

INDUSTRY 4.0 DIGITISATION OF SME INFRASTRUCTURE

DematecAutomation

Dematec is the lead participant in this two-year Project which will help 17 Australian SME manufacturers integrate 'Internet of Things' (IoT) capability into their products or retrofit legacy machinery with Industry 4.0-style instrumentation. This provides participants with a way to inexpensive lift their ICT intensity and to understand internal and external applications of digital adoption.



How the Growth Centre helped:

The Advanced Manufacturing Growth Centre has contributed \$250,000 in co-funding to the project. It has helped bring the Department of Industry's Entrepreneurs' Programme and SMEs together to deliver an initiative with enormous potential for its participants.

What's changed:

The 17 SMEs, deliberately chosen to represent the diversity of Australia's manufacturing sector, are adopting concepts that have been identified as essential for remaining competitive into the future. They will be able to see, in real time, important information about the performance of their assets, and to potentially adopt, and offer, new services to customers through digital connectivity.

Success story overview

Dematec Automation is a 28-year-old automation and Industry 4.0 specialist based in Adelaide. The company has worked on high-profile projects such as Techport Australia and the Gawler Water Reuse Scheme and continues to build on a rich history in manufacturing.

Dematec believes that adopting Industry 4.0 technologies, combining solutions such as sensors, cloud computing and analytics, is essential for manufacturing's competitiveness.



“Over the last three years or so we have made a concerted effort to look at how we can adopt new technologies and leverage it for our clients,” explains CEO David Hart.

The basis of this project is the integration of this platform which will deliver an affordable Industry 4.0-type solution to 17 SME manufacturers. Those selected now, and those selected in the future, will represent a deliberately diverse set of geographical locations and manufacturing sub-sectors and highlighting the broad applicability of the solution.

“We’ve developed an industrial internet of things platform that enables us to deliver digitalisation services to clients across all of our sectors at a very cost-effective price point.”

The package will instrument legacy machinery with sensors, display analytics on a dashboard, and provide real-time insights into operation. This solution has been successfully trialed at a water treatment system and on the energy management machinery of a manufacturing site.

It will, according to Hart, “Deliver an entry-level Industry 4.0 system to small and medium manufacturers that might have traditionally been almost too small to leverage our services,

to deliver some of the insight and value that bigger manufacturers have been getting from advanced technology for ten or fifteen years.”

The dashboard could be located on a screen in the factory, displaying how machinery is running and providing insights on productivity over time. For example, outlying results, such as consuming more power than usual, might indicate that machinery is failing. In this case maintenance could be carried out before a serious issue develops. Or where time is being lost, continuous improvement measures can be put in place to provide a solution.

Dematec describes these as internal applications. External applications will allow manufacturers such as machinery companies to provide greater functionality and value through their products.

“That value might be insight into how to optimise the performance of the machine that could be delivered to the end users themselves,” explains CEO David Hart

Dematec has expanded its engineering staff by 25 per cent to help roll out the project. A successful outcome for all participants would be a successful outcome for Dematec, which will have 17 case studies validating its integration work, as well as the opportunity to further mature the Industry 4.0 solution.

“It could be insights into how that machine performs in different operating conditions in different localities, and that information would be of value to the manufacturer of the machine.”

Adopting digital technologies will be critical to the success of Australian manufacturing. The Advanced Manufacturing Growth Centre research has found that ICT intensity is a common trait among successful manufacturers globally¹. Research by McKinsey & Company predicts that the Internet of Things will create between \$US 1.2 trillion and \$US 3.7 in annual economic impact at factories by 2025².

AMGC has supported this project through \$250,000 in co-funding. Hart credits the organisation with helping bring definition to the project, which had its gestation in the Department of Industry’s Entrepreneurs’ Programme.

“AMGC assisted in collaborating with the department, with us, and also with these small to medium manufacturers distributed around the country: basically bringing together the ideas and initiatives that could be rolled out,” finishes Hart.

1 https://www.amgc.org.au/Attachment?Action=Download&Attachment_Lid=27

2 <https://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/the-internet-of-things-the-value-of-digitizing-the-physical-world>

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