

IN THIS ISSUE . . . we cover a new research report on degree apprenticeships, the Ministry of Women's new STEM activity directory, and an innovative secondary-tertiary pathways programme

FROM THE CHAIR...

“It’s been a year of significant milestones”

The year 2016 has seen Engineering e2e meeting some significant milestones across our three work streams – Educational Delivery, Employer Engagement, and Promotion.



EDUCATIONAL PATHWAYS

Six Secondary-Tertiary Pathways Projects were awarded funding and work has begun in Northland, Auckland, Hamilton, Taranaki, Christchurch and Otago. Each project has its own flavour but all are collaborative initiatives between schools and ITPs offering students a clear line of sight to qualifications and a career in engineering.

RESEARCH

We’ve published reports on two pieces of research we commissioned this year. We featured Otago Polytechnic’s Making tertiary study in engineering more relevant in the last issue of this newsletter. I’m pleased to say that as a result of this report, work is underway to scope

a guide specifically for engineering educators who wish to review or develop their current Engineering programme.

UK Degree Apprenticeships A Year in Review provides a framework for the development of engineering degree apprenticeships in New Zealand. Engineering e2e looks forward to supporting work with employers and educators to progress this in 2017.

MAKE THE WORLD

We’ve been delighted by Make the World’s success this year. Evaluation shows a strong connection with Māori, Pasifika and women. The simple message of ‘Engineers Make the World’ is understood by just about everyone who recalls the campaign. An important gain has been made in career consideration, with engineering rising from a tenth place ranking to sixth over the campaign period to date. This is a significant shift in the perceptions of students and their parents.

A FOCUS ON REGIONS

During this year we’ve done a lot of thinking about mechanisms to support long-term success of the projects we’re initiating. We’re also

keen to enhance the great work that’s currently happening in engineering departments around the country. We like the idea of regionally-based centres for engineering education which involve employers, high schools, ITPs and universities. They would promote pathways into engineering and offer a single entry point for qualifications. These centres would support potential students to make good decisions about their courses of study and allow them to staircase between qualifications. They might run secondary-tertiary pathways projects, cadetships, scholarships and work experience. It’s an exciting prospect we’ll be exploring further in 2017.

A WARM THANK YOU TO ALL

Engineering e2e’s success is due to the efforts of many. A committed Steering Group meets monthly to guide the direction of our work. A small programme management team employed by TEC and the wider TEC staff ensure contracts are written and funds managed. Engineering employers and educators around New Zealand have embraced the programme.

I’d like to thank you all and offer my very best wishes for a safe and very happy festive season.

SIR NEVILLE JORDAN

Chair, Engineering e2e Steering Group

NEW RESEARCH REPORT: UK DEGREE APPRENTICESHIPS: A YEAR IN REVIEW

Written by Associate Professor Jane Goodyer, Engineering e2e's latest research report examines Manchester Metropolitan University's (MMU's) experience of the design and operation of a degree apprenticeship programme, and provides a framework for the development of engineering degree apprenticeships in New Zealand.



The report makes a number of recommendations for the New Zealand context also informed by findings from Jane's earlier report *Stepping into One Another's World: Apprenticeships – Transforming Engineering Technologist Education in New Zealand*.

MMU found strong interest from employers in degree apprenticeships, which resulted in strong student interest and high enrolment numbers. Associate Professor Goodyer found that degree apprenticeships should be scoped with a specific occupations in mind and standards developed with the potential for staircasing to other qualifications. Shared ownership of the development and delivery of a degree apprenticeship by employers and educators is crucial to its success.

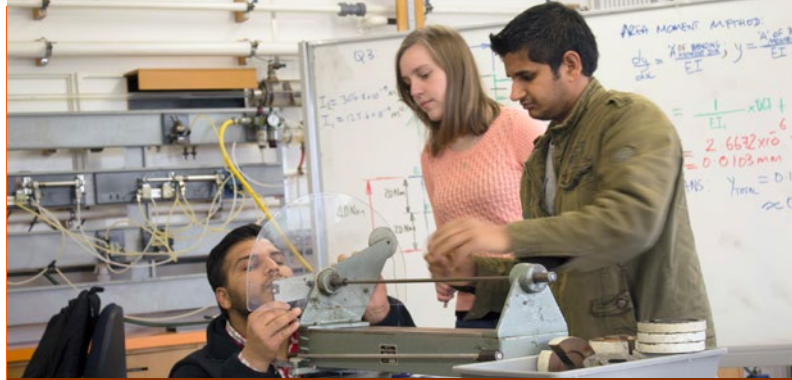
During the coming year, Engineering e2e hopes to continue supporting Associate Professor Goodyer to work with engineering employers, ITPs, professional bodies and educators to lay the groundwork for the development of degree apprenticeship standards.

See: www.engineeringe2e.org.nz/images/uploads/files/UK-Degree-Apprenticeships-A-Year-In-Review.pdf

NEW DIRECTORY TO HELP WOMEN AND GIRLS FIND STEM ACTIVITIES

A directory identifying opportunities for girls to get exposure to science, technology and engineering is now available on the Ministry for Women website.

Graduates with science, technology and engineering qualifications are in demand, yet in New Zealand, women make up around only 13 percent of those employed as engineers and just 23 percent of workers in Information Technology.



FEATURED CASE STUDY

PROMOTING THE MIDDLE PATHWAY INTO ENGINEERING

A secondary-tertiary programme aimed at encouraging students into engineering is proving valuable before it even starts! Where previously careers advisors tended to suggest students head into the trades or university, they now have a better appreciation of the 'middle pathway' into engineering

Read more at: http://engineeringe2e.org.nz/Education/Case_Study.cfm?ID=55

The directory identifies initiatives, programmes and associations through which young girls and women can Learn, Discover and Connect about science, technology and engineering.

Encouraging more women into science, technology and engineering-related careers meets our increasing demand for skilled workers in these areas and provides opportunity for women to secure sustainable, well-paid employment.



The Ministry hopes this list of initiatives will help women and girls to learn more about what is available in New Zealand. The list is by no means comprehensive and the Ministry is encouraging others to add their initiative to the directory.

See: www.women.govt.nz