

Innovators are our future

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(pic removed) Marand's engineering chief David Ellul at the company's in Moorabbin.

SIGNS of a pick up in capital expenditure in recent months reveal a level of cautious optimism in Australia's business community.

But there is an even brighter story that the official Australian Bureau of Statistics numbers do not tell.

This is the story of Australia's success and potential in high value manufacturing.

It is estimated there are as many as 2500 small, medium and large manufacturers in Australia investing in new technology, upskilling their workforces and driving local capabilities to meet global demand.

Essentially, these are advanced manufacturers — and they are carving out competitive spaces in a hi-tech world economy that has become known as "Industry 4.0".

Examples range from state-of-the-art machine and instrument makers such as Marand Precision Engineering, Breseight Australia, ANCA and Agilent Technologies, to sophisticated mining equipment producers including Korvest

and Gekko Systems, to world leaders in medical devices such as Cochlear, ResMed and Cook Medical.

For Australia, building capabilities in high value manufacturing is critical to our future growth and to the creation of meaningful jobs.

We quite rightly do not want to compromise our high standard of living. At the same time, other advanced economies — our competitors — are grabbing opportunities with both hands, and we must learn from them.

Industrie 4.0 is the German term for what some are calling the “fourth industrial revolution” — the merging of the cyber and physical worlds.

The first industrial revolution of the 19th Century was mechanisation. The second was electrification. The third was automation and IT integration — a transformation that is still under way.

The latest remarkable change is where a significant part of the manufacturing process is completed in a virtual environment, where the entire plant is digitised, and where products and machines collect and relay vital real-time data.

Disruptive technologies are streamlining work processes, enabling companies to become globally competitive. And while some may be sceptical about the job opportunities, experience is showing that as certain jobs disappear, new ones open up.

There is evidence that advanced manufacturers are in fact net contributors to job growth, and these new jobs tend to be more highly skilled and better paid.

US data reported by the Brookings Institution shows advanced industries added almost a million jobs in the United States between 2010-13, or nearly 18 per cent of the nation’s total job growth.

Australian advanced manufacturers are not only surviving, many are prospering as they tap new areas of growth, adapt to and develop new technologies, and take innovations to global markets.

RODE Microphones, under visionary Australian entrepreneur Peter Freedman, has become a world leader in its specialist audio field.

Carbon Revolution is a Geelong manufacturer that recently scored a coup, becoming the first company in the world to supply mass-produced carbon fibre wheels for a major automaker.

The company pioneered commercial production of carbon fibre wheels made from a single piece of material. Now the innovative business has doubled its workforce in less than a year to 90 staff.

Marand, based in southeast Melbourne, has established a unique capability in the aerospace industry. Among other projects, the company manufactures the vertical tails for the Lockheed Martin F35 combat jets, under more than \$400 million contracts.

Cochlear, maker of the bionic ear, is a global biotechnology company, employing 2700 people. More than 95 per cent of Cochlear's sales are outside Australia.

There are things we can do better. As a nation, we can significantly raise the level of collaboration between Australia's research community and industry, and we can improve our global competitiveness in attracting and maintaining research-intensive manufacturing.

In the meantime, successful manufacturers in Australia are getting on with ensuring their businesses are at the cutting edge, supplying the world.

We should celebrate them and do what we can to encourage other companies who want to emulate them.