbish bins and compactors to sense fill levels. The Bin Belly notifies cleaners when the bin reaches a programmed threshold.

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With its innovative culture, V3 is always on the lookout for new solution offerings and opportunities.

In 2015, it conceptualised and developed Sentient Eye, a facial and movement recognition solution which uses Optical Character Recognition (OCR) as well as facial and people-count technology to process images for security and regulatory enforcement applications. Sentient Eye was exhibited at Singapore's inaugural Interpol World Exhibition that year.

MOUNTING CHALLENGES

With its focus on developing cutting-edge technological solutions, it is no wonder most of V3's 35 employees are in the Research and Development (R&D) division with expertise in engineering, robotics and artificial intelligence. The SME is one of the first in Singapore to form an engineering department focused on R&D.

Nevertheless, human capital acquisition remains a key challenge – not just in attracting locals with the relevant skills, but also in retaining them.

Even then, the team tries to fill most of their positions with local hires, and has since opened development positions even to those with some, but not entirely related academic backgrounds.

"We welcome prospects from all backgrounds as long as they have the right attitude and willingness to learn," says Mr Long.

"We also believe that on-the-job training in both hardware and software development is important as each engineer needs to have a holistic vision of the concept."

Despite the huge advantages of employing modern technologies, many local SMEs remain hesitant in adopting them.

"Business owners are often either unaware of the huge cost savings that can be realised, or may be averse to adoption of modern technologies which they believe would disrupt their current processes."

Despite these challenges, the company has grown its customer base and solutions portfolio considerably and intends to remain relevant in the years to come.

Since its founding, it has achieved numerous accolades.

V3 was awarded the GSMA APAC Top Innovator by the GSM association in 2009, and a Silver award at the 2016 Asean ICT Awards. It was also a finalist for Best Telematics Service at Telematics Update Detroit in 2013.

Twice in a row, the company has also been awarded the Enterprise 50 Award, which recognises the 50 most enterprising, privately-owned local companies in Singapore. Last year, V3 Smart Technologies was ranked 36th.

Most recently, APAC CIO Outlook report, a leading IT magazine in the Asia-Pacific, listed V3 as one of the top 10 most promising fleet management solution providers in 2017.

Regional governments are taking strides towards automation and technology through smart nation initiatives. In Singapore, the government recently rolled out new initiatives and incentives in a bid to transform the local landscape by encouraging enterprises to adopt technological solutions.

V3 hopes to ride the technological wave and offer its wealth of expertise and experience in field of the Internet of Things (IoT).

Mr Long says: "Our mission at V3 to provide smart Mobility and automation solutions to industries is in line with the Smart City vision, and we look forward to being part of the movement."

The writers are students from NUS Business School.

ENTERPRISE



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This series is part of the Enterprise 50 Educational Project between the E50 partners and the NUS Business School. V3 Smart Technologies was among the winners in 2016. The annual E50 ranking is co-organised by *The Business Times* and KPMG, sponsored by OCBC Bank, and supported by Spring Singapore, IE Singapore, Singapore Exchange and Singapore Business Federation.

