ADVANCED MANUFACTURING GROWTH CENTRE

MEMBER PROFILE

FREELANCE ROBOTICS

Freelance Robotics began in 2009 with the aim of helping to apply the component disciplines within robotics to Australian businesses, also to bridge a gap between robotics research and development and industry.

In isolation or together, expertise in engineering fields such as mechanics, computing, electronics and signal processing can be applied to any number of factory tasks, where things could be better automated and more efficiently tackled.

"If a client just requires one of the skills that robotics uses, then that's what we provide; we know over 20 programming languages," explains CEO and founder William Pagnon, who leads a team of three based in Capalaba, Brisbane.

"We do artificial intelligence for the mining industry to predict production levels and we provide that now to the manufacturing industry. We have developed smart software that is able to do data mining on big data from sensors, from machinery, so that we can identify where the bottlenecks in the factory are."

Within manufacturing, applications also include integrating sensors, conveyors, industrial PCs, automated guided vehicles, robot arms and more. Projects begin with a feasibility study of a proposed application or product, followed by research and development, construction, testing and installation phases.

A point of difference for his company is its all-engineer workforce, says Pagnon, who has Masters degrees in robotics (from ESIEA in France) and mechatronics (from the University of Queensland).

"It's not only that we know different styles of robots, but we know how to build them and have a deeper understanding about what's going on inside machinery," he adds.

Deploying such automation can bring improved quality, safety, and productivity, and therefore competitiveness levels, though adoption among Australian companies could be improved, Pagnon believes. Evidence such as a 2016 International Federation of Robotics Report placing Australia 30th for automation levels supports this.

Barriers can include a lack of education; "a lot of people are not familiar with what robotics, the internet of things, communication between machinery can achieve", and sometimes short-term thinking from middle management.

Change can bring pain, for example in short-term costs or in changing comfortable habits, often with no reward for the individual making the decision.

"What I can find is that on the floor, people want change, people want technology coming in and it's often the production manager that calls you... [not those] who don't deal directly with the production but they deal with all the financials," Pagnon adds.

There is a huge opportunity offered to Australian manufacturers by Industry 4.0, he believes, going as far as saying there's no other choice for manufacturers wanting to remain viable. Failure to move with the world would be like the proverbial frog in the pot of slowly boiling water.

Awareness of the benefits of technological investment will be important, and Pagnon praises the Advanced Manufacturing Growth Centre co-funding programs to encourage and "give examples of successful transitions."

He observes that the AMGC was "one of the first associations we had discovered that was embracing the same goals as us" regarding manufacturers adopting advanced manufacturing characteristics.

"Suddenly we were not alone anymore and we could be able to associate ourselves with a group that enabled universities and industry and suppliers to work together to get an ecosystem of entities that can be really productive and generate an economic power for Australia."

AMGC
ADVANCED MANUFACTURING GROWTH CENTRE LTD

We do artificial intelligence for the mining industry to predict production levels and we provide that now to the manufacturing industry. We have developed smart software that is able to do data mining on big data from sensors, from machinery, so that we can identify where the bottlenecks in the factory are."

William Pagnon, CEO and founder