1. AWPA Study on Engineering Skills

The Australian Workforce and Productivity Agency (AWPA) announced a study on engineering skills (trades to professionals) in March 2013, with a short turn around for responses to specific questions raised in the Issues Paper, and to provide relevant case-studies. Robin King prepared a submission on behalf of ACED, and with Dr Sally Male, prepared a Case-Study on the NRSWS project. Robin, Sally and Prof James Trevelyan (UWA) also attended a round table discussion with the study team prior to finalisation of their report.

The AWPA study report was published in late June 2014, just before AWPA’s functions were rolled back into the DoI. Recommendations 5 and 6 are directly relevant to ACED, encompassing encouragement for ‘enhancing the relevance of engineering degrees to industry’ and for ‘building on the findings of the [NRSWS] project’. Other relevant recommendations propose ‘strengthening women in engineering programs [through] ... role models and mentoring’, and programs to support migrant engineers, and mature age re-entry to the workforce.

Since publication of the AWPA report, there has been no evidence that the DoI have this as a high priority. Nevertheless, the leaders of the engineering community (including ACED) are encouraged to work with the Office of the Australian Chief Scientist in its ongoing promotion of STEM careers and school education.

2. Industry Working Group, Office of the Australian Chief Scientist

The Chief Scientist (OCS) has declared a commitment to introducing work integrated learning (WIL) in all STEM degrees. Robin King attended this meeting (with representatives of AIG, BCA, ACCI, UA and ATN) and other guests from ACEN and AWPA to talk about best practice as identified in the NRSWS project, and because engineering is known to be ahead of the other S-T-M disciplines for having students engage with industry.

In recent months the OCS has asked several questions about the nature of the current engagement that engineering degrees have with industry. Summaries of the short email survey questions put to ACED members have been fed back to OCS. The two main messages conveyed are:

- all (professional) engineering degrees require students to complete some form of industry experience, normally 12 weeks in industry for zero credit;
- about 25% of the 11,000 graduating from formative professional degrees (Bachelors(Hons) and Masters class undertake their capstone projects that are linked in some way to industry.

3. Deans Councils Summit, Canberra, 28 Feb 2014

ACED assisted the organiser (Prof John Rice, Executive Director, Australian Council of Deans of Science) to have a presenter on industry-university collaboration, and then attended the meeting on
behalf of ACED. ACED was represented by President Daroush Habibi and Robin King. About a dozen other deans’ councils were represented, covering science, ICT, education, business, arts, law, architecture & design, nursing, and other health areas.

The program included presentations from Belinda Robinson (Universities Australia), Richard James (Higher Education Standards Panel), Elizabeth Johnson (OLT Fellow for the ACDS), Mark Freeman, (Discipline Fellow, Australian Council of Business Deans), Shane Houston (Indigenous Strategy & Services, University of Sydney), Brian Yates (ARC) and David Hind (former President of BHERT).

Participants discussed the desirability of stronger working with UA on policy positions in education provision. An example could be in the ICT area, that is now (seen to be as much) ubiquitous as specialised. Other topics raised included: transitions to MOOCs, vs. investment in lectures; and the AQF compliance issues that for business degrees (MBAs) are still not resolved.

4. **ACARA Meetings on the national Design and Technologies F-10 Curriculum**

ACED has been represented by Robin King at ACARA consultative meetings on the implementation of this schools curriculum area (see [http://www.australiancurriculum.edu.au/technologies/rationale-aims/technologies](http://www.australiancurriculum.edu.au/technologies/rationale-aims/technologies)). The strand has four ‘contexts’: engineering principles and systems; food & fibre production; food specialisation; minerals and technology specialisations. The principal issues of concern are about ensuring that primary teachers (in service or in pre-service education) are adequately prepared and supported in the required areas. Secondary teachers are already in this space, at least in small numbers. A survey of ACED members confirmed a general lack of engagement of education faculties with engineering schools that could arguably assist teacher education in this area. Prof Les Dawes, QUT is due to present to a future meeting on a project xxx that he is involved with.

5. **NRSWS Project: Enhancement of Industry Exposure in Engineering Degrees**

This project work was concluded and reported to the full satisfaction of the Department of Industry (DoI) in June 2014, and the financial acquittal was concluded on 31 July. Under the project funding agreement ACED is obligated to continue to disseminate project outcomes and track student retention and employability trends and encourage deeper industry engagement amongst members’ formative engineering degrees. However, DoI allowed ACED to retain only the project fund accrued interest (about $1,200), and expects to receive reports on its expenditure (see below). As a case of ‘work integrated learning’, the area of this project is of considerable national interest, not least by Engineers Australia and the Office of the Chief Scientist of Australia (see below).

The principal outcomes of the project are the published Best Practice Guidelines with exemplars and a self-reflection tool, together with the reports and materials from the ‘industry-inspired’ projects that were run within seven ACED members’ faculties. All the project materials may be found on the [www.arneia.edu.au](http://www.arneia.edu.au) website. The project leadership team (Dr Sally Male and Prof Robin King) will present a paper on the project at AAEE 2014.

In June, the team submitted a project funding request to ACED to run five dissemination workshops at participating universities, during November 2014. Notice of the partial success of this bid was received only in late October, precluding running the workshops as planned. The team will need to renegotiate with the participating universities to run these workshops in March – April 2015.
6. Tripartite Meeting (ATSE, ACED, Engineers Australia), 18 September 2014

President Daryoush Habibi and Executive Officer Doug Hargreaves represented ACED at this meeting, convened by ATSE. After information updates, all three parties endorsed the principle of undertaking collaborative work on ‘industry engagement between universities and industry’, with the possibility of developing some broad metrics. These will assist to raise the profile of engineering as a key professional discipline and field of study for improving Australia’s innovation and productivity.

The items discussed were the AWPA Engineering Workforce Study recommendations, the impact on engineering of the Higher Education Reform, policy directions for Research and Innovation and School STEM education.

7. ACED support for Learning and Teaching projects.

Four submissions were received from interested parties for funding. The Executive supported the following three projects:

- Development of a national e-portolio approach,
- Enhancing engineering education through shared curriculum design and delivery, and
- Enhancing industry engagement in engineering degree programs: dissemination and implementation workshops

8. Submission to Cooperative Research Centres (CRC) Review

At the time of writing this report, ACED is drafting a response to the Government’s review of the CRC program, on behalf of ACED.