

WORK WITH US TO ACHIEVE THE GOVERNMENT GOAL OF INCREASING ENGINEERING GRADUATES BY 500+ PER ANNUM FROM 2017

IN THIS ISSUE ... *we look at how Abley Transportation Consultants' staff diversity policies are helping their business, and new research on staircasing for L6&7 qualifications.*

LAST YEAR, Ako Aotearoa completed a project to explore ways to improve pathways to engineering study. The resulting Improving Pathways to Engineering Education Summary Report made several recommendations aimed at contributing to increasing the number of engineering graduates. Ako Aotearoa has now been contracted by TEC to address and extend these recommendations by exploring what 'Excellence' means in modern engineering education. More information about the project will be available on our website this month.

In our August newsletter, we reported on the outcomes of Massey University's research into advanced apprenticeships. One of the recommendations was: "Degree apprenticeships should have clear pathways to higher level qualifications". In September, TEC contracted Massey for a report which focuses specifically on staircasing as a strategy to enable students to progress to – and potentially beyond – level 6 and 7 engineering degrees. The emphasis will be on employer involvement and apprenticeship degrees. See page 2 of this newsletter.

Later this month, TEC officials will meet with representatives of companies to discuss the idea of offering advanced apprenticeships/sponsored degrees. It's an initial meeting to explore the possibility and to identify some of the issues that might need to be overcome along with the benefits to employers and potential employees. If your company has an interest in offering a sponsored degree and would like to be represented at this meeting, please contact engineeringe2e@tec.govt.nz

We've updated our work plan – the latest version is available at www.engineeringe2e.org.nz/Documents/eze-workplan-web.pdf

SIR NEVILLE JORDAN

Chair, Engineering E2E Steering Group

Initiatives undertaken through the Engineering E2E programme contribute directly to the achievement of the Government's Business Growth Agenda priority of building a more productive and competitive economy.



Promoting diversity brings great rewards

Abley Transportation Consultants' commitment to ensuring diversity of staff has many benefits, including good retention rates and a fresh way of approaching work challenges.

Employers looking for skilled people with engineering or engineering-related qualifications know the difficulties – it's not just about recruiting the right person for the job but also retaining them. The strategy at Abley and its GIS arm Interpret Geospatial Solutions is to promote diversity in the workforce, achieved through flexibility around staff employment.

The commitment to arranging work around staff needs obviously requires a lot of effort but it does bring payback says Managing Director Steve Abley. Retention rates are high and the mixture of people provides a fresh way of thinking and approaching work challenges.

Abley Transportation has more female engineers than male, the result of a deliberate strategy and one the company has had to work hard at implementing. While employing young female engineers can mean accommodating maternity leave, he says almost every woman has returned to the company, usually to a part-time role.

"I think we've been particularly flexible employers," Steve says, and notes this is not limited to the new mothers but is a way of being accommodating to families in general, "There's a phase when both women and men have a greater need for that flexibility."

The diversity at Abley also includes geographic and cultural differences – staff come from Australia, Belgium, China, Czech Republic, India, Ireland, Nepal, Pakistan, South Africa and South

FROM OUR 'DISCOVERIES' WEBSITE...

**'ADVANCING WOMEN –
TO PROVIDE NEEDED TECH SECTOR SKILLS'**

New Zealand Technology Industry Association July, 2015

This paper looks at the IT skills shortage, increasing the number of women in the industry, and the various skills and talent development initiatives available. It recommends that organisations considering investing in these sorts of programmes should first consider what's currently active, to avoid fragmenting the effort and limiting overall impact.

See www.nztech.org.nz/wp-content/uploads/2015/07/NZTech-Skills-Talent-women-Briefing-Paper-Aug-2015.pdf

For more Discoveries, see: www.engineeringe2e.org.nz/Discoveries/Whats_Making_Us_Think.cfm

from seeing his staff produce high-quality work, "It makes me humble and very, very proud of the team."

FIND OUT MORE...

- Abley Transportation Consultants: www.abley.com
- Engineering E2E Case Study: www.engineeringe2e.org.nz/Employers/Case_study.cfm?ID=33

Korea as well as New Zealand. Steve emphasises that the company hires on merit, but if someone's background or career history means they bring an extra element to the team then they are more likely to be considered.

While recruiting a diverse range of staff obviously makes it easier to fill any gaps, the advantage goes beyond that. It means, Steve says, "that we don't have 'group think' but 'individual think' – engineering is a creative industry so you need creative thinkers. Having different types of people contributing their ideas can also make for a more intellectually challenging work environment."

Communication has been important in growing a team of one to the current 35. Steve says the company invites feedback from everyone about how it could do better as an employer. "I suppose there's a level of tolerance or being more open minded to different perspectives when you're working with people who aren't exactly the same as you. You're constantly reinventing but the benefits for a growth company are enormous."

Another reward for investing in staff retention is that word gets around about the advantages of working for the company. "I think we now have a reputation as an exciting place to work – a good team, flexible employer and interesting work. It's like using a fly wheel – it takes a bit of energy to get it going but once you're away you're in a sweet spot and that's where we are, although we have to work hard to stay there." The best part, says Steve, comes

New research on staircasing for Level 6&7 engineering qualifications

TEC has commissioned research on how staircasing can be used as a strategy to enhance the uptake of mid-level tertiary engineering qualifications in New Zealand, with a specific focus on employer involvement and sponsored degrees.

This new research, being done over September and October, is in response to Goodyer and Frater's recent TEC-commissioned research on apprenticeships, which recommended that "Degree apprenticeships should have clear pathways to higher level qualifications".

The research will be undertaken by Dr Greg Frater, from Massey University's School of Engineering and Advanced Technology, with Associate Professor Nigel Grigg as Research Mediator and Associate Professor Jane Goodyer as Advisor.

Dr Frater is first reviewing relevant literature, including Government and industry reports, and then interviewing a range of stakeholders, including representatives of New Zealand tertiary engineering institutions (both polytechnic and university), employer representatives and IPENZ representatives.

Dr Frater will then compare current New Zealand engineering education strategies with strategies from overseas education systems discovered during the Apprenticeships research, and successful strategies from other sectors. Unique attributes and needs of the engineering discipline and of New Zealand's industrial and educational context will be reported.

FIND OUT MORE...

- Check out the Our Progress section on the Engineering E2E website: engineeringe2e.org.nz/Progress