

2015 Strategic Research Priorities and R&D Trends in Australia

Leonie Walsh, AIRG President, December 2014

Australia has experienced 23 years of economic growth with its average real GDP expected to exceed all other major advanced economies.

The mining industry and Australia's abundant resources have contributed significantly to achieving this outcome over a long period of time however more recently this has been backed up by a predominantly service based economy made up from companies that are tapping into the global market; with the majority of these being small to medium enterprises [1].

Current trends indicate that Australia is experiencing a significant evolution within core sectors of the economy. We are seeing a move to more of a knowledge-based economy, one where professional services and health care now employ more workers than manufacturing and adaption of the workforce into one that is highly skilled. Offsetting this Australia is experiencing a continued decline of several large scale manufacturing sectors, including the automotive sector and segments of the food industry [2].

This transition has increased the focus on how innovation and technology will play a key role in managing the transitions within these sectors and contribute to building new industries that will prosper in a competitive global economy.

The new Australian Government, elected late in 2013, recognizes this need to strengthen Australia's competitiveness as "Australia has become increasingly integrated into the global economy and as a result businesses, whether they export or not, are exposed to highly competitive international markets" [2]

The messaging is clear to the Australian technology sector although there has been some confusion and unrest relating to signals that there would be significant changes to the science and technology sector.

One of these concerns is a result of the Government's announcement of the new cabinet portfolios without a dedicated science minister and a redistribution of previously inter-connected science related portfolios. Publicly funded research, for example CSIRO, was included in the Department of Industry and Higher Education was supported in the Department of Education.

Funding cuts were also announced for a range of publicly funded research including the CSIRO and various research infrastructure, a review has been put in place for the long established Cooperative Research Centres and a cut to education funding has been proposed along with a potential de-regulation of the tertiary education sector for the first time in many years.

The Australian Government has responded with a new innovation and technology agenda has been represented in the newly launched *Industry Innovation and Competitiveness Agenda*.

This Competitiveness Agenda is a central part of the Government's Economic Action Strategy to build a strong, prosperous economy for a safe, secure Australia with the guiding principle being to focus on Australia's strengths.

The Agenda sets out four ambitions that Australia must pursue to ensure job creation and higher living standards:

- A lower cost, business friendly environment with less regulation, lower taxes and more competitive markets;
- A more skilled labour force;
- Better economic infrastructure; and
- Industry policy that fosters innovation and entrepreneurship.

Initiatives in this new agenda include:

- Encouraging employee share ownership
- Reforming the vocational education and training sector
- Promoting science, technology, engineering and mathematics skills in schools
- Accepting international standards and risk assessments for certain product approvals
- Enhancing the 457 and investor visa programmes
- Establishing Industry Growth Centres

The Government will redirect funding from the programs that have been cut or restructured to fund Industry Growth Centres in five key sectors:

- food and agribusiness;
- mining equipment, technology and services;
- oil, gas and energy resources;
- medical technologies and pharmaceuticals; and
- advanced manufacturing sectors.

These industry-led Centers will foster better use by industry of Australia's world-class researchers so that the community sees stronger commercial returns from the \$9.2 billion annual Commonwealth investment in research [3].

Core to the delivery of this competitiveness agenda is an increased focus on the education supply chain to deliver the skills needed to achieve these new jobs of the future. This will require both a review and increase in participation of science, technology, engineering and maths students, an increased focus on innovation and

creativity in the early stages of the education system and an improvement in the numeracy and literacy of students.

The competitiveness challenge is an ongoing one, and further reforms to promote the Agenda's ambitions will be developed over the longer term.

- [1] Why Australia, Benchmark Report, June 2014 Update, Australian Government, www.austrade.gov.au
- [2] Australian Industry Report, 2014 - <http://www.industry.gov.au/industry/Office-of-the-Chief-Economist/Publications/Documents/Australian-Industry-Report.pdf>
- [3] Industry Innovation and Competitiveness Agenda - http://www.dpmc.gov.au/publications/Industry_Innovation_and_Competitiveness_Agenda/docs/industry_innovation_competitiveness_agenda.pdf