

Designing manufacturing firms to be more competitive

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RØDE microphones was one of 14 globally competitive Australian firms studied for the report. Credit: Aaron Jamieson, courtesy RØDE

The manufacturing sector in Australia has been challenged by factors such as the strong Australian dollar but the co-author of a federal government-commissioned report, released today, says that taking a new approach to innovation will allow manufacturing to remain a critical part of the economy.

"A fundamental shift is needed for the [manufacturing sector](#) to remain competitive and relevant," says Professor Sam Bucolo of UTS's Design and Innovation Research Centre, co-author of the report Design for Future Manufacturing Competitiveness, launched by Federal Industry Minister Ian Macfarlane.

"But with a new approach towards [innovation](#), and by carving out a place in the global supply chain, Australia's manufacturers can transform their future," Professor Bucolo said.

Launching the report, Mr Macfarlane said Australian manufacturing had a bright future if companies were prepared to embrace innovation and design.

"Manufacturing is essential to a diverse, resilient, world-class economy," the Minister said. "But manufacturers need to continuously improve their products and services to meet market demands that constantly change. This report has practical advice to help manufacturing firms remain competitive by transitioning to high value-added products that compete on their value, rather than cost alone."

Professor Bucolo and his co-author, Peter King, Manager of Design Integration in CSIRO's Future Manufacturing Flagship, investigated why some manufacturers have been better able than others to navigate challenges such as increasing labour costs and the strong currency.

They studied 14 high-performing, globally competitive Australian manufacturing firms that use design to their advantage in areas as diverse as mining equipment and microphones. These included RØDE, whose award-winning microphones are used in more than 100 countries; Codan, which supplies sophisticated communications equipment and metal detectors; and Superior, whose flotation devices are used in marine and mining operations.

This research led them to develop a "design-led innovation" framework for other businesses to follow to be globally competitive. It has five principles, all of which are needed for success:

- **Clarity of Purpose:** Organisations need a clear purpose, communicated openly internally and externally.
- **Become Your Market:** Organisations need to immerse themselves in the world of their customers, customers' customers, and stakeholders to identify opportunities for market disruption.
- **Be the Disruptor:** Organisations need business models that consider markets and services, not just products.
- **Integrated Business Model:** Organisations need to innovate by integrating along the value chain.
- **Own the Change Experience:** Organisations need to be dynamic, agile and flexible and to embrace change.

Underpinning this framework is the application of practices borrowed from the design world, such as challenging what is accepted and prototyping in fast, iterative cycles.

Catherine Livingstone, a member of the Prime Minister's Business Advisory Council and Patron of the Australian Design Integration Network has lent her support to the report.

"What is clear from the findings in the report is that the adoption of design-led innovation must become mainstream if Australia is to address the challenges of the structural economic shifts the nation currently faces," she says in the preface. "To achieve the necessary broad-based adoption, design-led innovation principles will need to be incorporated throughout education and in industry practice.

"Design-led innovation is not merely a set of tools for firms to adopt, but

a mindset embedded inside the culture of firms and within the stakeholders who support them," she says.

UTS's Vice-Chancellor Professor Ross Milbourne said the research was the first of its kind in Australia and "demonstrates how research can be undertaken with industry to drive competitiveness of Australian manufacturing through design."

CSIRO Chief Executive, Dr Megan Clark, said Australian manufacturers have many opportunities to innovate and thrive. "This report, using the voice of industry, is timely and makes an important contribution to helping Australian manufacturing companies during this period of transition," Dr Clark said.

Professor Bucolo is Joint Director of UTS's new Design and Innovation Research Centre, which is working with industry to capture evidence of what makes businesses competitive and to build capability within the [manufacturing](#) sector.

More information: The report is available online:
[www.uts.edu.au/sites/default/files/Design
%20for%20Manufacturing%20Competitiveness%20Report_0.pdf](http://www.uts.edu.au/sites/default/files/Design%20for%20Manufacturing%20Competitiveness%20Report_0.pdf)

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