

Work Plan March 2017

	CURRENT INITIATIVES	LEAD	PROGRESS TO DATE	MONTHS												INDICATORS OF SUCCESS
				MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	>>		
EDUCATIONAL DELIVERY	SECONDARY-TERTIARY PATHWAYS PROJECT Engineering e2e is funding innovative joint proposals from secondary schools and eligible TEOs to work collaboratively to deliver programmes that successfully prepare and pathway students – particularly women, Māori, and Pasifika – into tertiary engineering study. Successful projects will improve the pathway from secondary school to tertiary engineering study, increase awareness of engineering as a career in the community, and increase enrolments in Level 6–7 engineering qualifications.	ITPs Secondary Schools	SECONDARY-TERTIARY PATHWAYS PROJECT: <ul style="list-style-type: none"> • Pilot completed (2015) • Application process for funding set up (Mar 2016) • Project promoted to ITPs and schools (Apr 2016) • Application/selection process set up and implemented (Jul 2016) • Six projects selected and funded (Sep 2016) • Project planning meetings held for the funded projects (Nov 2016) 	SECONDARY-TERTIARY PATHWAYS PROJECT IMPLEMENTATION <i>Government grant funding until June 2019</i> <ul style="list-style-type: none"> • Project support throughout 2017: <ul style="list-style-type: none"> • Begin the process of ongoing evaluation • Support implementation • Promote project outcomes 												<ul style="list-style-type: none"> • Transparent and demonstrably successful pathways from secondary to tertiary study are in place • A quantifiable marked increase in collaboration between ITPs and secondary schools • There is an increase in tertiary enrolments in engineering subjects and an increased diversity in the student body • There is widespread collaboration and sharing of information and best practice between all providers • Models of work-integrated learning, new teaching modalities and current good practice models are implemented • Research-led good teaching practice in engineering education is in place • Effective bridging programmes are in place • Learning environments meet the needs of a diverse (and growing) student body • Surveys of students and employers report satisfaction with the quality of education received • ITP employment outcome surveys indicate students are being employed before or soon after graduation
	SPONSORED DEGREES Exploration/development of models of delivery (particularly relevant for rapidly changing, high-tech industries) which allow both on-job training and completion of a Level 7 qualification in engineering.	ITPs Employers	<ul style="list-style-type: none"> • Scoping report commissioned (Jane Goodyer) and delivered (Jun 2015) • Minister agrees on funding for a pilot 'degree apprenticeship' programme (2015) • ITPs and Employers consulted (2015) • Research undertaken and report published – <i>Stepping into One Another's World</i> (Jul 2015) • Initial discussions with potential pilot partners held (Nov 2015) • Visit undertaken and report published – <i>UK Degree Apprenticeships: A Year in Review</i> (Nov 2016) 	SET UP PILOT BASED ON RESEARCH OUTCOMES AND EMPLOYER CONSULTATION <i>Workforce Challenge Grant funding until June 2020</i> <ul style="list-style-type: none"> • Research to determine employer needs • Set up pilot 												<ul style="list-style-type: none"> • Research-led good teaching practice in engineering education is in place • Effective bridging programmes are in place • Learning environments meet the needs of a diverse (and growing) student body • Surveys of students and employers report satisfaction with the quality of education received • ITP employment outcome surveys indicate students are being employed before or soon after graduation
	EXCELLENT TEACHING AND LEARNING IN ENGINEERING PROJECT A project to guide and facilitate improvements to quality of teaching and learning in engineering. Collaboration with heads of school and HR/PD staff within ITPs to develop a strategy for professional development. Links with Geoff Scott's work on graduate profiles and curriculum design (see <i>Employer Engagement: Progress, below</i>).	ITPs	<ul style="list-style-type: none"> • Research commissioned and published: <i>Improving Pathways to Engineering Technology Education</i> (Dec 2014) and <i>Supporting Excellent Teaching and Learning in Engineering Education</i> (Mar 2016) • Alternative Engineering Pathways Professional Forum held (Nov 2014) • Regional workshop undertaken • Case study outcomes published on Engineering e2e website 	IMPLEMENT RECOMMENDATIONS FROM RESEARCH REPORTS <ul style="list-style-type: none"> • Assess whether the Micro-Masters initiative provides a potential model for engineering education at Levels 4-6 in New Zealand, and how that initiative might be tailored to the New Zealand context 												<ul style="list-style-type: none"> • Surveys of students and employers report satisfaction with the quality of education received • ITP employment outcome surveys indicate students are being employed before or soon after graduation
EMPLOYER ENGAGEMENT	EMPLOYER ENGAGEMENT A survey conducted by Otago Polytechnic to explore the use of the Graduate Capability Framework in determining employers' perspectives on graduate profiles and future skill needs.	Otago Polytechnic	<ul style="list-style-type: none"> • NEEP Reference Group reconvened and skills needs confirmed (Nov 2014) • Employer-engagement workshop held (Jun 2015) • A pilot workshop introduced Geoff Scott's Graduate Capability Framework and explored its use in determining perspectives on graduate profiles and future skill needs (Jun 2015) • Workshop participants consulted on ideas for a public awareness campaign (Jul 2015) • Otago Polytechnic contracted to do an engineering graduate study based on the framework in the New Zealand context (Jul 2015) • A reference group formed to act as a conduit for ongoing advice and guidance from workshop participants (Jul 2015) • <i>Talking with Employers Workshop Report</i> published (Aug 2015) • <i>Creating Engineers – Climbing the Educational Staircase</i>, a report into the benefits of staircasing, completed (Mar 2016) 	IMPLEMENTATION <ul style="list-style-type: none"> • Determine how the outcomes from Otago Polytechnic's research into engineering graduate study will inform other Engineering e2e projects • Work with tertiary institutions to improve stair-casing opportunities for current and prospective students and also those in employment • Consider changes to the curriculum which might incorporate the graduate capability framework, work experience across engineering disciplines, plus entrepreneurial experience • Consider the viability of an Engineering Education Hub involving employers and high schools 												<ul style="list-style-type: none"> • There is a substantial increase in numbers of employers participating in apprenticeships • There is a substantial increase of numbers of employers on ITP advisory boards • Surveys of employers indicate good engagement
	GROWTH THROUGH DIVERSITY Proposed preliminary research on how to boost the numbers of women, Māori, Pasifika and other groups in the engineering workforce, with input from other stakeholders, including MoE, NZQA, TPK, MBIE, MPIA and industry	TEC	<ul style="list-style-type: none"> • A survey of enrolment demographics is completed • A stocktake of STEM engagement initiatives is completed 	INITIATIVES <ul style="list-style-type: none"> • Undertake research and consider recommendations • Consider the potential of a resource for engineering employers 												<ul style="list-style-type: none"> • Increased numbers of Māori, Pasifika and other groups in engineering workforce
PROMOTION	PUBLIC AWARENESS CAMPAIGN Raise interest in engineering and the broad range of study options available; key messages are around individual achievements of a diverse range of people	IPENZ Employers ITPs OPEN Communications	<ul style="list-style-type: none"> • <i>Engineering Barriers and Responses</i>, a research report on barriers to the uptake of engineering study published (Oct 2014) • <i>Make the World</i>, Engineering e2e's major public awareness campaign launched (May 2016, ongoing) • Wave one evaluation complete and available 	PROGRAMME OF ONGOING INITIATIVES <i>Government grant funding until June 2017</i> <ul style="list-style-type: none"> • Make the World public awareness campaign continues: <ul style="list-style-type: none"> • Continued rollout of media schedule (OPEN Communications) • Next wave of evaluation (OPEN Communications) • Communications Plan to inform key stakeholders about the campaign and engage employers and ITPs to support implementation and provide leverage (IPENZ) • Survey of enrolling students on what influenced their decision to study engineering (by 2018) 												<ul style="list-style-type: none"> • Improved public awareness of engineering and the education pathways to the engineering profession
	ENGINEERING e2e WEBSITE AND COMMUNICATIONS	Engineering e2e	<ul style="list-style-type: none"> • Regional launches held (Jul-Aug 2014) • Two infographics published: <i>Make the World</i> and <i>Leaky Pipeline</i> (Jan 2015) • Participation in the Metro BEngTech and NZDE Forum (Feb 2015) • Two strategic reports published: <i>Engineering Change</i> (Mar 2015); and <i>Engineering Our Future</i> (Nov 2015) • <i>Good Practice Case Studies</i> published (ongoing) • <i>Engineering e2e Work Plan</i> (this document) published (2014 and ongoing regular updates) • Discoveries section added to the website • Monthly newsletter and other regular communications • Current publications reviewed and evaluated 	ONGOING PROMOTIONAL ACTIVITY <ul style="list-style-type: none"> • Continue to publish case studies, newsletter and regular communications • Develop a communications plan for 2017 • Upgrade the website to be mobile-friendly 												<ul style="list-style-type: none"> • Stakeholders are kept up to date with Engineering e2e activity
GUIDANCE	ENGINEERING e2e PROGRAMME MANAGEMENT Consult with stakeholders and oversee the development and implementation of Engineering e2e initiatives	TEC	SUCCESSFUL COMPLETION OF AGREED INITIATIVES	ONGOING OVERSIGHT OF ENGINEERING e2e INITIATIVES <ul style="list-style-type: none"> • Ongoing consultation with stakeholders throughout the development and implementation process 												<ul style="list-style-type: none"> • Stakeholder satisfaction with the nature, development and implementation of Engineering e2e initiatives
	ENGINEERING e2e STEERING GROUP	TEC	SUCCESSFUL COMPLETION OF AGREED INITIATIVES <ul style="list-style-type: none"> • TOR & MO reconsidered and updated 	ONGOING GOVERNANCE <ul style="list-style-type: none"> • Providing advice/guidance 												<ul style="list-style-type: none"> • Engineering e2e goals achieved and an increasing number and diversity of students are graduating with engineering qualifications, particularly at Levels 6 & 7