

# Roborigger gains global breakthrough

Three years after being named WA's Innovator of the Year, crane technology company Roborigger is getting commercial traction.



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AN old-fashioned trade show in Germany has proven to be a pivotal event in the commercialisation journey of Perth company Roborigger.

After being constrained by COVID travel restrictions, founder Derick Markwell was finally able to get to BAUMA in October this year.

"It has been an unbelievable stepping stone to the rest of the world," Mr Markwell said.

"We had a stand there and we have just been flooded with interest and leads from serious players all over the world."

BAUMA is the biggest construction technology trade show in Europe, with 495,000 visitors and 3,200 exhibiting companies.

Roborigger had one of its machines on display indoors and a second unit outside, rigged up and in action with a loaded crane.

"It was expensive but worth it," Mr Markwell said.

"It's really challenging to introduce something that fundamentally changes the way construction is done when you are not there to describe it to people and help roll it out.

"BAUMA showed us the value of face-to-face meetings."

Roborigger's technology is attached to cranes and uses a rotating flywheel to stabilise loads.

It largely eliminates the need for workers to hold loads in place with taglines under cranes, reducing time spent in unsafe conditions and improving overall efficiency.

Like many technology companies, Roborigger has found the commercial applications are often very different to what it originally expected.

Mr Markwell started developing the technology in 2016, with a view to helping wind farm developers attach the blades to wind turbines.

Construction giant Multiplex was one of the first companies to see the potential, partnering with Roborigger on product development and using its technology on construction of the WA Museum Boola Bardip in 2019.



Derick Markwell with one of the company's units at its factory in Wangara.

Roborigger was a big winner at the Western Australian Innovator of the Year awards that year and a few months later raised \$5 million from venture capital firm Blackbird Ventures.

Progress was frustratingly slow during COVID but that is changing.

The company has built 45 units to date and half have been either sold or rented.

"The remainder we expect to get out in the next two months as part of our global expansion," Mr Markwell said.

Most of the company's growth is overseas.

"One thing we are finding is that we seem to have greater credibility outside of Perth than we do in Perth," he said.

"People here say: 'it can't be that good, it's just made by a local company'.

"Whereas when we are overseas, in Germany, Australia has a pretty good reputation for 'out there' technology.

"I haven't seen any pushback for the fact it comes from Australia."

Its customers include brick manufacturer SMD Groep in the Netherlands.

It uses Roborigger to load bricks into a small ship using a three-man team instead of five, with no people near the load, and taking 1.5 hours off the daily loading time.

Another is Germany's Meyer Werft, one of the world's biggest cruise shipbuilders.

It uses Roborigger for installing cabin modules, with precise remote control and no taglines.

Its Australian customers include Sea Swift in Queensland – it has been using Roborigger for more than a year on the Trinity Bay vessel, which does a weekly run from Cairns to Weipa.

Its system is also being used in deep excavation – the opposite of its initial focus on high-rise applications.

## Growth markets

Mr Markwell is looking to countries like Japan, Hong Kong and the United States for growth.

The company has six units deployed in Japan and is confident of further growth.

Its customers include Sumitomo Mitsui Construction Co, which in October unveiled the world's first autonomous tower crane.

It incorporates Roborigger technology to improve load control, boosting safety and efficiency.

SMCC said: "This system eliminates the need for workers to manually rotate the lifted load with the ropes and reduces the risk of disasters such as collision with



Photo: David Henry

suspended loads and falling of workers."

Mr Markwell said this project showed that Sumitomo was "pretty embedded with us".

He noted that other companies had approached Roborigger to discuss developing autonomous cranes.

"We have told them it has already been done," he said.

"Basically, there is no competitor in the world for this autonomous crane operation."

Another market where Mr Markwell sees big opportunities is Hong Kong.

Like Japan, he said Hong Kong was very focused on deploying technology that would allow it to work more efficiently and safely with fewer people.

To that end, the Hong Kong government has a Construction Innovation and Technology Fund that can cover 50 per cent of the costs of the Roborigger equipment.

The first deployment will be with CIMIC Group subsidiary Leighton Asia, which will use Roborigger on construction of a major boardwalk project.

"It's one of the models we need to consider here in WA," Mr Markwell said.

"Where something has to be approved by the government as being genuine, improving safety and efficiency, and good for the state, it then gets support, maybe just on government projects.

"To me that's where we should be going."

A further, very large opportunity is the US market, where Roborigger is finalising an agency agreement with a major construction equipment group.

"We've realised the US is a market you need to go into properly," Mr Markwell said.

"We've used Japan and Europe as our learning experience.

"Things like remote training, translation of manuals, dealer training, working with the agents, setting up our systems for spare parts, we've got all of that pretty much in place now.

"The WA government has been really good; they gave us some funding during COVID to develop some of those systems.

"It's all back-room stuff, you don't see it, but we've built that capability now to go into the states."

Its US agent has national coverage and has a lifting product that will be immediately offered with Roborigger as part of the solution.

Mr Markwell said this was another example of BAUMA delivering tangible results.

"They came, they used it, they don't have any questions about does it work," he said.

## Manufacturing plans

Mr Markwell likens Roborigger's commercial progress to a snowball rolling down a hill.

The further it goes, it gets faster and larger and gains more momentum.

The company has capacity to make one unit per day in Wangara.

Mr Markwell acknowledges costs in WA are an issue but sees local manufacturing as an advantage, particularly for quality control.

Some key equipment has to be imported but most is made locally.

"Everything you can see from the outside is all made in WA," he said.

Roborigger has established a network of local contractors for sub-assembly.

Mr Markwell said most of these contractors were geared up to service the mining industry, which had very different needs.

"We struggle to get local contractors to develop a manufacturing mindset rather than a one-off or a boutique product mindset," he said.

Nonetheless, he remains committed to the local operation.

"We are looking at manufacturing entirely in WA, I never see us moving," he said.

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