futureintech enews forindustry

number one
february 2004

welcome to futureintech

Futureintech is funded by Government to help lift enrolments in tertiary study in technology, engineering and science over the medium to long term. **enewsforindustry** keeps technology-based industries in touch with Futureintech's latest activities.

Futureintech works closely with a wide range of industry partners

go to page 2

Regional Facilitators work with industry in Auckland, Wellington & Christchurch

go to page 3

Find out what the Futureintech Team has been up to in the past few weeks

go to page 4

Helping secure New Zealand's future

New Zealand's need for a more highly skilled workforce in the technology, engineering and science industries has become urgent.

University graduate numbers in these fields fall far short of industry demand. It's a situation that, without intervention, will worsen over the coming decade.

Futureintech has been funded by Government as one of a range of initiatives to counter this trend. Its aim is to significantly lift enrolments in tertiary study in technology, engineering and science over the medium to long term.

About futureintech

Futureintech works directly with schools, industries and universities to help ensure that technology, maths and science teachers have the right resources to inform school students and inspire them to continue their study through to tertiary level.

The approach is hands-on. Full-time Regional Facilitators in Auckland, Wellington and Christchurch engage industry support and work with classroom teachers, careers advisors, students and their caregivers. They aim to provide support to all full primary, intermediate and secondary schools throughout New Zealand.

Industry role models have a major part to play. Futureintech Ambassadors – volunteer technologists, scientists, and engineers – will visit classrooms to work alongside students on projects. At tertiary level, Futureintech Visiting Industry Professionals (VIPs), technology, engineering and science professionals will raise awareness about future directions and career opportunities in industry.

An important Futureintech function will be to co-ordinate and promote existing technology-based educational schemes, such as CREST, Bright Sparks and the Neighbourhood Engineers Award, to maximise their effectiveness.

Futureintech is working with Maori and Pasifika groups to develop initiatives that answer their specific needs.

The Futureintech project is the result of extensive research into what has worked in other countries. It is modelled on the approach of SETNET, a UK programme which has achieved very positive results, and has been adapted to the unique New Zealand education environment.

Published by
Futureintech
tel 04 473 2023
fax 04 474 8933
enquiries@futureintech.org.nz
www.futureintech.org.nz

Futureintech is an initiative of
The Institution of Professional Engineers, New Zealand, Inc
3rd floor Molesworth House, 101 Molesworth Street
PO Box 12 241, Wellington, New Zealand

futureintechpartners

Futureintech will only succeed through the partnerships it forges with technology-based organisations. The project works in close collaboration with a growing number of industry groups. Each has agreed to work with Futureintech: either by showing leadership; influencing other organisations; supporting related initiatives; or offering scholarships for studies in technology, engineering and science.

Information Technology Association of New Zealand (ITANZ)

ITANZ is keen to raise awareness of careers in information and computer technology (ICT). A lobby group for the ICT industry, ITANZ has worked closely with IPENZ and NZ Trade and Enterprise over the creation of the Futureintech project.

New Zealand Computer Society (NZCS)

NZCS is the professional institution for Information and Communication people. As well as its backing for Futureintech, NZCS has a number of initiatives in the education field: student membership, student mentoring and scholarships for tertiary students.

Royal Society of New Zealand (RSNZ)

RSNZ is an independent, national academy of sciences, a federation of some 60 scientific and technological societies, and individual members. It promotes a critical awareness of science and technology in schools, in industry and in society.

Technology Education New Zealand (TENZ)

Involved since the inception of Futureintech, TENZ is a professional network which has been set up to promote and support Technology Education. It sees Futureintech's role as vital in providing information about technology and helping teachers and students in the classroom.

New Zealand Association of Science Educators (NZASE)

The New Zealand Association of Science Educators (NZASE) represents the interests of New Zealand teachers of science. Futureintech and NZASE share the aim of promoting science education and careers in this area.

New Zealand Institute of Food Science and Technology (NZIFST)

NZIFST, a society for food industry professionals, has been actively involved in finding food technologists to work in classrooms. It strongly believes in the need to foster training, education, certification and career-long development for food industry professionals.

Transpower New Zealand Ltd

Transpower is owner and system operator of New Zealand's electricity transmission grid – linking generators to distribution companies and major industrial users. It recognises that its support for education and research is vital for the future of the company, the industry and the country.

Association of Consulting Engineers of New Zealand (ACENZ)

ACENZ has promised to promote Futureintech to engineering consultancies. Membership of ACENZ is for companies rather than individuals. It has strong links with training providers in New Zealand, particularly the Schools of Engineering.

Economic Development Association of New Zealand (EDANZ)

EDANZ is a member-based organisation that exists to promote the interests of its members, and heighten awareness about the importance of regional and local economic development. It delivers advice to government, and advice and support to regions and territorial local authorities.EDANZ regional networks will be available to assist the Futureintech facilitators.

New Zealand Post Primary Teachers' Association (PPTA)

PPTA supports Futureintech. It is publicising details about the project and how it assists teachers.

Tait Electronics Ltd

One of New Zealand's leading electronics companies, Tait Electronics has offered Futureintech resources which can be used in schools and is encouraging its young technologists to be profiled for Futureintech.

Genesis Research and Development Corporation

Genesis in Auckland, New Zealand's largest listed biotech company, supports the Futureintech programme by hosting Auckland-based facilitator Angela Hart.

iTouch Business Mobility

Christchurch company iTouch, at the forefront of the wireless technology industry, is host to Christchurch-based facilitator Neil Potter.

New Zealand Association of Radio Transmitters (NZART)

Involved since the start of Futureintech, NZART administers a Trust to help and encourage persons wishing to further their education in the science of radio.

regionalfacilitators

Futureintech's first three full-time Regional Facilitators have been set up in Auckland, Wellington and Christchurch to engage industry support and work with classroom teachers, careers advisors, students and their caregivers.

Angela Hart
Auckland Facilitator
tel 09 373 5600
ahart@futureintech.org.nz

Before taking on this challenge I taught technology at secondary school, specialising in electronics and control technology. I've seen the effects of society's expectations and peer pressure in restricting the choices of career young people make. I'd like to get across to young people and their families the huge range of possibilities open to students these days; if they have ability and motivation (and most do), the world really is their oyster.

My goal as a Futureintech Facilitator is to increase the number of students opting to take technology, engineering and science courses at tertiary level. One way of achieving this is simply to inform students and their families of the many (often new) types of work now available in the fields of technology, engineering and science.

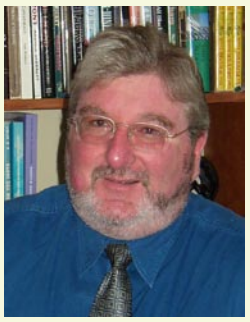
The benefits of working with teachers and students to promote careers in technology, engineering and science aren't just for potential employees – its a lot of fun for those already practising.

Marilyn Daly
Wellington Facilitator
tel 04 473 2025
mdaly@futureintech.org.nz

I have joined the Futureintech team following a 23 year career in primary teaching in Wellington. Over the last six years I have developed an interest in technology education and realise the value of bringing technologists and engineers into the classroom to support learning. Students are not only more motivated by being involved in real projects but they develop knowledge about careers in these areas.

I was awarded a New Zealand Teacher Fellowship in 2000 and was hosted by IPENZ to develop my knowledge of technology-based industry. In 2003 I received an Outstanding Teacher in Technology Award from Technology Education New Zealand (TENZ).

Futureintech needs people from technology, engineering and science industries to support this project. It's your contribution that provides a window into the world of work for today's students so they can make career choices that are both rewarding and beneficial to New Zealand's future.



Neil Potter
Christchurch Facilitator
tel 03 365 4120
npotter@futureintech.org.nz

I've been a teacher for the last 15 years working in the maths and science areas of high schools in both New Zealand and England. Prior to teaching I worked at the Southland Harbour Board in Bluff as an engineering officer.

To work for IPENZ on the Futureintech initiative was too good an opportunity to turn down. It's a chance to combine my experiences in engineering, with education helping teachers and students develop a better understanding of the exciting prospects of working in the areas of technology, engineering and science.

My role is to encourage the connections between industry and school. I believe that by getting students and teachers involved in programmes like CREST, and the Neighbourhood Engineers Award, assisted by experts from industry, awareness of careers in technology will increase. Underpinning this approach is Futureintech's website featuring profiles of individuals and companies that have hosted industry visits by the facilitators throughout New Zealand.

futureintech enews

one 2004 4

futureintechnews

Futureintech is up and running – our enthusiastic team are out there building infrastructure for connecting the worlds of industry and education.

Profiles

Futureintech is profiling young technologists, engineers and scientists to show that careers in these fields are interesting and rewarding. Young people who have been working in their professions for a few years are asked about what they do, what they studied, why they like the job, whether it's well paid and what their future job options are.

Research shows that 'living examples' of jobs helps young people make more informed judgments about careers.

Case studies of companies cover aspects such as expectations of employees, career development and management style.

TEARAWAY

TEARAWAY Magazine, "The Voice of NZ Youth", has a readership of 242,000 and is distributed through secondary schools, movie theatres, public libraries and other 'street' outlets. Futureintech is working with TEARAWAY to provide information directly to young people.

Futureintech will appear for the first time in a one-page slot in TEARAWAY in April, the first of a series of pages that will be published in New Zealand's number one youth magazine.

Physics CD-Rom

How do you duplicate Rutherford's experiments in the classroom?

In a classroom such a demonstration is impossible but there are other teaching tools that can do the job. Futureintech is helping with the development of a physics CD-Rom for 15 to 18-year-olds which links physics with the way it is used in New Zealand industry and shows how people use physics in everyday life.

Facilitators make their mark

Since beginning in January, Futureintech facilitators have been steadily making their way around businesses in their region, developing understanding of technology-based industry.

Focuses of their work to date have been profiling people in their jobs, and providing case studies of companies. Angela has interviewed design engineers at High Modulus (which produces composite materials for boats), road engineers at Traffic Design Group, a molecular biologist at Genesis Research and Development Corporation and food technologists at Hubbards, the cereal manufacturer.

In Wellington Marilyn has written about graduate engineers, including mechanical engineers at Windsor Engineering Group (manufacturer of kilns and dust control systems), traffic engineers at Traffic Design Group, electronic engineers at Tekron Electronics, roading engineers at Works Infrastructure, and structural engineers at Holmes Consultancy.

Neil has visited a range of different businesses in Christchurch to learn about what they do, and interview staff at Tait Electronics, Canesis Network, the Heinz Watties factory, and the Pratt and Whitney - Air New Zealand engine centre.

How to find out more . . .

Technology-based businesses:

Futureintech can work with you to help ensure your future professional human resource needs are being acknowledged and addressed.

Industry organisations:

Futureintech would like to case study your company and profile staff.

Futureintech:

enquiries@futureintech.org.nz

tel 04 473 2023

fax 04 474 8933

www.futureintech.org.nz

The Futureintech website will be online in March. Students, caregivers, science, technology and maths teachers, and careers advisers can find information about careers and case studies of technologists, engineers and scientists in action.