



TRADE TRAINING

Can the automotive industry benefit from 3D printing?

A partnership with Swinburne University, the Innovative Manufacturing Cooperative Research Centre (IMCRC) and repair solutions company Tradiebot Industries is seeking to transform the automotive repair industry with 3D printing technologies and robotics.

Some issues the auto industry is currently grappling with include material wastage, limited availability of skilled labour and long lead times for replacement parts. But the Repair Bot project is looking to solve those issues by fixing parts that were previously unrepairable and reducing overall repair times and costs through integrating additive manufacturing, 3D scanning and robotics.

David Chuter, IMCRC CEO and Managing Director, says the challenges of a project like this include the need for appropriate validation to ensure repaired parts can be as good as, or even better than, the original part. There are also challenges around the types of materials that are used in car parts – not all parts are made from the same type of plastic, which means part of the challenge will be making sure that the solutions can be deployed in a range of applications.

While Chuter said he's unaware of anyone in Australia using 3D printing for auto parts, Porsche recently announced it would use 3D printing for rare parts in small quantities. For example, the



IMCRC CEO
David Chuter.

release lever for the clutch on the Porsche 959 is no longer available – the part has very high-quality requirements, but it is in low demand, with only 292 of the sports cars ever produced.

Chuter says Porsche's foray into 3D printing could help the technology become more mainstream, but like any emerging technology, there will be the early adopters and those who take a wait and see approach.

"I think the main challenge is this project has to deliver as not just a research exercise, but it has to demonstrate that the repair work can meet or exceed the original design and product performance requirements," he says.

"If it can do that, then the barriers to implementation around compliance are very quickly removed." ●

STEPHANIE McDONALD

ADDITIVE MANUFACTURING

David Chuter says some industries such as automotive are taking longer to adopt 3D printing, partly due to a perception that 3D printing is only used for making a low volume of prototypes.

The IMCRC is looking to change that, having recently invested in the Australian Advanced Materials Manufacturing facility in Edinburgh Parks in Adelaide, which will print metals into complex parts.