



Steve Saunders, CEO and founder of Robotics Plus

NZ company among world robotics best

Set among kiwifruit orchards in rural Bay of Plenty is a company ranked among the world's top 50 hi-tech agri-businesses. In June, Robotics Plus was named on the 2020 RBR50, Robotics Business Review's prestigious global list recognising the 50 most innovative and transformative robotics companies of the year.

By Elaine Fisher

Robotics Plus is also one of only five international companies named in the robotics and automation category of the 2020 THRIVE Top 50 list.

The list is compiled by SVG Ventures-THRIVE, a global agri-food innovation and investment platform based in Silicon Valley. To make the Top 50, companies must have exemplary leadership teams, technology and traction. They are selected following months of rigorous research by the SVG-THRIVE team in collaboration with corporate partners including leading agriculture and technology corporations such as Corteva,

Driscoll's, Kubota, Trimble, Taylor Farms, Valmont, Yamaha and Forbes.

Robotics Plus co-founder and chief technology officer Dr Alistair Scarfe says it's a huge honour to receive a coveted spot on THRIVE's Top 50 global list. "We're thrilled to be showcased in such a prestigious list alongside exceptional ag-tech companies from around the world who are pushing the boundaries of technology and innovation. It's a fantastic acknowledgement for our diverse team who are developing world-leading innovation incorporating automation, vision, robotics and artificial intelligence."

Steve Saunders, chief executive officer and co-founder of Robotics Plus, says: "It's a fantastic validation for our talented team to be featured in the THRIVE Top 50 - they've put in an enormous amount of work over the past few years to develop world-first platform technologies that help solve some really important food and fibre challenges in agriculture. We'd also like to recognise our fantastic partners and collaborators in the commercial, research and government sectors, who have played a vital role in our technology and company development."



The Robotics Plus team has developed a prototype robot to help pick some of the more than 3 billion kiwifruit harvested in New Zealand each year

Founded in 2013 by Steve Saunders and Dr Alistair Scarfe, the first two commercial innovations of Robotics Plus are the Āporo apple packer and an automatic log scaler. It has a number of new products in the pipeline which it intends to launch soon.

Despite its international recognition, Steve says the company, which now employs 67 staff, has no plans to move its headquarters and research centre away from the rural backwater.

“There is no reason Robotics Plus can’t stay in Te Puna. We are right in the middle of the agricultural heartland of New Zealand and in the orchards around us have the ideal “playground” in which to test our robots.”



We are receiving more and more interest from Silicon Valley and Europe

The Bay of Plenty is also a great place to live and work and that helps the company attract top scientists and engineers. “We are receiving more and more interest from Silicon Valley and Europe from people keen to escape some of the craziness of the world. We can’t match salaries commanded in Silicon Valley, but the cost of living is nowhere near as high in New Zealand and the lifestyle is a real draw.

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Top: Dr Alistair Scarfe, CTO and co-founder (left) and Steve Saunders, CEO and co-founder (right) with a Robotics Plus UGV

Robotics Plus robotic Āporo apple packers

Bottom: Robotics Plus UGV (Unmanned Ground Vehicle)

"However, it is a challenge to find the people we need. New Zealand produces fantastic engineering graduates, but we have a problem finding people with five to 10 years' experience and with the highly specific skills we now require. In the company's beginning we had a number of generalists, people who could straddle all areas, but now have to find specialists in particular areas."

Bringing new products to market is challenging, says Steve, especially when they are machines which will largely replace humans. Clients expect these robots to work 24/7 so they must be not only hi-tech and efficient, but also robust and reliable.

"It's all very well to have a bright idea and build a prototype, but it's very different bringing it to market.

As well as ruggedness, there's how to manufacture and distribute the robots, how to sell and market them and how to service them."

The company began with the aim of developing the autonomous kiwifruit picker Dr Alistair Scarfe was working on, but that machine has not yet been commercialised.

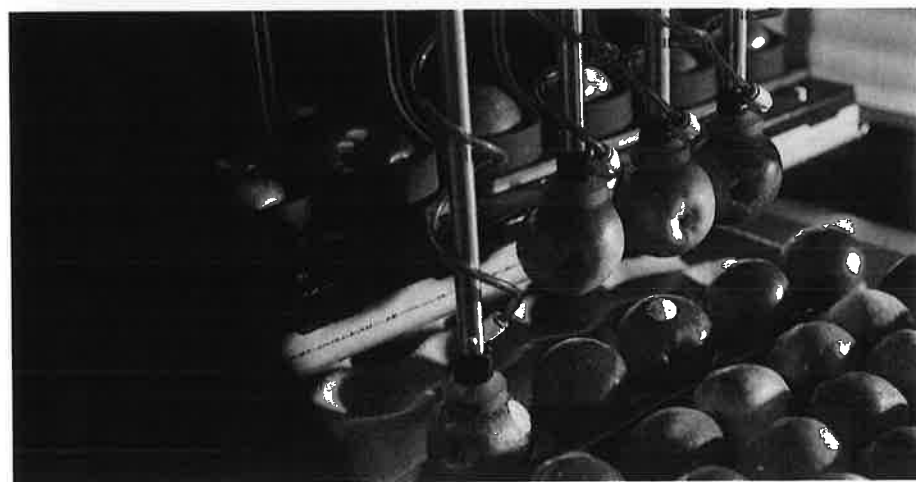
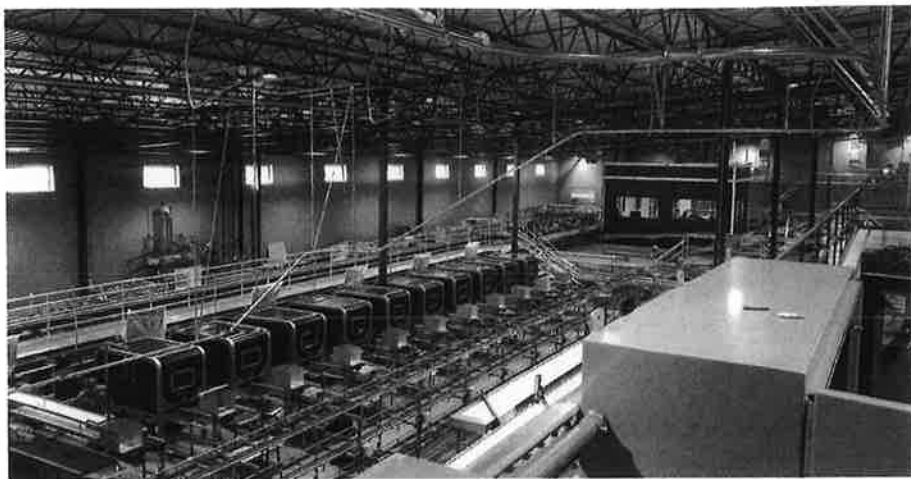
"The kiwifruit picker is a fanatic concept machine which we would love to commercialise. We are in the middle of kiwifruit country and see the issues with finding workers for harvesting, which is only likely to get worse.



Ideal 'playground' in which to test our robots

"Commercialising the picker is a matter of capital investment and finding a partner willing to invest. Everything we do is in collaboration. The log scaler was developed in collaboration with ISO Limited and the Āporo apple packers were assisted by US\$10M Series A investment into the company by Yamaha completed in 2018. We have other top-secret projects underway, all of which have commercial partners." These projects include unmanned ground vehicles (UGVs).

Another advantage to its rural location is that Robotics Plus leases a former kiwifruit packhouse in which it has manufactured up to 20 Āporo apple packers. However, Steve says the company is looking for manufacturing partners who can scale



Both images: Robotics Plus robotic Āporo apple packers recently installed in a US packhouse

up quickly, built to its specification and quality standards. "It's a good challenge to have because it means we are actually being successful and meeting the aims of Robotics Plus founders to create an iconic international company, based in New Zealand."

Robotics Plus launched its award winning robotic Āporo apple packers commercially in 2018. The technology, which identifies and safely places up to 120 apples per minute in display trays, is being marketed by Global Pac Technologies, a Jenkins Group (NZ/Australia) and Van Doren Sales (US) joint venture. The patented robotic apple packer is the world's first fully automated packing solution

that orients and colour packs apples into trays for export, and is already operating in packhouses in New Zealand, the United States and Europe.

In 2019 Robotics Plus launched its industry-changing Robotic Scaling Machine (RSM) which automates the accurate volumetric measurement of logs on trucks and trailers, with Mount Maunganui-based ISO Limited commissioning the world's first automated logging truck scalers. ISO now have several robots installed across New Zealand. Approximately 35% of New Zealand's log exports are currently measured through this technology. ●

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