



# enewsforindustry

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## 2010 a big year for Futureintech

This year Futureintech aims to consolidate its success, to ensure that this unique and invaluable resource for students, teachers and industry throughout New Zealand continues in the years to come.

OVER THE PAST SEVEN YEARS, FUTUREINTECH has been continually evolving, incrementally building on the growing opportunities that industry links with schools present to both parties. In recent years we've written a guide for team practice and experimented with different methods of promotion and communication, and last year we responded to the latest science education research with our Primary Science Strategy.

This year, our focus is on enhancing professional development opportunities for our Ambassadors, particularly in looking for opportunities for Futureintech Ambassadors to improve their communication skills.

Futureintech now enjoys a solid reputation with teachers and careers advisers as a reliable and uniquely useful resource, and we are excited by the number of Ambassador visits already booked this year.

Later this year we will provide New Zealand Trade and Enterprise with a proposal to continue the initiative.

### Importance underlined

The importance of the Futureintech initiative was underlined in a number of recent news articles.

Last November, we gained some welcome attention when Minister of Economic Development Gerry Brownlee paid a visit to Elmwood Normal School in Christchurch. Students at the school had been working on their Transpower Neighbourhood Engineers Awards project since June and couldn't wait to show him the progress they'd made.

The goal of the project was to develop an interactive 3D map of their school. Futureintech Ambassadors from a range of different fields supported the team at every step, from determining geographic locations and making scale drawings to designing the electrical circuits that lit up different classrooms on the map. Two Ambassadors, **Vivian Yang** from **Christchurch City Council** and **Reuben Williams** from **Golder Associates**, were on hand during the Minister's visit as students walked him through the process.

"The visit was an opportunity for students to showcase their progress," says former Christchurch Facilitator Colin Bell. "It featured a formal welcome speech from a student, displays of electrical circuits, physical and virtual models of the school, and posters. The displays were hosted by knowledgeable and articulate students and the Minister interacted a lot.

"He was impressed by what they'd done. He noted the interest and knowledge shown by the students and said he wished that he'd had similar learning experiences in school. He also talked about the importance of



Minister of Economic Development Gerry Brownlee, together with IPENZ CE Andrew Cleland and Futureintech Ambassadors **Vivian Yang** from **Christchurch City Council** and **Reuben Williams** from **Golder Associates**, at Elmwood Normal School.

technology, engineering and science careers to New Zealand's economy."

Minister Brownlee's comments are reinforced by recent headlines that New Zealand needs many more technical professionals to handle multibillion-dollar infrastructure projects over the next decade – see [www.stuff.co.nz/business/3255783/Engineer-shortage-to-hit-infrastructure-projects](http://www.stuff.co.nz/business/3255783/Engineer-shortage-to-hit-infrastructure-projects).

Futureintech's work promoting careers is as important as ever. We are always on the lookout for new Ambassadors and Industry Partners, particularly in information and communications technology and electronics.

Visit our website at [www.futureintech.org.nz](http://www.futureintech.org.nz) for more information on our programme.

# Futureintech Facilitators: Coaching fundamentals

With the help of Organisational Development Consultant Marilyn Hunt, the Futureintech team gained insight into how to enhance the professional development opportunities to Ambassadors through improving communication.

**F**UTUREINTECH FACILITATORS recently participated in two training sessions on maintaining productive relationships between Facilitators and Ambassadors.

Marilyn Hunt, a Facilitator, Coach and Organisational Development Consultant from Phoenix Facilitation, was brought in to help the team approach the issue from a fresh perspective. She has worked with Futureintech Director Angela Christie on other training programmes related to professional development, and her background as a secondary school teacher and coaching professional made her a good match for the project.

During the sessions, one in September and a follow-up in December, Marilyn met with the team at the Wellington office and led discussion on professional goals for the

Ambassadors and how the Facilitators can help the Ambassadors achieve them.

“The Facilitators quickly realised that the key area for development for them was around giving feedback,” says Marilyn. “They want to offer the Ambassadors an opportunity for personal and professional development, particularly in the area of presentation skills.”

A common theme was the need for Facilitators to be bolder about offering constructive criticism. “In my example, I was worried about upsetting an Ambassador who does so much good work for me,” says Cathrine Ritter, Facilitator for Central/West Auckland. “I couldn’t think of a good way to phrase it. With the ideas that we came up with, I certainly feel better prepared to deal with that situation and provide feedback without feeling as though I’m coming across as ungrateful.”

“There are really important ways to communicate, and the prime one is to keep the Ambassador focused on the main reason for their talk,” says Wellington Facilitator Susan Weekes. “The main thing is to set up an expectation for Ambassadors that we will give feedback.”

Throughout the sessions, Marilyn emphasised that the Facilitators’ role is varied. In their desire to support the Ambassadors’ professional development, this role could be one of a performance manager or a coach, rather than, say, a mentor or teacher.

“In mentoring, someone experienced with the technical aspects of a certain field offers their skills and support to someone less experienced. A coach doesn’t have to have a similar technical background, as they are supporting and



The Futureintech team meets face-to-face in the Wellington office to share their experiences and insight. Top left: From left, Administrator Angeli Hudson and Facilitator Rod Hare. Bottom left: Facilitators Cathrine Ritter, Angeli Hudson, Catherine Smith and Margaret Brunton. Top right: Facilitators Gay Watson and Susan Weekes. Bottom right: Facilitators Catherine Smith, Margaret Brunton, Gay Watson and Susan Weekes.

challenging a ‘coachee’ to uncover and achieve their own goals.”

“I was impressed with the progress we made towards incorporating a coaching ethos into our role,” says Colin Bell. “We quickly understood what coaching was, saw the need and advantages a systematic approach would offer, and moved into practical ways of implementing a system.”

Marilyn found that the Facilitators were eager to share their experiences, which goes a long way toward overcoming the difficulties of working with remote staff. “My sense is that the sessions helped the Facilitators focus on some big-picture coaching ideas. It also helped them home in on some issues around giving feedback, and share and develop approaches on how they could be resolved. My hope is that they left the sessions with some new perspectives. I enjoyed working with everyone.”

# Futureintech Ambassadors: Having an impact

The latest evaluation of our practice shows that Futureintech continues to have a positive impact in maths, science and technology education, and most importantly in the promotion of technology, engineering and science careers.



**D**URING AUGUST AND SEPTEMBER, FUTUREINTECH undertook its second service evaluation to identify levels of user satisfaction with the website, publications and Ambassador visits. Results showed that teachers and careers advisers are highly satisfied with all three aspects of the project.

“The Ambassadors are a really great way to increase student awareness – not just for career opportunities, but also to emphasise the relevance of particular secondary school subjects like Physics and Calculus,” one of the respondents wrote.

We’re also getting input from outside experts. As we mentioned in the August 2009 edition of **enewsforindustry** ([www.futureintech.org.nz/documents/fit-e-news-ind-aug-09.pdf](http://www.futureintech.org.nz/documents/fit-e-news-ind-aug-09.pdf)), IPENZ has contracted the New Zealand Council for Educational Research (NZCER) to study the impact of Ambassador visits in primary and secondary schools.

Led by researchers Rachel Bolstad and Magdalene Lin, the study is based on interviews with teachers and students and in-depth case study visits to different schools. The NZCER prepared a milestone report covering July to November 2009, giving Futureintech an idea of the initial findings and outlining plans for the next phases of the project.

Futureintech Ambassador Shelley Banham from Hubbards Foods organises a factory tour for St Kentigern College students.

So far the results are showing a very positive trend, with encouraging feedback coming from teachers and students. The report indicates that teachers who have requested Ambassador visits have been pleased with how the visits have gone.

One teacher described an Ambassador as “very good at questioning the kids to be able to generate a discussion.” Another Ambassador was described as “patient and kind [...] he would sit down and help [the students] work things out. He was always thinking of ways to motivate them to work as a team.”

Students with an interest in technology, engineering, or science found the presentations interesting and relevant, and those who worked with Ambassadors on long-term projects appreciated their help. One student noted that having an Ambassador’s input made a difference “because we have a real engineer helping us instead of just our teachers”.

Ambassadors who have participated in the survey thought highly of the experience as well. “We’ve been busy at work and it can be quite hectic, but when I give a presentation, it’s kind of like a new buzz,” one of them said. “It’s quite exciting because in science we need those young minds.”

The NZCER’s draft report on the final results of the survey is due in mid-2010. For more information on the project, contact Futureintech at [enquiries@futureintech.org.nz](mailto:enquiries@futureintech.org.nz).

## VIP Scheme: We can't give it away

Futureintech's Visiting Industry Professionals Scheme has funding for a total of \$50,000 in new projects this year. The only thing we need now is your application.

The VIP Scheme provides funding for senior professionals from technology, engineering and science-based industries to spend up to three weeks in a tertiary institution. Their role can be teaching, advising on research and curriculum, or a mixture of both.

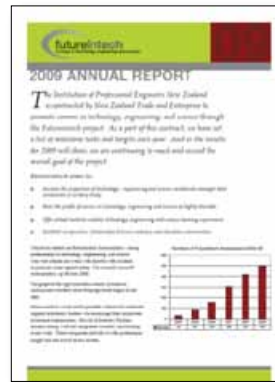
The purpose of the VIP Scheme is to encourage ongoing partnerships between industry and education. Top professionals sharing their industry expertise with tertiary students and staff has a number of benefits for everyone involved.

Academic staff can learn about developments in the private sector – knowledge which could help improve teaching and research programmes. Students can gain a sense of what to expect in the workforce once they graduate, and information on what skills employers

are looking for. Tertiary staff can become more knowledgeable of, and stronger advocates for, careers in technology, engineering and science.

The closing date for the current round is 31 March. Stories of past VIP projects and our online application form are available at [www.futureintech.org.nz/vip-scheme.cfm](http://www.futureintech.org.nz/vip-scheme.cfm).

## 2009 Annual Report



We are sending out our Annual Report for 2009 with this edition of *enewsforindustry*.

The Futureintech Annual Report details our achievements in 2009, including the continued growth of Ambassador numbers and school visits around the country.

As always, we would greatly appreciate any feedback you have on our performance. Send any comments or questions to [enquiries@futureintech.org.nz](mailto:enquiries@futureintech.org.nz).

The University of Canterbury's Dr Gabriel Visnovsky, who works with a 1000L airlift reactor as a part of his biotechnology research, hosted Futureintech VIP Dr Robert Dempster (pictured right) in 2009 to enhance their Bioprocess Engineering programme.

## New Facilitator

We'd like to extend a warm welcome to Catherine Smith, the new Facilitator for the Christchurch region. Catherine has experience in adult education, including acting as education officer in the Air Force, teaching at the Mechanical Engineering School at Woodbourne. She has also worked as a training writer for a consultancy firm, taught maths at Christchurch Polytechnic, and worked as an online web conference trainer for the Ministry of Education.



Catherine can be contacted via email at [christchurch@futureintech.org.nz](mailto:christchurch@futureintech.org.nz).

After two years with the Futureintech team, outgoing Christchurch Facilitator Colin Bell has retired and will be moving to Nelson to spend time with his family and devote himself to his interest in environmental conservation. Colin made a significant contribution to the team and we wish him and his wife Jenny all the very best for the future.



## 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 over 450 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 around 280 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](http://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.



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