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2 Promoting your industry in schools

How organisations are using Futureintech resources to promote career opportunities



5 Supporting our schools

Industry support of school career programmes



6 Futureintech news

Ambassadors promote careers;
VIP Applications open; Futureintech video

7 About e-news and Futureintech

Promoting your industry in schools

To increase the numbers of skilled employees in technology, engineering, and science, it's essential for related industries to promote themselves to students – and many are discovering that working with Futureintech is an excellent way to get started.

Here are just a few great examples of how organisations are using Futureintech resources to promote career opportunities in their areas of industry.

Institution of Engineering and Technology

The Institution of Engineering and Technology (IET) recently teamed up with Futureintech to distribute resource materials to primary and secondary schools. First on their list is a series of posters, which clearly and colourfully illustrate basic electrical concepts like voltage, currents, and electrical safety.

“We find that primary and secondary schools don't get much of a look at what we do, so we designed the posters to get them involved,” says Ray Morris, Fellow and Council Member of the IET. “We have one displaying all the symbols used in electrical engineering, which is a pretty important start. And our currents poster shows how all matter is made of atoms, and how that causes electricity to flow through wires.

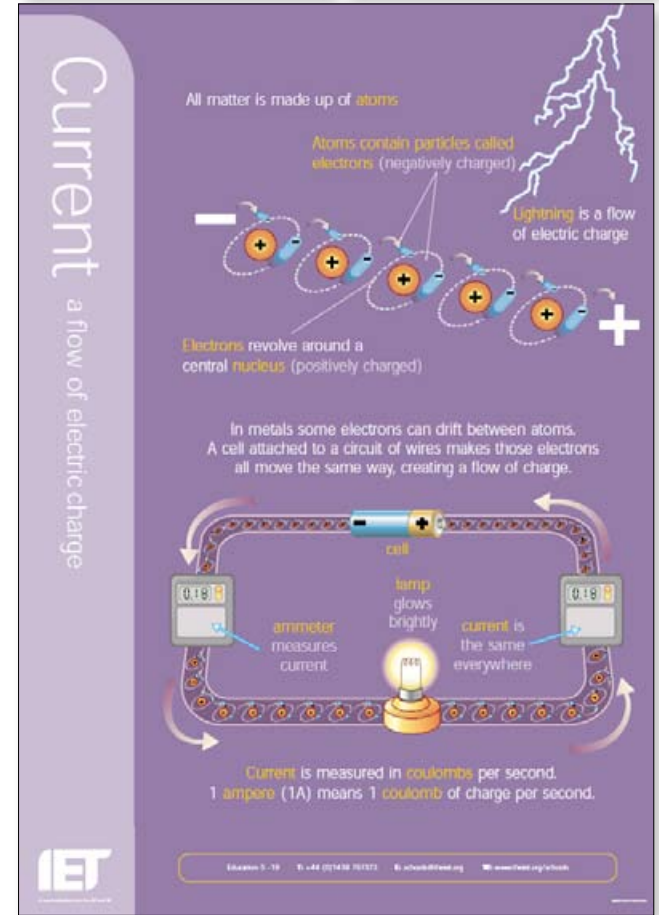
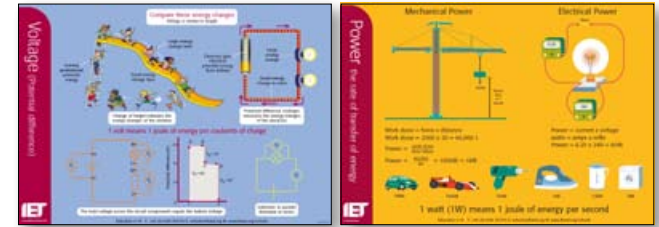
“I'm delighted to see these. If they had been up on the wall when I was in school, they certainly would have appealed to me.”

The difficulty is making these resources readily available to schools – and that's where Futureintech comes in.

“We find that teachers are often not aware that this information is available,” says Ray. “We're trying to disseminate this information to schools in New Zealand, and Futureintech has been an enormous help.

“It's important to get young people interested. If we can get one student to see a poster and learn from it, we think it will be worthwhile.”

For more information on the posters, visit the IET website at www.theiet.org/education/teacherresources/posters.



Society of Chemical Engineers New Zealand

Tristan Hunter from the Society of Chemical Engineers New Zealand (SCENZ) is well aware of the importance of promoting chemical and process engineering at the high school level. “There’s a real shortage of people who appreciate it,” he says. “It’s extremely hard to find good people, and we’re always looking.”

Concerned about intake numbers, SCENZ decided to invest in promoting the industry. This has resulted in a collaborative brochure with Futureintech, “Your Future in Chemical/Process Engineering.”

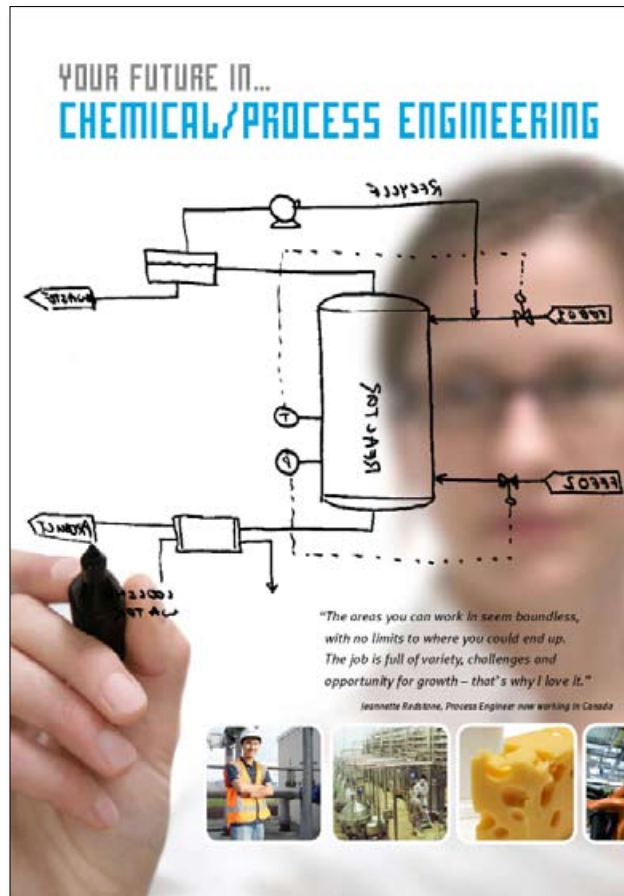
The brochure highlights the many practical applications of this field to New Zealand industries. It includes examples of available jobs and personal quotes from young employees.

“There’s a misconception that New Zealand doesn’t do chemical or process engineering, that it’s all sent off to China or somewhere,” says Tristan. “In fact, there’s a remarkable amount going on here.

“We want to make people aware of two things about the industry: the impact people can make on the quality of life and the environment, and that a lot of what we do is highly relevant to New Zealand.”

Futureintech sends this brochure to school careers advisors, who give them to students and parents.

“We’re extremely happy with the work Futureintech has done,” says Tristan. “The cost was small, and they have the



expertise and the contacts to deliver excellent results.”

More information and resources can be found on the SCENZ webpage, www.scenz.org.nz. To order copies of the “Chemical/Process Engineering” brochure, contact Futureintech at enquiries@futureintech.org.nz.

OPUS

“It’s hard to know what you want to be when you’re 15 to 17 years old,” says OPUS Safety Technician Jessica Fleet. “When I was leaving school, I was a bit torn on what to study.”

Fortunately, with the help of a capable careers advisor, Jessica found that a civil engineering cadetship with OPUS suited her personality. She went on to work for them full-time, analysing and improving the state highway network in the Nelson region.

And now, she promotes engineering to students herself. Using Futureintech resources and publications, she has volunteered to be the IPENZ Representative for the Nelson College for Girls.

“The idea is to get a younger engineer working with the students to give them someone to relate to,” she says. “The role is still evolving. As time goes on, I’ll liaise with careers advisors to provide information for the girls, and hopefully organise some visits to construction sites. For now, if there are any girls in the school who want information, they can contact me.”

Jessica is eager to promote the cadetship programme that got her started. “A lot more companies are going toward cadetships, because it helps you keep your options open. You can work and learn at the same time, and get a feel for the job. I think the schools need to be more aware of it.”

As a female engineer, she’s also keen to be a role model for the girls. “I’m really passionate about getting more

Promotion in schools

women into engineering,” she says. “People might think it’s a ‘man’s job,’ but in fact, women can get a lot out of it. There are still obstacles, and I won’t say it’s easy, but it would be really positive to have more women involved. And guys are starting to appreciate that as well.”

Tararua District Council and Infracon Ltd

The Tararua District Council and Infracon Limited, the Council’s Local Authority Trading Enterprise, are running a cadetship programme that gives local students the chance to explore the possibilities of engineering.

“We don’t have the big offices for engineers like the cities do,” says the Council’s Human Resources Advisor, Jenny McNeur. “Through our cadetships, we’re providing young people with opportunities for professional work.”

Since 2005, the Council and Infracon have each hired two cadets every second year. Council cadets work with the Consultancy division, learning professional services, supervision, and inspection, while the Infracon cadets are more involved with physical work.

“We get them out on the roads,” says Infracon Training Coordinator Craig Ewens. “They learn all the jobs, from operating stop-and-go signs to surveying and engineering.”

As they gain this valuable work experience, they also study for a diploma from the New Zealand Institute of Highway Technology (NZIHT). The cadetship covers all tuition and associated fees, and gives the students the option of one day of study leave each week.



Jenny is enthusiastic about the benefits of this programme. “The beauty of it is that when they finish, they’ll have a sought-after qualification, and they won’t have a student loan to pay off.”

“It’s a growing period for them,” says Craig. “We give them every support, both financially and by providing information.”

Futureintech supports the effort by providing resource materials. Two engineering brochures and a bookmark promoting the Futureintech website are included in an information packet about the cadetship programme. This is distributed to students and their parents at information evenings and local careers events, like the Tararua College Careers Expo in Pahiatua held earlier this month.

Infracon cadets Brent Golder and Quentin Roulston, Tararua District Council cadet Anthony Mason, and former Council cadet Josh Webster at the Tararua College Careers Expo.

Reaching out to local students is an important step. The Council and Infracon make a point of taking on cadets with a link to Tararua, either through attending school in the area or having family connections.

“Basically, it’s about growing your own engineers,” says Jenny. “We look at their attitude, and a certain level of academic aptitude. Personality and work ethic are also important. It affects how they’re going to interact with other people. So far, we’ve been extremely lucky. They’ve really put their minds to it.”

Craig agrees. “It’s definitely good for the company. It goes back to our motto of ‘Your Company, Your People’. We hope that some of them will stay with us – or better yet, travel a bit, gain some worldly experience, and come back.”

Supporting our schools

Encouraging students to go into technology, engineering, or science related fields can be a difficult task. Many industries are addressing this problem by supporting school career programmes in their communities.

Careers advisors play an important role in guiding students towards potential careers. But for highly technical fields, they may not have the necessary background to answer specific questions. This is a prime opportunity for industry leaders to provide information and support. IPENZ and NZIFST have done exactly that.

Get Alongside

The Institution of Professional Engineers New Zealand (IPENZ) has established the 'Get Alongside' campaign. Launched in 2007, Get Alongside teams local engineers with careers advisors. Its aim is to supply students with the insight they need to make informed decisions about engineering.

Almost 70 IPENZ members around the country are already involved. They visit schools to distribute resources and answer students' questions about the engineering industry. With their help, students can see the possibilities of following this career path.

"We're offering all IPENZ members the opportunity to contribute," says Fay Duncan, Careers and Heritage Administrator. "By working with a careers advisor or teacher and acting as an example, engineers can get students enthusiastic and thinking about their own careers."

Support Our Schools

The New Zealand Institute of Food Science and Technology (NZIFST) have been doing a lot to promote the food industry in recent years. They run an in-depth "Careers and Education" webpage (www.nzifst.org.nz/careers/default.asp), host Food Industry Big Days Out, give presentations at teacher conferences, and provide prizes at Regional Science & Technology Fairs.



They collaborated with Futureintech to publish a brochure on "Your Future in New Zealand's Food Industry," and they encourage their young members to become Futureintech Ambassadors.

Now, they are inviting those members in areas not covered by Futureintech, and those who are not eligible to be Ambassadors, to support careers advisors and teachers through their Support Our Schools (SOS) initiative. Similar to Get Alongside, SOS promotes the food industry by acting as a source of accurate, up-to-date information. Technologists, engineers, and scientists work with schools to highlight the opportunities of a career in this industry.

"NZIFST members have been working with schools in many ways," says NZIFST Careers co-ordinator Jenny Dee. "Through SOS, we have two members in Nelson who volunteered to support six secondary schools, and another who offered to mentor a CREST student. In Gisborne, we have a member who has been mentoring students doing science fair projects. All of this work contributes to raising the profile of careers in our industry."

To get involved in the Get Alongside or SOS campaigns, or find out how your organisation can support careers and education, contact Futureintech at enquiries@futureintech.org.nz.



Ambassadors promote careers

Across the country, schools are putting on careers events and arranging curriculum support from industries in order to show the relevance of maths, science, and technology. Futureintech Ambassadors are doing their part by visiting classrooms, giving students real-life examples of the jobs available.

Wharehuia Dixon, a civil engineer from **Beca**, presented to three science classes at Aorere College in Auckland as a part of their science focus.

He told them about his job as an airport planner, and the Auckland International Airport extension project he's working on for the 2011 World Cup Rugby tournament. He also talked about his experience as a Maori from rural New Zealand making the transition to studying engineering in Auckland, and the importance of having good role models.

In Taupo, Ambassadors have been participating in Taupo Intermediate School's 'Discover' programme by showing students what surveyors do. **Charlotte Ronaldson** and **Keith Sanford** from **Cheal Consultants** brought along a total station to show how surveying equipment works, and gave a memorable demonstration of trigonometry in the process.

"I really enjoyed doing it," says Charlotte. "It was aimed at a younger group, which made it quite interesting. The kids are amazingly bright and asked some surprising questions. They had no idea of what surveyors do, so it was good to talk to them about it at an early stage."



VIP Applications open

Futureintech is now accepting applications for the next round of the Visiting Industry Professionals Scheme.

The VIP Scheme provides funding for top professionals in technology, engineering, and science to get involved with tertiary education. By assisting in course planning, giving lectures, and answering questions about their respective industries, VIPs provide students with valuable insight into their professions, and gain a better understanding of their needs for education and training.

Funding is available for ten VIPs in this round, with up to a maximum of \$5,000 per project. The funds are paid directly to the tertiary institutions to be used according to their requirements.

To fill out the application form, or find out more about the VIP Scheme, visit our website at www.futureintech.org.nz/vip-scheme.cfm. If you have questions or need help with your application, contact Christine Linnell at clinnell@futureintech.org.nz.

Charlotte Ronaldson, a surveyor from Cheal Consultants with students from Taupo Intermediate.

Futureintech video

Futureintech's first promotional video is now available on our website, www.futureintech.org.nz.

This short video spotlights the ICT industry through the eyes of Futureintech Ambassador **Scott Abernethy**, a software engineer with **Harris Stratex (NZ) Ltd**. Taking us through a day at the office, Scott describes how the challenging job and good team atmosphere keep him eager to come to work every morning.

We'll be trialling the video with students and gathering feedback. If successful, this could be the first of a series featuring technology, engineering, and science related careers.

We'd like to take this opportunity to thank Scott and his employers at Harris Stratex for their participation in the project.



About Futureintech

Funded by NZ Trade and Enterprise, Futureintech is an initiative of the Institution of Professional Engineers New Zealand (IPENZ). Established in 2003, Futureintech is a practical attempt to increase the number of young New Zealanders choosing careers in technology, engineering and science – crucial sectors for the infrastructure and social and economic growth of the country.

Futureintech Ambassadors

Futureintech Facilitators around New Zealand work to develop links between schools and local industries. Central to this work is the recruitment of Ambassadors – young people working in technology, engineering and science who are trained by Facilitators to volunteer in schools. Their contribution includes giving presentations, explaining their work, supporting projects, providing a real-world perspective and demonstrating the practical applications of the curriculum. There are currently 350 trained Ambassadors working with Futureintech, representing a wide variety of industries. Their support and that of their employers is greatly appreciated.

Futureintech partnerships

Futureintech maintains partnerships with over 200 companies, representing a diverse cross-section of New Zealand industry. Partners work with Futureintech in a variety of ways, from encouraging staff members to become Ambassadors to providing expert information for publications or promoting Futureintech to a wider audience. Futureintech's work would not be possible without their generosity and commitment.

Futureintech publications

Futureintech produces an ever-increasing range of print resources for teachers, students, careers advisors, caregivers and industry, all of which are available free of charge by request from head office.

www.futureintech.org.nz, a regularly updated website offering profiles of Ambassadors and their employers, a database of relevant tertiary courses and monthly regional news, is another key component of the initiative.

Futureintech's monthly newsletter **enews** is distributed in alternate months to schools and industries, and aims to ensure that all stakeholders are kept fully informed of Futureintech's activities and of the resources we provide.

Futureintech Facilitators

Futureintech's regional Facilitators promote and maintain relationships with schools and industry employers. This involves recruiting and training Ambassadors, advising teachers on how Futureintech can best support their programmes, arranging, planning and supervising Ambassador visits and distributing resource materials.

Facilitators are supported by Host Partners, who provide the office space which enables them to work remotely from the Wellington head office. Host partnerships ensure that Facilitators not only benefit from a collegial atmosphere but also have daily exposure to an industry-related workplace.

If your staff might be interested in volunteering as Ambassadors, or your business benefit from being involved in any way with Futureintech, please contact your local Facilitator to discuss how we can work together.



Rod Hare
North Auckland Facilitator
Mobile: 021 714 359
Email: rhare@futureintech.org.nz



Angela Hart
Central Auckland Facilitator
Mobile: 021 479 892
Email: ahart@futureintech.org.nz



Gay Watson
South Auckland Facilitator
Mobile: 021 479 802
Email: gwatson@futureintech.org.nz



Margaret Brunton
Central North Island Facilitator
Mobile: 021 479 803
Email: mbrunton@futureintech.org.nz



Jenny Dee
Napier/Hastings Facilitator
Mobile: 027 2907 937
Email: jdee@futureintech.org.nz



Susan Weekes
Wellington Facilitator
Mobile 021 479 891
Email sweekes@ipenz.org.nz



Colin Bell
Christchurch Facilitator
Mobile: 021 479 890
Email: cbell@futureintech.org.nz



Lynne Newell
Dunedin Facilitator
Mobile: 021 479 804
Email: lnewell@futureintech.org.nz